



LIFE14 ENV/IT/000414
Demonstrating Remote Sensing integration in sustainable forest management
FRESH LIFE

ACTION D7
Networking

Deliverable
Networking Final report

Florence, 30/11/2019

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1. Aims

The aims of this action were:

- promote clustering activities with other EU networks, initiatives and projects (including other LIFE and LIFE+ Projects) connected to the project topics and sectors, e.g. organization of common events to share results and experiences and publication of news about the project on their newsletters.
- create synergies among stakeholders all over the EU to promote the adoption of forest/environmental technologies by local authorities and private sector

2. Milestones e deliverables

In the Action D7, the following milestones and deliverables are expected:

<i>Name of the deliverable</i>	<i>Deadline</i>
D1 – Networking Report	31/12/2017
D2 – Networking Final Report	30/11/2019

3. Progress

As indicated in the project proposal, two permanent collaborations with relevant networks were established: AIT and SISEF have joined our network and have disseminated the events and news about the project. FRESH LIFE has participated at the events of these organizations with special sessions dedicated to the project. Also the networking with other LIFE and non-LIFE projects is already began.

Scientific Societies and Institutions



AIT (Associazione Italiana Telerilevamento)

The Italian Society of Remote Sensing is involved for transferring good practices in the use of multiplatform and multisensory remote sensing for monitoring forest resources. The FRESH LIFE project is involved in supporting AIT activities such as sponsorship of conferences and workshops. FRESH LIFE news are published on the AIT website too. In July 2018 we had an entire sessions dedicated to our project at the AIT international conference. The full video streaming of the session is available on our YouTube Channel.



The Working Group on Forest Geomatics of the Italian Society of Silviculture and Forest Ecology is active in promoting the use of spatial tools and remote sensing for supporting the sustainable use of forest resources. The FRESH LIFE organised a special session at the XI SISEF congress held in Rome from 10 to 13 October 2017 (at this link our video realized during the event https://youtu.be/_Egg2ypqkMY). In November 2019 we had an entire session dedicated to our project in the XII SISEF National Congress during which we organized the Final Event. FRESH LIFE was also one of the sponsor of the congress helping with organization and funding.

LIFE projects



LIFE14 ENV/IT/000514 – www.futureforcoppices.eu/it/

The LIFE project Future For CoppiceS is aimed at developing and promoting a better knowledge of coppice forests for a more sustainable management of this important source of ecosystem services. The methods for UAV remote sensing developed in FRESH LIFE can be useful for acquiring information to support coppice forests management. For this purpose, in August 2016 we used our eBee UAV to create 3D spatial information on one of the test sites of Future For CoppiceS.



LIFE13 ENV/PL/000048 – <http://www.forbiosensing.pl/>

The aim of the LIFE+ project ForBioSensing is to develop and apply a monitoring method for the Białowieża forest (Poland) with the use of innovative techniques and data, including multiple types of remotely sensed information. Both FRESH LIFE and LIFE+ ForBioSensing are focused on forest remote sensing techniques, for this reason Prof. Krzysztof Stereńczak (Forest Research Institute), coordinator of the LIFE+ ForBioSensing visited in February 2017 the geoLAB – Laboratory of Forest Geomatics at the University of Florence to start a scientific protocol for the common use of remotely sensed data. The first aim of the protocol is aimed at forest types mapping.



LIFE14 ENV/ES/000179 – <http://www.lifehealthyforest.com/>

The LIFE project HEALTHY FOREST is aimed at applying advanced methodologies to achieve a more sustainable forest management at EU level in the field of control and prevention of forest decline caused by invasive and pathogenic agents. FRESH LIFE and LIFE HEALTHY FOREST agreed to share communication and information on-line platforms for augmenting the impact of

news and results dissemination. The application of UAV monitoring systems developed in FRESH LIFE for LIFE HEALTHY FOREST purposes (forest health monitoring) are also foreseen.



LIFE+IMAGINE

LIFE12/ENV/IT/001054 – www.life-imagine.eu/it/

LIFE+IMAGINE through advanced environmental monitoring technologies is aimed at providing information to support coastal management. UAV technologies implemented in FRESH LIFE can be successfully used for monitoring these environments. The geoLAB – Laboratory of Forest Geomatics at the University of Florence signed for this purpose an agreement with LaMMA Consortium for Environmental Modelling and Monitoring Laboratory of Tuscany Region, partner of LIFE+IMAGINE.



LIFE12 ENV/ES/000148 – <http://lifecomforest.gobex.es/es/>

The LIFE+ COMFOREST is aimed at the identification, monitoring and sustainable management of communal forests in Extremadura. For this reason UAV technologies operated in FRESH LIFE can be used for acquiring updated and detailed information for specific forest areas. FRESH LIFE and LIFE+ COMFOREST agreed to share news and results dissemination through common communication and information on-line platforms.



