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**PREVENTION ACTION INCREASES  
LARGE FIRE RESPONSE PREPAREDNESS**

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**WP2 - REVIEW AND ANALYSIS OF EXISTING LARGE WILDFIRES PREVENTION MEASURES AND  
PREPAREDNESS ACTIONS**

**Deliverable 2.1 – Workshop #1**

*31 July 2019*

**Project name:** Prevention Action Increases Large Fire Response Preparedness (PREVAIL)

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**Website:** <http://prevailforestfires.eu/>

**Partnership:** Università degli Studi della Tuscia - UNITUS (Coord.), Università degli Studi di Napoli Federico II – UNINA, Centre de Ciència i Tecnologia Forestal de Catalunya - CTFC, Ellinikos Georgikos Organismos - DIMITRA, Instituto Superior de Agronomia – ISA

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## 1. Kick-off meeting minutes

### 1.1 Attendance list

Ascoli Davide - UNITO, University of Turin and University of Naples (Italy)

Barbati Anna - UNITUS - University of Tuscia (Italy)

Caverni Luca - Council for Agricultural Research and Agricultural Economics Analysis (CREA), Italy

Colaço Conceição - ISA Instituto Superior de Agronomia, Universidade de Lisboa- (Portugal)

Colonico Mario - UNITUS- University of Tuscia (Italy)

Ferrari Barbara - UNITUS- University of Tuscia (Italy)

Filiani Giovanni - Regione Toscana (Italy)

Gravano Elisabetta – Regione Toscana (Italy)

Koutla Aikaterini – Greek Ministry of Environment and Energy, Greece

Moreno Mauro - UNINA, University of Naples (Italy)

Negro Dario - Italian National Civil Protection

Pepe Antonio - Council for Agricultural Research and Agricultural Economics Analysis (CREA), Italy

Pompei Enrico - Italian ministry of agriculture food and forestry policies

Romano Raoul - Council for Agricultural Research and Agricultural Economics Analysis (CREA), Italy

Salvati Luca - Council for Agricultural Research and Agricultural Economics Analysis (CREA), Italy

Sequeira Nuno - INSTITUTO DA CONSERVAÇÃO DA NATUREZA E DAS FLORESTAS, Portugal

Tomao Antonio - UNITUS - University of Tuscia (Italy)

Xanthopoulos Gavriil - Hellenic Agricultural Organization DEMETER, Institute of Mediterranean & Forest Ecosystems (Greece)

### 1.2 Welcome of the participants

Dr. Luca Salvati, the local organizer of the meeting, and Prof. Anna Barbati, the coordinator of PREVAIL project, welcomed the participants and introduced the agenda and the main objectives of the meeting (Annex 1).

Then, Dr. Dario Negro, representing the Italian National Civil Protection, welcomed the participants, describing the role of the National Civil Protection in the wildfire management cycle, with particular reference to the use of the national air fleet (including Canadair and helicopters) that are involved in fire suppression when fire overwhelms the suppression capacity of regional forces. He also reported that after 2017, year of

high frequency large fires events in Italy, the Italian Civil Protection promoted the establishment of a technical board at national level, including delegates from the Fire Brigades, the Ministry of Agriculture & Forestry, the Ministry of Environment, and the Italian Regions to promote dialogue and cooperation between all different levels involved in the wildfire management cycle, with the aim to promote strategies to improve fire extinction capacity. Dr. Negro also underlined how the implementation of structural fire prevention measures is deemed crucial for Civil Protection since it helps reducing, in the long-term, the frequency of emergencies, the loss of human lives and the costs of suppression.

### 1.3 WP2 Overview and data collection results

Antonio Tomao showed the main results of the WP2 activity on “Review and analysis of existing large fire prevention measures and preparedness actions (data collection)”. Firstly, he presented the background context and the key objectives of the PREVAIL. Then, he exposed the results of data collection, carried out during the first months of the project, related to funds invested in fire prevention in Italy, Greece, Portugal and Spain.

Main sources of data on prevention measures include: i) EU funds invested for fuel management and post-fire restoration actions in Partner Countries within the Rural Development Program (RDP); ii) funds made available for specific demonstration projects on fire prevention (e.g. Cohesion funds, LIFE projects); iii) regional price lists of active fire prevention measures and results of published relevant studies.

