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EU Forest Strategy puts forest ecosystems on the path to recovery

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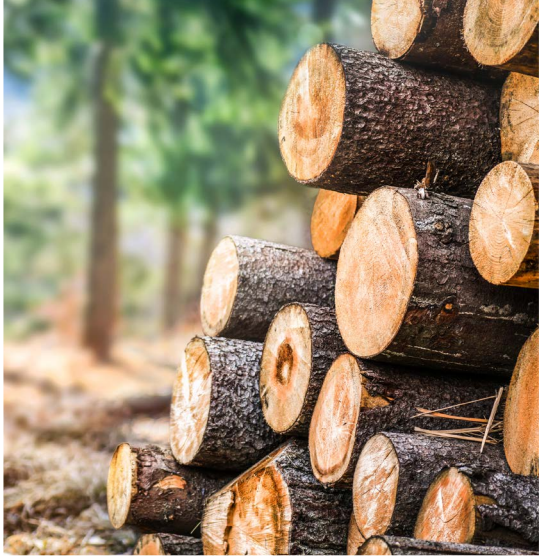
funded by European Commission



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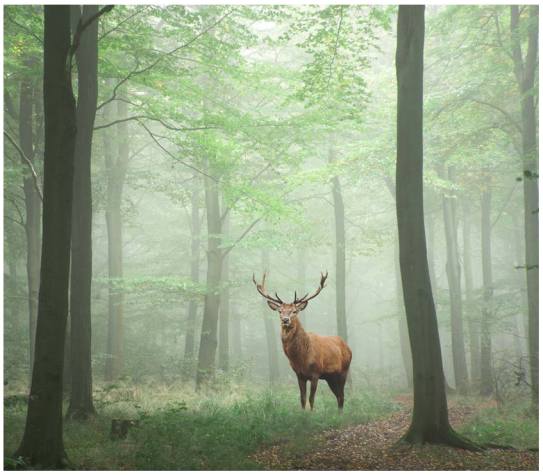
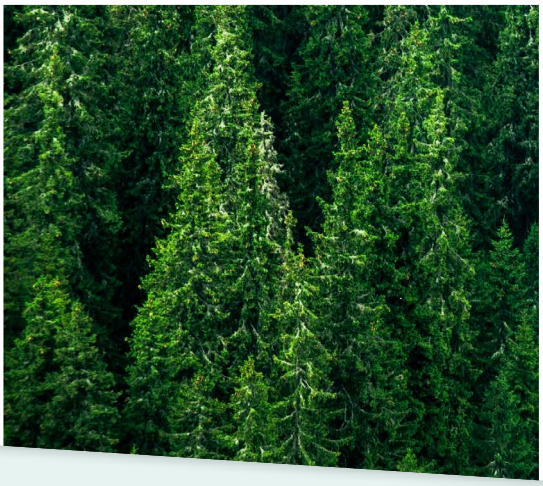




Welcome

Forests make up about 40% of the European Union's total land area. They are unique habitats, a valuable natural resource, and important for rural livelihoods and national economies. Forest ecosystems capture and store carbon, purify our drinking water, prevent soil erosion, protect us from floods and landslides, promote leisure and recreation, and offer a habitat for plants and animals, in addition to providing timber and other products and services.

In the context of the European Green Deal and the EU 2030 Biodiversity Strategy, the new EU Forest Strategy for 2030 (adopted on July 16, 2021) recognises the central and multi-functional role of forests. The strategy also acknowledges the contribution of foresters and all others in the forest-based value chain to achieve a sustainable and climate-neutral economy by 2050 while ensuring that all forest ecosystems are restored, made resilient, and adequately protected.

It is critical that we preserve our tree populations and increase carbon sinks in forests, and that we foster sustainable forest management approaches that maximise all economic, ecological and social benefits that European forests supply. Forestry and agriculture can be combined in agroforestry systems, and research and innovations in this area will be further reinforced.

The new Common Agricultural Policy (CAP) is one of the main sources of financial support for forests in the EU. The new CAP offers more flexibility to design forest-related interventions addressing national needs, simplifying applications and administration while linking and ensuring synergies between the European Green Deal, the national forest policies, and the EU environmental and climate legislation. This more flexible approach will help to increase the uptake of CAP funds for the purposes of the new EU Forest Strategy.

Research and innovation, for instance on sustainable forest management under a changing climate, circular bioeconomy, digitalisation and forest monitoring, will help attain the objectives of the EU Forest Strategy. The EIP-AGRI has a key role in supporting foresters and other stakeholders across the forest value chain, stimulating the uptake of innovations by promoting knowledge exchange, cooperation, education, training and advice, and bridging the gap between knowledge and practice.

