



LIFE PROJECT – FoResMit

LIFE14 CCM/IT/000905

DELIVERABLE ACTION E.12

AFTER-LIFE COMMUNICATION PLAN



HELLENIC REPUBLIC
DECENTRALIZED ADMINISTRATION of MACEDONIA & THRACE
GENERAL DIRECTORATE of FORESTS & RURAL AFFAIRS
XANTHI FOREST DIRECTORATE

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1. Introduction

As foreseen by the project and taking in consideration B6 Form of Grant Agreement, After Life Plan of FoResMit Project has been realized with the aim to:

- Describe the project main achievements and results and the dissemination actions implemented until the project end
- Present the strategy to continue the monitoring of project results and the communication with the target audience for the coming years, considering technical details; rationale; risks and mitigating factors.
- Highlight concrete replicability potential, considering available resources and funding active search.

2. The FoResMit project

Project location:	Italy: Toscana; Greece: Anatoliki Makedonia, Thraki
Project start date:	01/09/2015
Project end date:	31/08/2019
Total budget:	€ 1,480,568
EU contribution:	€ 879,264
(%) of eligible costs:	60
Coordinating Beneficiary:	Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria (CREA)
Associated beneficiaries	Città Metropolitana di Firenze (PROVIFI) Democritus University of Thrace (DUTH) Decentralized Administration of Thrace (DAMT)
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Project Website:	www.lifeFoResMit.com

2.1. Background and description

Pine forests planted in the last century to reconstitute the forest cover, in the absence of active management can face forms of degradation. Degraded forests are forest stands with many dead, damaged and bad formed trees that have lost their resilience capacity, defined as the ability to recover their structural and functional capacities, as a result of a disturbance or lack of cultural care. In view of the actual increase of greenhouse gases (GHGS) and related climate changes, forests have a key role as CO₂ sink and climate regulators. When a forest is healthy, the CO₂ removed from the atmosphere and accumulated in the trees and in the soil is greater than that emitted by decomposition processes. When a forest is degraded, the decreased growth does not remove enough CO₂ from the atmosphere to compensate the greenhouse gas emissions due to the decomposition of dead trees and soil organic matter.

The general objective of the project was to test and verify in the field the effectiveness of thinning treatments for the restoration of peri-urban degraded coniferous forests in Italy (Monte Morello forest) and Greece (Xanthi forest), improving the ecological stability and climate change mitigation potential of these ecosystems. A multidisciplinary approach was applied to define the impact of traditional and selective thinning treatments on vegetation structure, biomass increment, C accumulation in all relevant pools of vegetation and soil, and CO₂ and other greenhouse gas fluxes, thus giving a complete picture of mitigation potential of management practices. At the same time

the project aimed at ensuring more resilient forest ecosystems and creating benefits for local population and human well-being considering the whole ecosystem services of the forest.

2.2. Achievements

Overall, LIFE FoResMit project demonstrated the applicability of thinning treatments based on positive selection to recover degraded coniferous forests. Referring to the expected results, at the end of the project, the following main objectives were achieved:

- demonstration of the three mitigation options of i) reduction/prevention of emissions, ii) sequestration – enhancing uptake of C and iii) substitution of fossil fuels for energy production with biological products.
- increased net primary productivity of forest stands, stability and resilience
- increased soil C stock
- after an initial increase, reduction of CO₂ emissions and GWP from soil and increased CH₄ uptake
- energy cogeneration with removed woody biomass and fossil fuel substitution
- quantification of C credits, C sequestration and timing
- forest ecosystem services improved, considering trade off among provisioning, regulating, supporting and cultural services.