The data regarding the amount of “programmed” and “realised” expenditure for direct and indirect measures for fire prevention have been presented for the RDP 2007-2013 and for all the Partners Countries at national and regional scale (when available). A similar level of detail was not achievable for the RDP 2014-2020, due to the different structure of the program. Consequently, data on expenditure can be retrieved at a more general level of aggregation, i.e. measure 8, including all forms of support to the forestry sector.

Dr. Tomao also emphasized that in the RDPs there are no measures with a one-to-one relation with wildfire prevention. The RDP measure more closely related with wildfire prevention (or post-fire restoration) in the 2007-2013 period is the “2.2.6: Restoring forestry potential and introducing prevention actions” and in the 2014-2020 period is 8.3 “prevention of damage from forest fires, natural disasters”. However, depending on the priorities of geographic area covered by the RDP, the 2.2.6 and 8.3 funding can be allocated to prevention of forest natural hazards other than wildfires (e.g. storms, avalanches). For this reason, a collection of more in-depth information about eligibility and evaluation criteria of the 8.3 calls under the current RDPs has been carried out for some Regions of high priority for winter and summer wildfire occurrence in Italy and Spain. Such a deepening of data collection, which is not feasible for all RDPs, is intended to help understanding criteria/priorities set out by current RDP programs to access funds, also in the perspective to formulate recommendations, for the next programming period, that could improve the efficiency of public expenditure by Management Authorities.

He concluded his presentation with a list of open questions to be discussed during the meeting:

- Types of project and actions funded by measure 8.3 for natural risks prevention (successful applications).
- How much prevention principles have been applied to the restoration measure 8.4 (integrated approach of restoration and prevention)?
- Which other non-specific measures have promoted projects which include also fire prevention?

- Limitations on the use of funds allocated to fire prevention.
- Which fire risk planning tools have been adopted to strategically steer the reward of prevention projects towards RDP measures?
- How can we improve the focus of fire prevention measures in high risk areas?
- How to provide a functional, transversal and integrated framework for prevention in the next RDP?

## 1.4 Italian Rural Development Programme & Wildfire prevention measure

Raoul Romano presented an overview of the expenditure of the measure 8 (RDP 2014-20) across Italian regions. First, he showed how funds for measure 8 have been progressively decreasing because of a reallocation of resources to other measures. This led to a decrease from a planned expenditure of 1.408.162.226,57 € in 2016 to 1.292.464.306,47 € in 2018 for the Italian Country. In particular, the sub-measure 8.3 (prevention) showed an increase of around 18%, while the 8.4 one (forest recovery after damage) decreased by more than 38%. Up to 31/12/2018, only 18.2% was spent for measure 8 in Italy (23% for the 8.3). Thus, most of the planned investments for measure 8 are still to be spent in Italy. Dr. Romano showed also the statistics of total expenditure at regional level: Campania and Sicily are the regions which spent more on prevention, but these funds were mainly spent for salaries of Regional staff involved in fire prevention. Umbria is the region with the higher expenditure on prevention, when compared to recovery, and Abruzzo did not activate measure 8.4 at all. On the other hand, Liguria showed a more balanced expenditure among measures for forests.

Dr. Romano then listed all the interventions funded so far within the 8.3 sub-measure, which include:

- removal of dry biomass from coniferous forest
- management of woodlands
- monitoring actions
- firefighting structures
- fuelbreaks
- forest roads
- preservation and realization of hydraulic forestry regulation works
- works, purchase and general cost for management actions
- increasing forest diversity
- prevention wildlife and insect damages
- grazing (for the first time)

Between the several activities funded within sub-measure 8.4 (restoration of forest, improvement of forest roads/forest hydraulic works, fire monitoring and firefighting infrastructures), most of the expenditure was due to projects for the recovery of forests after insect damages and windstorms.

He then concluded the presentation with some recommendations and future perspectives including the development of a minimum set of provisions, compulsory for regional RDPs, with particular attention to the wildland-urban interface, the provision of a minimum commitment of resources for fire prevention, a better integration between prevention and suppression and clear recommendations about post-fire recovery.