For this, we count on the support activities from the EIP-AGRI network, which can bring together forest owners and managers, administrations, small enterprises, researchers, farmers, advisors and others who can contribute to making the ambition of this strategy true, for the benefit of forests, rural areas and a sustainable forest bioeconomy. By reading the stories in this forestry edition of Agrinnovation magazine, you contribute in building an EU-wide knowledge network. I hope it inspires you to continue networking for sustainable innovation.

Wolfgang Burtscher
Director-General
Directorate-General for Agriculture and Rural Development

Fostering collaboration for forest innovation

EIP-AGRI Operational Groups improve forest sustainability across Europe

Across Europe, more than 2 200 EIP-AGRI Operational Group projects (update March 2022) are bringing people together to build innovative solutions that can be shared and applied on farms, in fields and increasingly also in forests.

While not all EU Member States have included forestry-related themes in their Rural Development Programmes, a range of Operational Groups is already exploring innovation for sustainable forest management, biodiversity, wood mobilisation, climate mitigation, precision forestry and more.

Preserving biodiverse and productive forest edges

Forest edges are rich, biodiverse habitats that can provide valuable ecosystem services, yet they are often neglected. An Operational Group from Slovenia is raising awareness to demonstrate the importance and versatility of forest edges.

Sabina Povhe of partner organisation Novinet: "Slovenian forest edges have great ecological value, and they also have untapped economic potential through the production and sale of fruits, nuts, game or other forest products, or through agritourism. A well-kept forest edge also attracts beneficial organisms for food cultivation. We want to show farmers and forest owners that restoring and maintaining the biodiversity of these forest edges can support nature conservation and ecosystem services, while also increasing productivity and helping farmers and forest owners diversify their activities. Through publications, practical workshops, and educational activities for a younger audience, we are sharing methods and practices to sustainably maintain and restore forest edges. By engaging the local community, we hope to create a more stable ecological system, including productive and biodiverse forest edges."

▸ **More information** in the EIP-AGRI database

Did you know? The German states of Bavaria and Lower Saxony will start funding forestry-related Operational Groups in the new programming period (2023-2027).

Helene Faltermeier-Huber, EIP-AGRI innovation support officer from Bavaria: "Responding to an increasing interest, we decided to include innovations for the forestry sector in the new directive. Thematic calls may for example focus on regional value chains, and establishing seed plantations for climate-resistant tree species. The calls should be launched in the second quarter of 2022."

Fertilisation to improve pine nut production

In the Portuguese regions of Alentejo Litoral and Ribatejo, stone pine (*Pinus pinea L.*) is of great economic value to local forest owners. However, good crops are rare, and there is much yearly variation in pine cone and pine nut production. Operational Group FERTIPINEA is running field trials to see how fertilisation can improve tree growth, increase production and yield stability. Project coordinator Maria Encarnação Marcelo: "We want to see how rational fertilisation can correct soil characteristics and nutritional imbalances of the trees, which may affect the development of stone pine forests. Our experimental work helped establish fertilisation recommendations for stone pine stands in different developmental stages, based on soil and leaf analysis, which will be improved with further studies."

▸ **More information** in the EIP-AGRI database

Precision forestry in New Aquitaine

Ten forest stakeholders from New Aquitaine, France, have set up an Operational Group that develops and tests decision support tools to manage maritime pine and chestnut stands in a sustainable way while meeting market needs. The project is designing a smartphone application on decision support for thinning in maritime pine stands. For chestnut, the group organises training and demonstration on diagnostic tools to monitor risks (e.g. pests and diseases, drought) through remote sensing, tree health, and carbon balance, to stimulate the renewal and improvement of the chestnut stands.

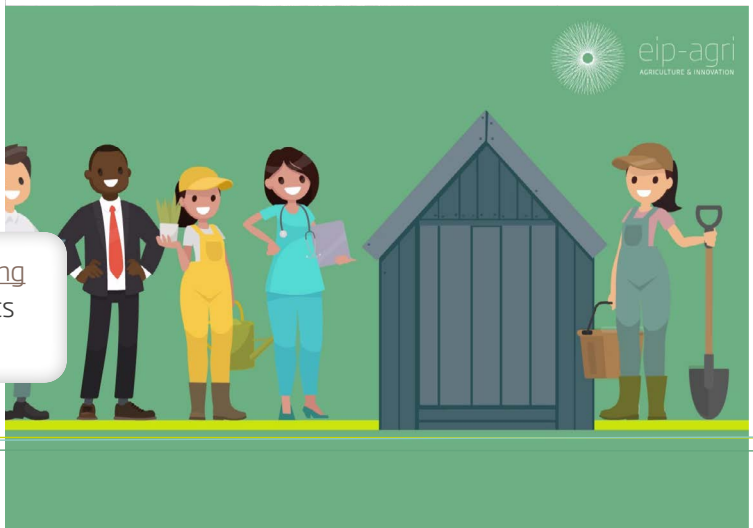
▸ **More information**
on the project website and
in the EIP-AGRI database

Local network for multifunctional forests

In the Pistoia Mountains of Tuscany, woodland ownership is very fragmented. This prevents an efficient management of forest resources, which can endanger the provision of ecosystem services and may lead to groundwater issues and fire risks. Operational Group ForLEAVEs is building a knowledge network to rekindle the interest of local smallholders in their forest resources.

