REPORT


GO PRO FOR Med
LIFE21-NAT-IT-LIFE GOPROFOR MED 101074738
WORKSHOP
MONDAY DECEMBER 4, 2023
Co-funded by the European Union
PRESERVING AND MANAGING FOREST HABITATS IN THE MEDITERRANEAN AREA
Coordinatore
Partners
Affiliati

INTRODUCTION

The European Union recently published new Guidelines on Closer -to-Nature Forest Management " to promote biodiversity -friendly and adaptive forest management as part of a common framework for closer -to-nature forest management".

Although it is relatively common in Central Europe, it has been sparsely adopted in Southern Europe and remains limited to local experiences.

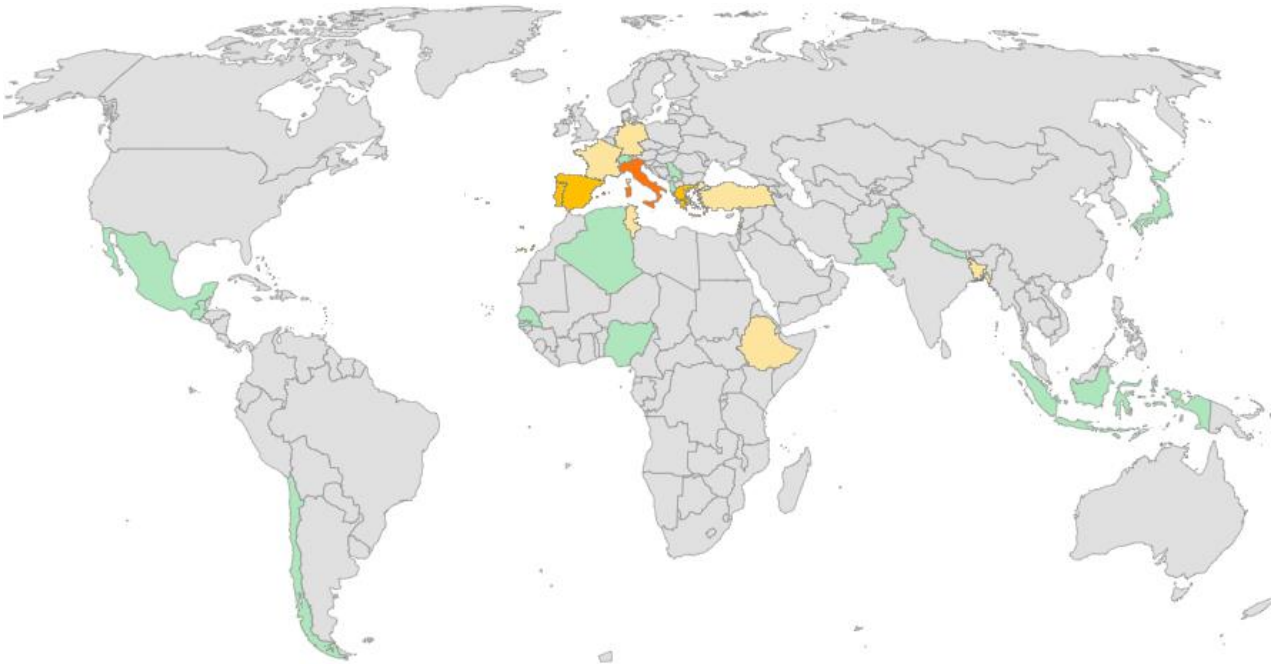
The activities of the LIFE GoProForMED project converge with what is hoped for by the EU.

The primary aim of the project is, indeed, **to improve the conservation status of four target forest habitats in the Mediterranean Biogeographic Region through the application of "close to nature" management models**.

About a year after the start of the LIFE project activities, GoProForMED organizes a workshop to present the first results , with specific reference to the planning and characterization of the elements of the ecological network for the conservation of forest habitats and their biodiversity. The workshop will also address some of the main challenges faced by Mediterranean forests: forest fires and grazing. These two aspects, combined with the forest management models promoted by the project, constitute the main challenges for ensuring the conservation of biodiversity in Mediterranean forests.