## 1.5 Fire prevention in the Tuscany region

Dr. Giovanni Filiani presented the state of the art of fire prevention measures funded within the RDP programs for the periods 2007-2013 and 2014-2020 in the Tuscany region. He reported that a total of 12 calls have been opened between 2007 and 2013 for measure 2.2.6. The total expenditure for that measure has been 101 million euros, 26 million of which have been spent for fire prevention. The current program has already allocated 17.8 million to fire prevention and a call is currently open. He also stressed the point that almost half of the funds have been paid to private owners. In the current 2014-20 program, private owners have the same funding rate (i.e. 100%) as the public bodies, whereas in the past they were reimbursed only at a rate of 70% over the total cost of the intervention. He then confirmed the list of interventions paid by the RDP reported by Dr. Romano.

He reported that the application of 8.4 (forest recovery after damages) has been conceived by the Tuscany region only to pay the first interventions after fire and not the costs for forest restoration, which are covered completely by the forest owner. This is to reduce wildfires aimed at claiming subsidies for restoration of burnt lands.

Then, Dr. Filiani talked about the limitations on the use of funds. He reported that basically fire prevention is funded by the region only in high-risk areas, except for those activities promoted by regional AIB (i.e. Fire-fighting) organizations. He also stressed the point that the involvement of private owners in a network of fire prevention activities has been challenging and most of the interventions carried out by private owners are rather scattered thus reducing their effectiveness.

Finally, he reported some best practices applied in the Region. Among them, the most relevant is the approval of 7 prevention plans (Specific Plans of Fire Prevention - SPFP) in very-high fire risk areas. In SPFP they have planned fire prevention interventions in strategic areas regardless administrative boundaries and ownership. In these areas the planned interventions are aimed at reducing the horizontal and vertical continuity of fuel, thus reducing the fire severity and keep the fires within the extinction capacity of regional fire-fighting bodies. The strategic areas are identified through the history of forest fires taking into consideration the types of fires, the vegetation and the climatic drivers and assets to be protected (i.e. fire risk analysis). The sub-measure 8.3 has been funding some interventions planned within those plans in the current RDP program.

## 1.6 Current status of RDP funding for fire prevention in Greece: technical limitations and challenges

Aikaterini Koutla (MSc) presented an overview of the fire prevention activities in Greece. She reported that the Greek Forest Service is responsible for the prevention of forest fires and recovery of burned areas. In 2019 the Fire Brigade and the Forest Service adopted a joint ministerial decision on fire protection which coordinates and regulates the cooperation between them in the areas of prevention and suppression of forest fires. Greece has also improved fire prevention hiring 5.066 seasonal employees to work in the local forest services for fire protection (32 million € for 2018/2019).

The public funds that can support fire prevention activities come from RDP but also from an internal program named "Green Fund", especially for its Measure 1 "Preventive measures for the fire protection of public Forests and Forest lands". During 2019 around 3 million € have been used for fire prevention according to these two funding programs.

She showed figures on the past program 2007-2013, where less than 30% of the total programmed budget for fire prevention (measure 226.1) was spent. Therefore, the unspent budget, especially for projects that

had started late and could not be completed in time, was transferred to the current program. This inefficiency was mostly due to delays because of bureaucracy issues. During the 2007-2013 period a better result (expenditure of more than 50% of programmed funds) has been achieved with the measure 125B. Under this measure construction and improvement of forest road network within managed forests have been carried out in public and private forests.

Then, Ms Koutla described the current RDP program. Fire prevention is basically linked to the sub-measure 8.3 (total budget of 30 million €) which is planned to fund activities such as (i) building and/or maintaining forest trails and roads, (ii) establishment of water supply points (water tanks, water reservoirs, etc.), (iii) firebreaks and other zones or points of discontinuity of fuel, (iv) projects to improve and restore the durability of existing forest fire protection roads, (v) cleaning of subsoil or other vegetation, (vi) diversification of forest structure using less flammable forest species, (vii) installing and/or upgrading equipment and fire monitoring systems including observatories, forest fire detection systems.