LIFE15 CCM/IT/000141 – <https://olive4climate.eu/en/>

OLIVE4CLIMATE – LIFE

Climate Change Mitigation Through a Sustainable Supply Chain for the Olive Oil Sector



LIFE17 GIE/IT/000561

GOod Practices implementation netWOrk for FOReSt biodiversity conservation

During the last year of project, we were also selected by the LIFE project GOPROFOR as a Best Practices. The project aims to "distill" the GOOD PRACTICES from LIFE projects of forestry interest realized throughout the European Union between 1992 and 2018. For good practice they mean an instrument for the application of nature conservation, in relation to forest themes in a broad sense. The good practice must be validated, possibly through scientific evidence, in detail described and, therefore, perfectly replicable. After a validation procedure the Forest Information System that we produced for the demonstration sites was included in the best practices database (<https://www.lifegoprofor-gp.eu/best-practice/115/ita>).



Other projects



GO SURF – <https://go-surf.it/>

GO SURF is a project funded by the European program for rural development and, like the FRESH LIFE, is aimed to create a Forest Information System useful for achieving the goals of Sustainable Forest Management. Through the UNIFI we collaborate to create an Operational Groups (OG) inside the European Innovation Partnership (EIP-AGRI). The aims of this project are in line with the ones of the FRESH LIFE and they take inspiration from the results of our project to create a Forest Information System that integrates the local ones (like the ones created in our demonstration sites) inside a bigger one operative at regional scale. A decision support system (DSS) that allows to increase the areas managed following the Sustainable Forest Management.

Network Activities

Here below a list of the networking events we organize in the last year of project. All the details are presents on our website and on the FB page that contain a complete report of these events including photos and videos.

- 10-12 December 2018, collaboration with a network created to quickly answer on the emergency caused by the “VAIA” windstorm in northern Italy. Our team participated with the acquisition of high resolution remote sensing data by UAV. Data derived were used from national bodies to better understand causes and consequents of the event;
- 29 January 2019, seminar “Geoinformatics in monitoring forest disasters” organized in Florence in collaboration with the Laboratory of Geomatics of the Faculty of Forestry, University of Agriculture in Krakow, Poland. A video of the event is available on our FB page;
- 22 March 2019, presentation of the shared activities within the final event of the LIFE project FutureForCoppices with which we had a strong scientific collaboration especially in the UAV data acquisition and elaboration;
- 23 March 2019, organization of the event “Learn to Love Forests” held in Florence on the occasion of the International Day of Forests. A video recorded during the live streaming of the event is available on our FB page;
- 1-5 April 2019, participation at the VI Mediterranean Forest Week in Lebanon to present the results of our project. We had a poster and a presentation at the Mediterranean Forest Model Network in a special session dedicated to the best practices for the sustainable forest management. PDF version of the poster and presentation are available on our website together with photos from the event;
- 10 April 2019, sponsorship and participation at the Workshop “Geomatics for environmental management” held in the Lecture hall of the School of Agriculture in Florence in collaboration with the Erasmus+ project GEONATURA. A video recorded during the live streaming of the event is available on our FB page;
- 22 June 2019, participation at the Southern Hub Workshop of Rosewood H2020 Project where we presented how maps obtained by the integration of field data and UAV data can be useful for sustainable wood mobilisation;
- 1-5 October 2019, participation at the XXV IUFRO World Congress in Curitiba (Brazil) where Anna Barbati (University of Tuscia) presented the results of our project in a session named “Innovative application of Unmanned Aerial Vehicles (UAVs) in Forest Science and Management” during which she talked about “What UAV remote sensing can tell us about sustainability of forest management at operational level: lessons learned from the EU funded FRESHLIFE project”. The presentation is available for download on our web site;

From the list we want highlight the participation at the Mediterranean Forest Model Network annual meeting in Lebanon and to the XXV IUFRO World Congress in Curitiba (Brazil). Both these were great occasions to sharing results achieved with our project and improved our network in order to

maintain activities also in the AfterLIFE period. A complete list of the network created during the project period is available on our website together with a description to the sharing activities with each project.

Another important part of the networking has regarded the acquisition of UAV remote sensing data with our eBee on the demonstration sites of other project LIFE and not. The knowledge acquired on the use of UAVs allowed us to start many networking activities due to the potentials of these tools. Here below a short list of the flights organized following the request of UAVs data to test it in other projects or situations.

Date	N. of flight	Area covered (ha)	Description
01/07/19	4	190	Networking activities with LIFE Future for Coppices in south Tuscany
10/12/16	12	550	Acquisition on coastal forests in the Monteverdi Marittimo area to test cutting monitoring for forestry companies
11/12/16	5	450	Acquisition on coastal forests in the Monteverdi Marittimo area to test cutting monitoring for forestry companies
07/04/18	2	50	Riparian vegetation acquisition for river management in collaboration with UNIFI
15/12/18	2	90	Flights to test potentials in soil erosion monitoring after forest wildfires
07/06/19	5	190	Flights on the Natural Reserve of Vallombrosa to acquire data for the new forest plan
30/06/19	2	100	Acquisition of data to compare the results of two different management methods on beech forests of Tuscany Apennine
23/09/19	2	90	Acquisition for thinning planning due to the realization of new ski slopes
11/11/19	6	120	Riparian vegetation acquisition for river management in collaboration with UNIFI