AUDIENCE

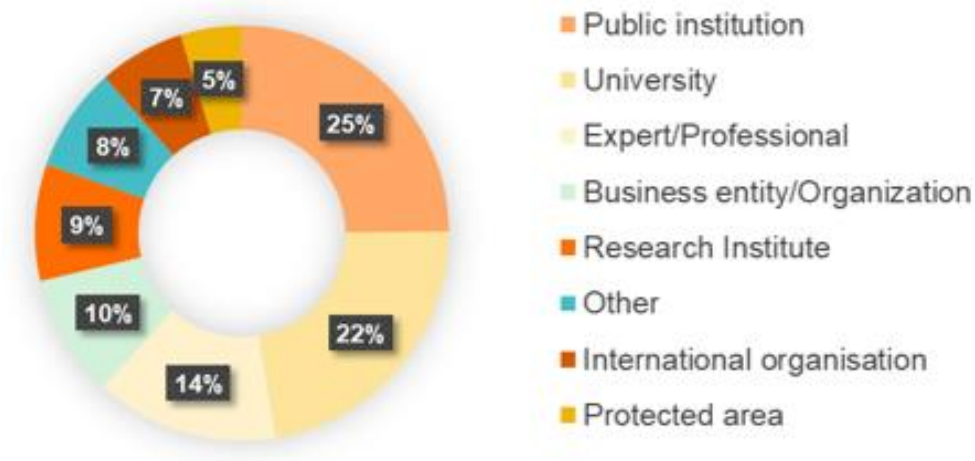
Excluding the members of the partnership, those registered for the event come from 26 Countries, of which 10 are European, 5 from the African continent, 5 from the Asian continent, 3 from the Americas, and 3 from the Middle East, for a total of 209 participants. Of these, 195 registered online, and only 14 in person. The majority of registered participants are of Italian nationality (154 participants), followed by Portugal, Spain, and Greece.



COUNTRY	REGIONE GEOGRAFICA	N°
Italy	Europe	154
Portugal	Europe	8
Spain	Europe	7
Greece	Europe	5
Turkey	Middle East	4
Bangladesh	South Asia	3
Lebanon	Middle East	3
Tunisia	North Africa	3
Ethiopia	East Africa	2
France	Europe	2
Germany	Europe	2
Malta	Europe	2
Albania	Europe	1

COUNTRY	REGIONE GEOGRAFICA	N°
Algeria	North Africa	1
Chile	South America	1
Guatemala	Central America	1
Indonesia	Asia	1
Japan	East Asia	1
Mexican	Central America	1
Nepal	South Asia	1
Nigeria	West Africa	1
Pakistan	South Asia	1
Sénégal	West Africa	1
Serbia	Europe	1
Switzerland	Europe	1
Syrian	Middle East	1

Participants are primarily affiliated with public institutions (governmental, regional, local entities), academic and professional fields, followed by business entities/organizations (such as companies, societies, cooperatives, studios, etc.), and research institutions.



The common thread connecting the majority of participants is their involvement in the forestry and conservation sector.

Regardless of actual attendance at the event, this analysis highlights a strong interest in the topics addressed by the LIFE GoProForMED project.

PARTICIPATION

In-person attendance exceeded the number of registered participants. Despite the indication of 14 registered participants, 56 individuals attended, including 35 externals to the partnership.

On the other hand, online participants were fewer than the number of registered participants. The maximum peak of online attendance reached more than 90 people.

The identity and origin of online participants cannot be verified, as the video conferencing system used (Zoom) was not configured for this function.

MORNING SESSION

The first part of the day was focused on presenting the project in general, its activities, and the initial results achieved so far. This includes efforts related to the **definition and implementation of the ecological network and its elements, emphasizing their characterization**.