2.3. Communication actions to the target audience

Communication actions:

- 26 general articles and press release on national and International media
- 19 technical and scientific publications on peer reviewed national and international journals and University theses
- Organization of 13 events plus 4 dedicated to Institution and policy makers
- Participation at 35 national and international events and 2 COST actions
- Networking with 9 LIFE projects, participation at 7 joint events and organization of 3 joint events
- Social survey and interviews for local communities' involvement in the decision planning

Communication tools:

- Website
- Notice boards in beneficiaries' premises and monitoring filed sites
- Brochures and informative leaflets
- Rolls up and posters
- Various gadgets
- Manual with silvicultural guidelines in Italian, Greek and English
- Layman's report in Italian, Greek and English
- 2 videos in Italian, Greek and English

Impact:

- Based on stakeholder analysis we identified and involved in the project events 4 groups of interest, basing on their field of activity: public administrations, environmental Non-Governmental Organizations-NGOs and actors of tourism sector, forest-wood chain actors, Universities and research institutes, for a total of 63 actors.
- 653 participants at events organized by the project
- 25 public entities interested in the replication of selective thinning
- 269 Monte Morello visitors' plus 34 representatives of organized groups interviewed
- 803,820 website visitors and 303 Facebook friends

3. After-LIFE strategy (communication strategy: audience, channels of communication, ways of evaluating the impact of actions)

Forest management has a long-term perspective; hence it is important to plan a follow-up for many of the Actions. Effects of thinning implementation will need more years to become evident and reliable. As observed for C credits, the short term of the project duration was not enough to generate positive carbon credits and estimates foreseen 3-5 years to replenish the loss of C stock in the forest. In particular, the following strategy is adopted in order to guarantee long term usage of the project results:

1. Medium- and long-term monitoring of the treated areas
2. Ongoing dissemination of the new system. Deliverable: update of the commitment of the main targeted stakeholders to uptake the solutions proposed by the project
3. Active search for funding for further implementation of the LIFE FoResMit system

The implementation of the strategy and its achievement are based on internal resources of project beneficiaries, commitment of public administrations and forest managers involved as target audience of the project and application to national and international funding sources

3.1. Medium- and long-term monitoring of the treated areas

This action will be rather easy to implement, because once the forest treatment phase is complete and the monitoring protocols are validated, it will be possible to carry out the necessary samplings and analyses in a technically simple and economically feasible way.

Monitoring of vegetation will include maintenance of monitoring plots, Trees number, Basal area, Biomass increase, Unstable trees. Monitoring of soil will include soil sampling at 0-10 and 10-30 cm and analyses of C and N content by elemental analysis. CO₂ emissions will be estimated based on temperature functions. C sequestration and C credits generation will be re-calculated using the new data. Already established contacts with CREA-PB group “Nucleo Monitoraggio del Carbonio”, UNCEM Marche and Regione Marche to compensate the emissions from the third line of freeway, Etifor (private company) will be used as means of C credits governance.

These actions will be carried out by means of the partners’ own funds unless other resources are found. Moreover, we’ll continue to collaborate with University of Firenze and carry on bachelor and master thesis (currently 1 master thesis and 1 training are running).

<u>Action</u>	<u>Activity</u>	<u>Resources</u>	<u>Duration after the project end</u>
D1	Quantification of C pools in vegetation and soil in Morello and Xanthi forests	Own resources for personnel and travel (€ 2,000)	3 years (5 years after thinning)
D2	Estimates of CO ₂ emissions from soil based in Morello and Xanthi forests	Own resources for personnel and travel (€ 2,000)	3 years (5 years after thinning)
D3	Quantification of C sequestration and carbon credits	Own resources for personnel (€ 2,000)	3 years (5 years after thinning)
D3	Voluntary C market implementation in collaboration with identified stakeholders	Own resources for personnel (€ 2,000) and funding search	3 years (5 years after thinning)

3.2. Ongoing dissemination of the FoResMit approach

The project partners have a real interest to the promotion and dissemination of project results and their institutions will take advantage of publication of scientific and technical articles, participation in conferences, seminars, courses, etc. as well as of their own established international networks to continue to disseminate the innovative forest treatment. This dissemination will continue for three years following the project conclusion, and the project website will be kept up to date for the same period.

Ongoing publications are already submitted to international journals:

- Special issue: “Application of Innovative Silvicultural Treatment on Pine Forests” on Forests journal.
- Drought-induced growth dynamics and responses to climate of mixed tree species in a Mediterranean conifer forest.
- Microbial communities and activities of forest floor fractions in degraded pine forests after thinning treatments.
- Thinning effects on litterfall accumulation and forest floor production and their nutrients concentration in relation to soil GHG fluxes.
- Carbon mitigation of Xanthi periurban forest - a GIS mapping application.