Coordinator Francesco Benesperi: "We provide information on the economic value of their woodlands, on the wood market and value chain, and on alternative – environmental, recreational and educational – forest uses to diversify their farm activities". The project will share practical experiences from two farms that are testing different kinds of sustainable woodland management. Through collaboration and education, a 'Community of the Forest' and a 'Forest School' will help demonstrate the importance of good management to revitalise the community.

▸ **More info** in the EIP-AGRI database
▸ This project was presented at the EIP-AGRI Forestry seminar: watch the video.



Discover all Operational Groups working on forestry themes and all other topics in the EIP-AGRI database.

Inspirational idea

Joining forces for water-related ecosystem services

LIFE project and Operational Group work in synergy for stronger impact

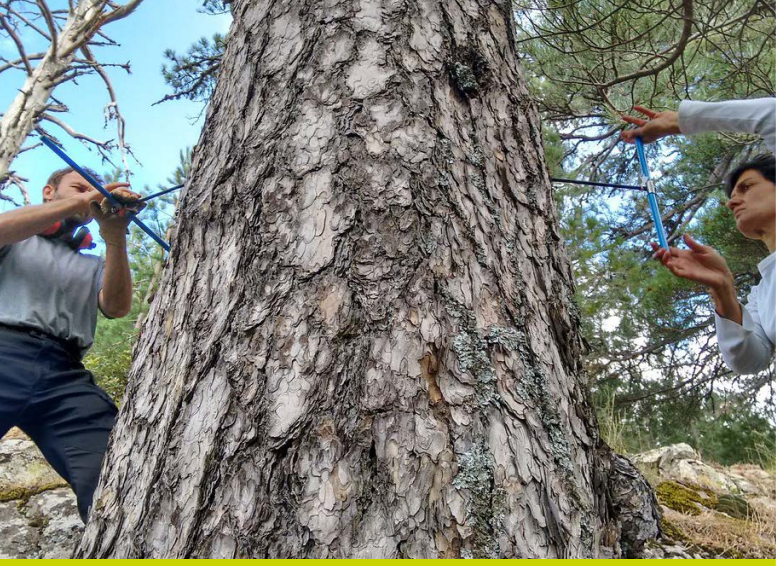
The middle Brenta river plain in the Italian Veneto region forms a rich ecosystem with environmental, cultural, recreational and agricultural value. Under the title 'Parco Fiume Brenta', a LIFE project and Operational Group are working in close synergy to manage the Brenta water resources in a sustainable way.

The Brenta river plain is an ecological corridor for biodiversity, recognised as a Natura 2000 site. It is also a regional source for drinking water, is used for recreation, and about 43% of the area is dedicated to agriculture. LIFE project and Operational Group Brenta 2030 are working together to balance these different land uses and enhance the area's water-related ecosystem services.

Giulia Amato of coordinating partner Etifor: "The projects share the same goal, but their actions are complementary. The LIFE project builds green infrastructures that improve the ecosystem services of the Natura 2000 site. The Operational Group specifically supports local farmers in implementing agri-environmental measures that contribute to this, such as establishing forested infiltration areas, hedgerows or permanent pastures, restoring wetlands or adopting organic farming. We are developing a system to reward such sustainable agricultural practices, which can help recharge the aquifer and improve the area's water quality. While the Operational Group has prepared the ground for ecosystem payments by working with the farmers, producing data and making funding available, the LIFE project will now facilitate the actual implementation."

The LIFE project and Operational Group meet regularly to share results. Giulia continues: "We organise our dissemination activities together: our workshops and demonstrations on pilot farms show farmers how the proposed measures can generate income. Working with the LIFE project has expanded the ambitions of the Operational Group. From a very local project it became a nationally known case for innovative financing schemes that can be replicated in other areas."

- Find out more in the EIP-AGRI database or on the Parco Fiume Brenta website, where you can also download the project report.
- **Did you know?** The project was presented at a meeting of H2020 thematic network SINCERE, which promotes innovations to enhance forest ecosystem services.