Antonio Casula, General Director of FORESTAS, initiated the proceedings by introducing Forestas, the hosting organization of the workshop, and a partner in the project. Following this, **Maurizio Mallocci** (FORESTAS) delved into the activities of the Agency in Sardinia, particularly its involvement in various European projects, including LIFE GoProForMED.

Kyriakos Skordas, a board member of EUROSITE, outlined the role and activities of this European organization, highlighting how collaboration with the LIFE GoProForMed project could contribute to developing nature-friendly forest management in Mediterranean areas. He also emphasized the potential synergies between the project and the European network of N2000 area managers in terms of training and disseminating content, results, and best practices arising from the LIFE activities. Finally, **Marcello Miozzo** (DREAM), the Project Manager, concluded this introductory section by presenting the project, its operational context, participating countries, objectives, and key action lines.

The focus then shifted to illustrating one of the project's initial activities in its first year — namely, the implementation of the ecological network in the 12 target areas. **Serena Corezzola** (DREAM) began by explaining the components of the ecological network and the protocols developed to establish standard procedures for their definition, identification, and characterization.

After this "theoretical" segment, the practical application of the protocols in the 12 target areas was presented. **Marcello Airi** (FORESTAS) covered the application and current status in the 4 Italian sites; **Petros Kakouros** (EKBY) discussed the Greek site; **Haimad Baudriller** (CNPF) detailed activities in the 3 French sites, and **Mar Pallarés** (CTFC) addressed the 4 Catalan sites. Challenges arising from the practical implementation of the methodological approach across

diverse habitats and contexts were highlighted, and these experiences will contribute valuable insights for refining the protocol.

Serena Buscarini (DREAM) concluded the project's first phase by presenting the case study of the Montes Forest, detailing the transition from characterizing the ecological network to defining interventions for improving Senescence Islands. The collected field data, as previously outlined, play a crucial role in defining conservation or improvement interventions, which will be the focus of the project's second phase.

In the second part of the workshop dedicated to project activities, the presentation continued with an overview of activities related to defining direct and indirect indicators and the initial, in some cases partial, results derived from these efforts.

Lorenzo Balducci (UNISAP) and **Giada Giacomini** (DREAM) presented the monitoring conducted on canopy, epiphytic lichens, vascular flora, saproxylic beetles, phytophagous insects, birds, and bats. These efforts aim to establish relationships between multi-taxonomic biodiversity and tree microhabitats, dendrometric data, and information on previous management practices.

Tommaso Anfodillo (UNIPD) introduced the first application of the allometric approach in the Montes Forest. This approach helps predict the forest structure corresponding to the maximum resource use (a "close-to-nature" model) and assess the degree of disturbance by comparing the actual structure with the potential one. **Giorgio Matteucci** (CNR) presented additional structural indicators, including forest structure, tree microhabitats, and deadwood, complementing the allometric approach and supporting the interpretation of monitoring results. Finally, **Pierre Gonin** (CNPF) introduced the adaptation work for Greece and Spain of the Index of Biodiversity Potential (IBP), an indirect and composite indicator of the potential biodiversity of the forest.

AFTERNOON SESSION - ROUNDTABLES

The second part of the day focused on two specific pressures on forest ecosystems, typical of the Mediterranean area: forest fires and grazing. These two aspects, along with the forest management models advocated by the project, pose the primary challenges for ensuring biodiversity conservation in Mediterranean forests.

Each session, moderated by a partnership member, began with two presentations related to the theme, followed by a discussion involving both speakers and the audience, both in the venue and online.

ROUNDTABLE 1 - How to integrate wildfire prevention and biodiversity conservation

This session was moderated by **Mario Beltrán** (CTFC), who emphasized the extreme complexity of the discussed topic, considering the multitude of elements to take into account. Many actions aimed at fire risk prevention can potentially conflict with biodiversity conservation objectives.

