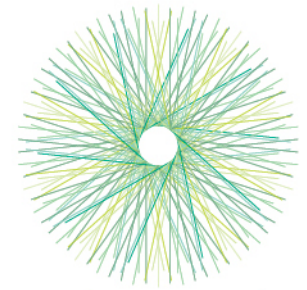


# Press article

## Sustainable forest management

JANUARY 2018



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### Press article 500words

#### Creating vital cork forests in Portugal with satellite and GIS data

#### Portuguese foresters to develop a decision support tool to help save time and money

**Cork oak forests are losing vitality in some regions of Portugal, causing problems for the foresters and the national forestry services. Dr. Luís Filipe Falcão, forest producer: "Over the past few decades, I have observed a reduction of quantity and quality of cork produced. More dramatically, I have seen a clear increase in tree mortality. This is a serious threat as cork oaks need to grow for 40 years before they first yield a good quality cork." An additional problem is that getting rid of dead trees requires a lot of manual work and time. First, foresters mark them individually with a white stripe and then they apply for a cutting permit from the national forestry services. This is followed by a visit to the farms by the national forestry, and only then the trees can be cut down.**

To address these tree mortality issues, Conceição Santos Silva, technical coordinator at Associação de Produtores Florestais do Concelho de Coruche Limitrofes (APFC, a forest landowners private association) decided to start working in an Operational Group: "In cooperation with researchers and forest producers, we want to make a mobile tool that can assess in real time what the vitality of a tree is, based on objective information like climate and leaf change."

The association already collects past and current GIS data of dead cork oak trees from several farms. In the Operational Group "GEO SUBER", this information will be combined with free images from the satellite Sentinel 2 to feed into an existing digital platform. The Operational Group will turn this digital platform into a user-friendly mobile tool for the landowners and forestry services. Once developed, the tool will allow the forest producers to take precautionary forest management measures. Silva: "After the identification of the spectral signature of the dead trees, an automatic classification can be developed to produce the maps with the dead tree location." These maps will be useful not only for the forest landowner, but also for the forestry services to authorise cutting down the trees.

Falcão: "My role in the Operational Group is to express the concerns, expectations and requirements from the producers' point of view and to share my experience and provide data related to cork oak decline. I will compare the calculated predictions obtained by remote-sensing, with the current vitality and vigour of the trees. Additionally, as an end-user of the mobile tool, I shall provide feedback on its usability."

In the end, the tool should allow landowners to quickly detect cork oak decline, loss of vitality and tree mortality. This will allow a faster response time. Also, landowners will get support in drafting forest management plans and implementation of risk management practices, resulting in a recovery of vitality. Silva: "Lastly, this technology can simplify the procedure required prior to cutting down affected cork oaks."

Luís Filipe Falcão is hopeful about the Operational Group's work: "I hope that we will foster a fruitful relationship between the partners in the Operational Group, which may then translate into further work addressing the various challenges in cork oak silviculture and forestry in general."

## Press article 250words

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The association already collects past and current GIS data of dead cork oak trees from several farms. This information feeds into a digital platform that the Operational Group "GEO SUBER" will turn into a user friendly mobile tool for the landowners and forestry services. Falcão: "My role in the Operational Group is to express the concerns, expectations and requirements from the producers' point of view and to share my experience and provide data related to cork oak decline. I will compare the calculated predictions obtained by remote-sensing, with the current vitality and vigour of the trees. Additionally, as an end-user of the mobile tool, I shall provide feedback on its usability."

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## Background information

### Project information

[Operational Group: GEO Suber](#) (AIS poster page 9)

### Pictures

Pictures below are free for use, please use the copyright: Associação de Produtores Florestais do Concelho de Coruche Limitrofes (APFC, a forest landowners private association)



The Operational Group is developing a mobile tool that will allow landowners to quickly identify tree mortality and detect new spots of cork oak decline or areas with loss of vitality. This picture shows a cork oak's 'sudden death', a phenomenon that can occur at the end of the summer.



Dr. Luís Filipe Falcão, forest producer, uses a drone to get information on the vitality and vigour of the trees. The Operational Group then compares it to the pictures obtained from the satellite Sentinel 2 to confirm the spectral signature of the dead trees.