She reported also the eligibility criteria to participate to the calls (basically based on feasibility of the project and the timetable) and the criteria for selection (Natura 2000 sites, high risk areas according to the national law).

She confirmed that there is a substantial delay in the application of the fire prevention measures in Greece because of the bureaucratic procedures.

## 1.7 RDP funding for fire prevention in Portugal limitations and challenges

Dr Sequiera, as an introduction of his speech, showed some statistics about Portuguese forest resources. He reported how the main forest types are plantations dominated by *Eucalyptus* spp. and *Pinus pinaster* in the northern Portugal and *Quercus suber* in the south. He also presented the percentage of private owned forests, which amount to 97% of the total.

Some statistics about amount and spatial locations of “rural fires” in Portugal were also provided showing how some years (2003, 2005, 2017) were characterized by an exceptional number of fires and burnt area, especially in central and northern Portugal. This is partially due to global change and extreme weather events but also to the continuity of fuel (same species, highly flammable forest types) and landscape homogeneity.

Due to these extreme fires, associated to high human life losses, Portugal decided to change the organization system in fire management, promoting more capacitation and specialization of the system and more measures in rural fire management. A National Agency today controls the overall allocation on funding prevention and fire fighting.

Then, he reported the statistics of RDP funds invested in fire prevention in the period 2007-2013, which amount to 18% of forestry measures. Such budget has been used for fuel breaks, fuel load reduction in selected critical areas, water points, wildfire prevention infrastructure signage. 20% of the budget on forestry measures in used for post fire restoration (erosion control, streams recovery, prevention of permanent loss of habitat, maintenance of damaged roads, reforestation).

Finally, he discussed the main challenges for fire prevention which are:

- Land abandonment and property fragmentation;

- Small forest plots and inadequate property records and ownership information: many people do not know if they own forest lands and where they are, since there is not an updated cadastre;
- Low financial incentives designed to reward forest management practices: indeed, reduction of fuel load is not paid by RDP if it is linked to ordinary management of plantations and forests (e.g. thinning);
- Landscape homogeneity: the change of species would be a good solution (paid by sub-measure 8.5 of current RDP), but it is not carried out due to economic losses consequent to the new species establishment (longer rotation period, too low revenue for the forest owner as raw product compared to the value chain).

## 2. Round table “Improving the efficiency of expenditure for fire prevention in the current and in the next RDP program”

After the presentations, the workshop envisaged a discussion about the main issues related to funding for fire prevention across the participants' countries. Dr. Ascoli asked the invited experts to list common features among countries, and the most relevant information, ideas and weaknesses discussed in the previous section of the workshop in order to get to a synthesis of main contents according to the participants.

Ms Koutla and Dr. Xanthopoulos reported that in Greece, the main problem that reduces the efficiency of RDP program is probably at political level. In fact, several ministries and institutes are involved in the funding process. Furthermore, there are competing requests for EU resources among ministries and it is rather challenging to have an adequate amount of funding for the forestry and fire prevention sector. Therefore, they suggest providing more evidences about the added value that can be obtained from prevention activities. If we are able to demonstrate that every euro invested has a specific result in term of fire risk and damage reduction (i.e. reduction of fire severity; houses protected), it would be easier to negotiate with ministries. Furthermore, a long-term programming of expenditures can help decision makers to allocate funds more efficiently.

Another problem raised by the Greek experts is the existing need for permissions to actively manage fuel. For instance, a specific permission is needed for cutting vegetation around private houses. This long bureaucratic process significantly reduces fire prevention efficiency.

Dr. Sequiera reports the experience of Portugal, where the land abandonment and private property fragmentation (small forest plots and inadequate property records and ownership information) do not allow to carry out effective fire prevention at landscape level. In this regard, Dr. Filiani reports the experience of the Tuscany region, where in recent years 7 Specific Plans of Fire Prevention have been approved. In those plans specific fire prevention activities are programmed at landscape level regardless if they have to be applied in public or private lands. Following these plans private owners are obliged to do fire prevention and if they fail to do that the public sector can act as a substitute in the management. This represents a model of interest for Portugal where most of the lands are privately owned.