The first presentation, by **Davide Ascoli** (UNITO), provided a comprehensive overview of methods and strategies for fire risk prevention and their relationship with forest biodiversity conservation issues. Ascoli stressed the importance of integrating these two aspects at both the landscape and stand levels, addressing key issues such as strategic land planning, spatial distribution of interventions, and the necessary compromises to achieve multiple objectives. Economic and technical constraints at the stand level were highlighted, while at the landscape scale, a detailed analysis of protected areas was proposed. Sustainable management was considered crucial, with a mention of "Closer-to-nature forestry" as a possible solution. The LIFE Granatha project was cited as an example of environmental protection integration, fire prevention, and sustainable development.

The second presentation, by **Haimad Baudriller**, a forest engineer from CNPF, focused on the CNPF's role in fire risk management and sustainable forest management, including relevant

French experiences. In France, fire risk prevention is addressed on a broad scale, differing from the local scale, which corresponds to the level of forest owners. The two issues are managed separately: prevention actions aim to ensure effective access to the territory for firefighters, while forest ecosystem management aims to promote sustainable forest management. CNPF develops public policies for protecting forests from fires and simultaneously promotes sustainable forest management exclusively for private forest owners. To achieve these two objectives coherently, CNPF must raise awareness among private individuals on these issues and convince them to manage their properties at the landscape level, encouraging cooperation. Although CNPF does not have a direct role in firefighting, it intervenes later, supporting private individuals in managing forests affected by fire. Baudriller emphasized the complexities of jointly managing biodiversity conservation and fire risk prevention. Conflicts arise, for instance, between those aiming to preserve a territory for a target species and those managing it to reduce the risk of fire. This conflict often leads to inaction, as illustrated by the example of the Hermann's tortoise. Another example concerns the rocky inlets of Marseille and Cassis, characterized by high biodiversity. The law does not allow altering the landscape to insert fire prevention infrastructures, resulting in no action taken and allowing the fire to destroy what was initially intended to be preserved. The lack of regulations and laws was only addressed in 2022 after a series of major fires in southwest France, leading to a new forest law on July 10, 2023. This legislation prioritizes fire prevention over forest conservation. If a choice must be made, sustainable management is often sacrificed. Baudriller highlighted the need for more effective dialogue and collaboration among experts from different fields.

The discussion opened with **Petros Kakouros** (EKBY), reporting that in Greece, fire risk prevention is considered a top priority, often at the expense of other aspects such as biodiversity conservation, pastoral activities, and the landscape. In 2023, a large fire occurred in the northern part of the country, bordering Bulgaria and Turkey, burning approximately 110,000 hectares, the largest fire ever in Europe. Greek policies prioritize fire risk prevention, allowing sometimes "destructive" interventions that compromise vegetation renewal.

Mario Beltrán (CTFC) emphasized that this perspective is common in Mediterranean countries, where flammable biomass has increased due to the expansion of forested areas, leading to larger and more intense fires. In Catalonia, as in Greece, the priority is protecting people rather than forests, though not as extremely as reported for Greece.

Marcello Miozzo (DREAM) believes that territorial planning is the correct approach to contain fire risk without impacting biodiversity excessively. He raised questions about the validity of reducing canopies for any type of overstory and inquired about deadwood management, seeking guidance on how to address it.

To answer the first question, **Davide Ascoli** (UNITO) emphasized that preventive silviculture has species-specific and site-specific connotations. He discussed the complexity of fire ecology and physics concerning different species and forest structures. For example, not many species are susceptible to crown fires, and for conifers, this occurs only in certain conditions. For broadleaves, it is much rarer; for instance, crown fires may occur in immature holm oak stands and in young stages. Site-specific and ecological prescriptions are required. Regarding deadwood management, Ascoli indicated that it should be adapted to the specific site conditions. He explained how the position of deadwood relative to wind and slope can influence fire intensity and severity, allowing targeted rather than extensive and economically burdensome deadwood management that is ecologically valuable. This can also increase individuals' resistance to fire.