### More information on sustainable forest management

- [EIP-AGRI workshop 'New value chains from multifunctional forests'](#)
- [EIP-AGRI Focus Group 'New forest practices and tools for adaptation and mitigation of climate change'](#)
- [EIP-AGRI Brochure on Creating diverse forests with multiple benefits](#)

### EIP-AGRI Inspiration from your country on sustainable forest management?

Here below you find a list of topics that have been covered in one of the EIP-AGRI events and / or EIP-AGRI publications.

Albania	Improving hydropower production through sustainable forest management	<a href="#">EIP-AGRI Brochure on Creating diverse forests with multiple benefits</a> – p.7
EU, Austria, Normandy, Belgium	Twecom project: projects that put unused woody biomass to good use	<a href="#">EIP-AGRI Brochure on Creating diverse forests with multiple benefits</a> – p.9
Finland	Profitable energy production from biomass	<a href="#">EIP-AGRI Brochure on Creating diverse forests with multiple benefits</a> – p.9
Finland	Improving forestry value chains in Finland	<a href="#">Inspirational idea</a>
France	Operational Group OU-GEF: Innovative tools for collaborative forest management	<a href="#">Workshop New Value Chains for multifunctional forests</a> – p.3 <a href="#">Presentation at workshop</a>
Greece	The concept of complete forest utilisation	<a href="#">Workshop New Value Chains for multifunctional forests</a> – p.13
Portugal	Forest land owners' associations managing forest land	<a href="#">EIP-AGRI Brochure on Creating diverse forests with multiple benefits</a> – p.11
Spain	High value 3D printed products from low quality cork raw materials	<a href="#">Workshop New Value Chains for multifunctional forests</a> – p.16

Spain	Exploring multiple forest functions	<a href="#">EIP-AGRI Brochure on Creating diverse forests with multiple benefits</a> - p.4
Sweden	Combining timber production with traditional sámi reindeer herding	<a href="#">EIP-AGRI Brochure on Creating diverse forests with multiple benefits</a> - p.6

## EIP-AGRI

The European Innovation Partnership 'Agricultural Productivity and Sustainability' (EIP-AGRI) is one of five EIPs which have been launched by the European Commission in a bid to promote rapid modernisation of the sectors concerned, by stepping up innovation efforts.

The EIP-AGRI aims to foster innovation in the agricultural and forestry sectors by bringing research and practice closer together – in research and innovation projects as well as via the EIP-AGRI network.

EIPs aim to streamline, simplify and better coordinate existing instruments and initiatives, and complement them with actions where necessary. Two specific funding sources are particularly important for the EIP-AGRI: the EU Research and Innovation framework, Horizon 2020, as well as the EU Rural Development Policy.

- [EIP-AGRI Brochure on the EIP-AGRI Network \(2015\)](#) (EN – FR – GR – HU – IT – PT – RO - SP)
- [EIP-AGRI Brochure on Thematic Networks under Horizon 2020](#) (EN – FR – HU – SP)
- [EIP-AGRI Brochure Horizon 2020 multi-actor projects](#) (EN)
- [EIP-AGRI Brochure on Funding opportunities under Horizon 2020 - 2018 Calls](#) (EN)

## EIP-AGRI Operational Groups

EIP-AGRI Operational Groups are groups of people who work together in an innovation project funded by Rural Development Programmes (RDPs). Operational Groups are the EIP-AGRI's main tool for turning innovative ideas into real solutions for the field.

An Operational Group consists of several partners with a common interest in a specific, practical innovation project. The people involved in the Operational Group should bring in different types of practical and, where necessary, scientific expertise. They may include farmers, scientists, agri-business representatives and many others. Every country or region has the possibility to define specific national demands or restrictions on how to put together an Operational Group.

- Visit the [Operational Groups page](#) on the [EIP-AGRI website](#)
- [EIP-AGRI Brochure on Operational Groups: Turning your idea into innovation \(update 2016\)](#) (EN – CZ – FR - HU – PT – RO – SK – SP)

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