The presence of well-structured plans can allow the opening of multi-measures calls which fund projects with a common aim (i.e. fire prevention) integrating several RDP measures. This is allowed by the current RDP and the Tuscany Region opened calls for integrated territorial projects, although not yet in the fire management sector. These integrated projects can consider both structural prevention (e.g., fuelbreaks) but also other activities with an indirect effect on fire (measures reducing land abandonment, grazing, change of species, among others). This is feasible according to the Italian law, with the only exception of Wildland Urban Interface areas which are regarded as being outside the domain of rural areas, since multi-measures calls can be defined at regional level with the EU agreement. However, it is not currently applicable in Portugal (not envisaged in the 1305 regulation). This approach can help to have a more integrated prevention at landscape level. In this regard, a possible outcome of the PREVAIL project would be to select those measures and sub-measures that can be included in such types of multi-measure calls.

Another option is to facilitate aggregation of landowners (es. Comunità del Bosco in Tuscany Region, Associazioni Fondiarie in Piemonte Region, IT), even if in Portugal this is very difficult because of land abandonment. Indeed, a major problem is that people are still moving to cities and rural areas are progressively abandoned. A countermeasure for that is to support not-productive management of land

through payment for ecosystem services or forest certification or specific measures supporting the change of species, like the change from *Eucalyptus* spp. and *Pinus pinaster* to native broadleaves with a longer rotation period in Portugal.

## Annex 1



### PREVAIL - PREVENTION ACTION INCREASES

#### LARGE FIRE RESPONSE PREPAREDNESS

#### WORKSHOP "RURAL DEVELOPMENT PROGRAMME & WILDFIRE PREVENTION MEASURES"

18 OCTOBER 2019

Venue: Room 69 - Building B - Via Po, 14, Roma (RM)



#### 18 OCTOBER – MORNING SESSION

- |       |  |
|-------|--|
| 9.00  | Registration of participants and welcome coffee  |
| 9.15  | Welcome and general introduction   |
| 9.30  | Overview of the results of the WP2. Review and analysis of existing large fire prevention measures and preparedness actions (data collection).<br>Antonio Tomao (University of Tuscia, Italy)  |
| 9.50  | Presentations by invited experts: "Current status of RDP funding for fire prevention across Mediterranean Countries: technical limitations and challenges" (20 mins each) <ul style="list-style-type: none"><li>▪ Raoul Romano (CREA, Research Centre for Agricultural Policies and Bioeconomy, Italy)</li><li>▪ Giovanni Filiani (Tuscany Region, Italy)</li><li>▪ Ms Aikaterini Koutla. (Department of Forest Protection and Rural Safety, Direction of Forest Protection, Greece)</li><li>▪ Mr Nuno Sequeira, (member of the directive board of the Nature Conservation and Forest Institute, Portugal)</li></ul> |
| 11.10 | Coffee break   |
| 11.30 | Round table "Improving the efficiency of expenditure for fire prevention in the current and in the next RDP program"   |
| 13.00 | Lunch  |

#### 18 OCTOBER – AFTERNOON SESSION

- |       |  |
|-------|--|
| 14.15 | Wrap-up session  |
| 15.00 | Internal meeting for PREVAIL partners<br>(Limited to the Prevail partners) |
| 17.00 | Departure of participants  |

## Annex 2

 	<p><b>PREVAIL - PREVENTION ACTION INCREASES LARGE FIRE RESPONSE PREPAREDNESS</b></p> <p>Funded by European Union Humanitarian Aid and Civil Protection</p>
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**WORKSHOP "RURAL DEVELOPMENT PROGRAMME & WILDFIRE PREVENTION MEASURES" 18 OCTOBER 2019**  
**Venue: Room 69 - Building B - Via Po, 14, Roma (RM)**

### Attendance list

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## Annex 3



Participants to the Workshop #1



Presentation of Raoul Romano, Council for Agricultural Research and Agricultural Economics Analysis (CREA), Italy



Presentation of Aikaterini Koutla– Greek Ministry of Environment and Energy, Greece



Presentation of Nuno Sequeira - INSTITUTO DA CONSERVAÇÃO DA NATUREZA E DAS FLORESTAS, Portugal



Round table “Improving the efficiency of expenditure for fire prevention in the current and in the next RDP program”