Marcello Airi (FORESTAS) highlighted the costliness of landscape-scale interventions, proposing a more complex approach involving agro-silvo-pastoral strategies, thus engaging the local population. He stressed the complexity of altering the public perception of the landscape, which inevitably changes when subjected to fire prevention interventions. Without social consensus, any action can be ineffective, and he believes that involving communities and local realities in environmental and forest preservation is the most effective and economically sustainable solution.

Ascoli reiterated that what Airi outlined is defined as an "integrated territorial planning approach," including indirect prevention through rural development planning based on fire risk prevention. This can be economically incentivized with PES (Payment for Ecosystem Services), for example, for pastoral activities within firebreaks or for installing vineyards in the same areas, thus supporting economic activities contributing to fire prevention. He mentioned how Catalonia leads in this type of approach, while **Beltrán** emphasized the complexity of such actions. However, the goal is to create a "living landscape," populated by communities contributing to fire prevention through their actions.

Maurizio Mallocci (FORESTAS) Intervened, emphasizing the need to distinguish between the management of public and private forest heritage. The approach differs significantly, especially in the Mediterranean area, where many companies or entities that own and manage forest heritage are small. The small forest entrepreneur aims to maximize profit through logging, minimizing expenses, and abandoning the forest for decades until the next harvest. In Sardinia, with 5-600 thousand hectares of "silent" lands, many fire outbreaks develop precisely in these neglected areas. There still persists an anthropocentric view of environmental and forest assets, where humans act as predators. It would be desirable to evolve towards a perspective in which environmental and forest assets are considered subjects with rights, similar to other living beings, requiring constant care as "subjects" rather than "objects." To achieve this goal, it is necessary to eliminate subjectivity and return to objectivity through planning that binds both public and private entities according to a plan and not individual interests.

Ascoli responded by noting that this perspective is already present in Tuscany (Italy), where private individuals must adjust the management of their properties according to established management tools. There are regulatory tools that allow intervening in place of a private manager if they do not comply with the prescribed measures, especially in cases of strong interests such as fire risk. Initiating a path that fosters consensus, using land aggregation tools, and creating economies of scale to ensure sustainable management is crucial.

Beltrán concluded by reiterating the complexity of the discussed issues and emphasizing the need for further discussions and workshops to address various aspects related to fire risk management, involving the local population and creating social consensus.

ROUNDTABLE 2 - Grazing in the forest: challenges and opportunities

The element of forest grazing is not addressed by the project, but since the beginning of the activities, it has been realized that this element cannot be overlooked when discussing forest management in the Mediterranean area. For this reason, it was decided to include this session to initiate a discussion on this aspect and hopefully gather valuable insights to integrate into the project's logic. **Teresa Baiges** (CPF) moderated this session. Baiges reiterated that there is no doubt that current Mediterranean forests have been influenced by traditional activities such as grazing, and the GoProForMED project cannot disregard this aspect. Although grazing is no longer an activity of significant prominence, it still persists in some Mediterranean forest areas. For instance, in Spain, 50% of forest areas consist of open forest areas affected by grazing. A traditional agro-silvo-pastoral form is represented, for example, by Dehesas, recognized at the European level as areas rich in biodiversity. In these systems, a less functional aspect is that the conservation of biodiversity, forest management, pastoral and agricultural activities are considered separately. This kind of "stovepipe" approach is unfortunately quite common and ideally should change, opening up to the "systemic" integration of all these aspects. Grazing contributes to maintaining open areas, which are key environments for biodiversity and are currently declining across Europe. Even within a forest context, these areas are biodiversity reservoirs and key elements for species associated with forests. Grazing has and can play a key role, both in terms of reducing the risk of fire, as highlighted in the previous session, and in maintaining open areas within a forest environment, even though it may simultaneously present conflicting aspects.

The first presentation in the session is by **Salvatore Mele** (FORESTAS), providing a historical overview of the pressure from domestic grazing in the Supramonte area, the project's target area. Grazing in these forests is predominantly sheep and goat, while in other historical periods, pig and cattle grazing had greater significance. Mele traces the history of different types of grazing in different historical periods and the impacts exerted on forest areas.