Region of Easter Macedonia and Thrace, Leader Partner of the “Wild Life For Ever” project (Interreg Greece-Bulgaria 2014-2020), asked DAMT by numb. 110397/14999/28-06-2019 to receive book copies and to cooperate in future dissemination activities.

These actions will be carried out by means of the partners’ own funds unless other resources are found. Moreover, several contacts with stakeholders have already established in a stable way and will be used to gain the maximum impact.

<u>Action</u>	<u>Activity</u>	<u>Resources</u>	<u>Duration after the project end</u>
E1	Website update: each three months CREA will update the FoResMit website with the technical and dissemination news	Own resources for personnel (€ 4,000)	3 years
E5	General articles: 5 publications foreseen	Own resources for personnel (€ 1,000)	5 years
E5	Scientific articles: 6 publications foreseen on results of monitoring 5 years after thinning.	Own resources for personnel (€ 3,000)	5 years
E6	Networking with national, H2020, INTERREG and LIFE projects related to forest and climate sectors	Own resources for personnel (€ 2,000)	3 years (5 years after thinning)
E8	Development of contacts already initiated during the project with the identified stakeholders, which will result in dissemination events. Already performed:	Own resources for personnel (€ 2,000)	3 years
E8	New contacts with stakeholder in Italy and Greece, which are potentially interested in FoResMit activities and results	Own resources for personnel (€ 2,000)	3 years
E9	Development of contacts already initiated during the project with the identified Institutions and policy makers to implement selective treatments	Own resources for personnel (€ 2,000)	3 years

E9	New contacts with Institutions and policy makers potentially interested but not reached during the project duration	Own resources for personnel Around € 2,000	3 years
E10	Dissemination in events linked to forest and climate sectors. Participation at 6 national meetings and 2 international meetings will be	Own resources for personnel and travel (€ 6,000)	3 years
E10	Distribution of 5,000 brochures and leaflets during special events, workshops, direct visits, meetings and email	Own resources for personnel (€ 1,000)	5 years
E11	Diffusion of 2,000 video and gadgets during special events, workshops, direct visits, meetings and email	Own resources for personnel (€ 1,000)	5 years

3.3.Active search for funding for further implementation

Activities aimed at implementing selective thinning in other test areas and further investigating new aspects related to what learned from the project are already started and will continue in the next years.

3 proposals related to the project results, aimed at deepening the knowledge and achievements on specific aspects are already submitted to national and international funding programs:

- “Sistema di Supporto alle Decisioni per il miglioramento della performance della filiera foresta-legno in una prospettiva di bioeconomia circolare (FOR.CIRCULAR). Call “Bando per la promozione di progetti di ricerca a supporto dell’attuazione della Strategia Nazionale per lo Sviluppo Sostenibile - Snsvs 2”
- Innovative deadwood management to improve the ecosystem services provided by mixed forests (LIFE IDEA) submitted on LIFE19 ENV/IT/000241
- Resilient management of Forest ecosystems in a Lake basin (DendroForLake) submitted on LIFE19 CCA/IT/001316.
- Preparation on a proposal in the H2020 call: Forest soils Research and Innovation Action - ID: LC-SFS-22-2020. Focus area: Building a low-carbon, climate resilient future (LC)

Other proposals will be submitted to proper calls in the next years.

Letters of interest from 25 Institution and 27 forest-wood chain actors demonstrate the feasibility and concrete willingness on the application of selective thinning in their own areas in Italy, Greece and Spain. No legislative constraints emerged during specific meeting held with policy makers and selective thinning can be applied under the current forest law in Italy. In Greece, the new plan of Xanthi-Geraka-Kimmerion public forest cluster already included selective thinning and the Forest Service of Xanthi has already applied selective thinning in the first tree marking process in spring 2019 on 119 ha. Forest Directorates of Eastern Macedonia and Thrace and 8 municipalities declared to include the FoResMit approach in their management plans.