The second presentation, given by **Giovanna Seddaiu** (UNISS), illustrates critical issues and solutions about grazing in the forest. Seddaiu introduced the topic, emphasizing the importance of proper management of silvopastoral systems to maximize the benefits grazing can have on the forest and minimize its negative effects.

In Italy, agroforestry systems with grazing animals constitute about 10% of usable agricultural land (1,300,000 ha). In Sardinia, since the 1950s, the forested area has increased from 13% to 54%. This is also due to significant abandonment of grazed areas. Despite this, it is reported that in Sardinia, about 1 million hectares of agroforestry land are affected by forms of grazing. In relation to national data, Sardinia is therefore a territory heavily impacted by these activities. However, robust, homogeneous, and standardized data on the actual grazed areas are lacking, and it would be desirable to have standard inventory forms to reconstruct a realistic framework for more accurate planning. Regarding the trade-offs between the benefits and critical aspects of grazing in the forest, a 2019 review shows that studies are not always consistent in attributing benefits or disadvantages of grazing concerning key forest elements. This is due to the great complexity of biotic and abiotic factors that determine impacts on the forest and the provision of ecosystem services. There is, therefore, a strong need for more objective quantification.

The grazing management methods, the ecological functions of the forest, and animal behavior are very relevant factors for grazing to maximize its potential beneficial effects and minimize critical aspects. Therefore, management strategies in this direction are necessary. Some examples of innovative livestock management techniques are then presented: 1) improving the productivity of the forage component to limit competition with the tree component by enhancing its quality; 2) adaptive multi-paddock grazing systems: animal movement is not free but is guided in paddocks (enclosures) with a very high instantaneous load in terms of the number of animals per unit of area and unit of time, with adaptive rotation of grazing areas based on forage availability; 3) virtual fences; 4) attractive points (molasses or salt) set up to

guide livestock along defined preferential paths by the manager to preserve certain types of vegetation or contain/eliminate other target vegetation types.

Baiges opens the discussion, emphasizing how the presentations have clearly highlighted the complexity of the topic, and at times, the contradictory nature of information related to grazing in forests.

Marcello Miozzo (DREAM) raises a question about the actual collaboration of shepherds in applying the innovative techniques illustrated by Seddaiu or whether these are still experimental models confined to a few experiences. He also asks if Seddaiu believes these methodologies are easily applicable.

Currently, these approaches have been mainly tested in a few private farms. Another factor to consider is the significant challenge related to the abandonment of such activities. The disappearance of livestock farming from certain contexts results in the loss of pastoral culture, knowledge and everything connected to it. Seddaiu suggests that when grazing is managed by public entities, such as FORESTAS Agency, whose primary goal is the conservation of the territory, they could be ideal entities to implement these strategies. While economic incentives might encourage the application of these methods, they might not be sufficient on their own; active involvement of local communities in territorial governance is necessary. Large-scale planning based on the different vocations of the territory could reduce conflicts with forest management and promote positive synergies between grazing and biodiversity conservation.

Mele highlights that the pastoral system in Sardinia is undergoing a change. Livestock farming is becoming less attractive to younger generations, and shepherds are currently in very old age groups. This could lead to further abandonment of traditional activities and favor further expansion of forested areas on the island, which, in Mele's opinion, are already too high.

Seddaiu emphasizes the current challenges that shepherds face when it comes to forest grazing, such as higher management costs, difficulties in installing fences, competition with

wildlife, and limited mechanization, as well as the provision of lower financial incentives in the presence of an increase in forested areas on farms. These challenges contribute to an attitude of disinterest in forest management. Seddaiu underscores the importance of finding appropriate tools to counteract this lack of interest; otherwise, it will be challenging to achieve the adoption of management strategies suitable for forest conservation by shepherds.

Baiges concludes by putting forward two requests to the GoProForMED project, suggesting better integration of the legacy of grazing in Mediterranean forests in biodiversity assessments and considering the role of grazing in maintaining forest biodiversity, identifying it, and possibly promoting it along with fire prevention.