Genetic diversity to help forests cope with climate change

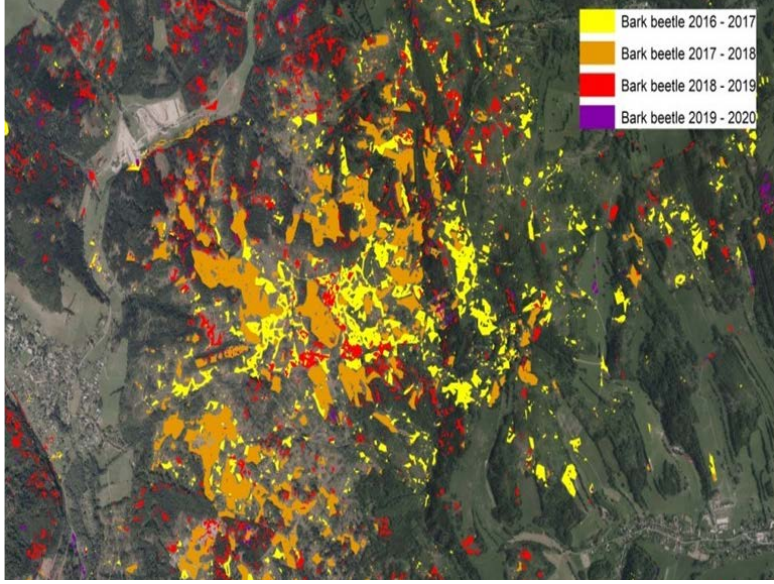
Our forests are vital in the fight against global warming. However, forests are also under growing pressure from climate change effects such as drought, extreme temperatures, pest and disease outbreaks, as well as forest fires and deforestation. Horizon 2020 project GenTree has mapped the genetic diversity of tree populations to identify traits that could make them more resilient and help them survive in a changing climate.

Diverse forests are better equipped to resist climate change and other threats. However, "climate change may be moving too fast for most tree species to adapt", says GenTree coordinator Bruno Fady from INRAE, France. "This poses a challenge for the future of our forests, their potential for delivering ecosystem services and forest-based products, and their resilience and adaptation to future risks."

Horizon 2020 research project GenTree has mapped the genetic information of twelve major European tree species, including conifers such as Scots pine (*Pinus sylvestris*) and Norway spruce (*Picea abies*), and broadleaves such as European beech (*Fagus sylvatica*). Bruno Fady explains: "These are economically and ecologically important tree species in Europe. We collected data on the physical features and nutrient levels of leaves, tree rings and wood, and soil characteristics. Mapping genetic diversity in tree stands and populations can help us understand how species adapt and thrive under changing conditions. It may also tell us which features build resilience to disease or pest outbreaks."

These genetic records will be used for breeding programmes and sustainable forest management schemes. "Preserving genetic diversity in-situ and in collections will help our forests deal with future climate challenges, and increase their ability to actively fight climate change, for instance through carbon sequestration and active regeneration. Working together across European borders will enhance research and innovation, leading to resilient forest ecosystems that will benefit generations to come.

- More information on the project website
- **Did you know?** GenTree won the prestigious "Stars of Europe" (Les étoiles de l'Europe) award for scientific excellence in 2020.



Managing emerging forest pests and diseases

H2020 HOMED develops knowledge and tools to tackle forest threats

In the last few decades, a growing number of native and non-native pests and diseases have caused severe losses to European forests. Horizon 2020 multi-actor project HOMED is developing science-based, practical methods and tools to assess and control emerging or invasive forest pests and pathogens.

"Insect pests and fungal pathogens may be harmless in their place of origin but very damaging when introduced in other regions, such as chestnut blight and ash dieback or Asian long-horned beetle in Europe. Due to global trade and environmental stresses including climate change, an increasing number of species can establish themselves and pose significant threats to European forest ecosystems, causing economic and environmental losses", says HOMED coordinator Hervé Jactel from INRAE, France.

HOMED is developing cost-effective, environmentally friendly methods and tools to prevent, detect and monitor invasive forest pests and diseases, so that they can be contained and controlled. Hervé explains: "We are developing early warning systems that detect pest and disease invasions early on, and best practices for efficient biocontrol in case eradication has failed. This includes pheromone traps in airports, sentinel plantations with European trees planted in foreign countries where the pests may come from, or mathematical models that help predict the spread of invasive species. The tools that we are developing benefit from cutting-edge technology, including new sensors and satellite technology. We test tools for four main types of pests and diseases: foliar moths and needle blight, which cause tree growth loss, and wood boring beetles and dieback fungi, which cause tree mortality."

Project researchers are working closely with forest managers, biosecurity agencies, policy makers and environmental NGOs to validate the tools as they are being developed. Hervé hopes that "forest entomologists and pathologists keep working together, and that these innovations may be taken up to better protect the health of European forests."

- More info in the EIP-AGRI database and on the HOMED homepage
- You can find an overview of all Horizon 2020 multi-actor projects on the EIP-AGRI website.

THE EU FOREST STRATEGY

Protecting and restoring our multifunctional forests

EU Forest Strategy puts forest ecosystems on the path to recovery

Forests are essential for our wellbeing, for the health of our planet and for prosperous rural areas. The European Commission's new EU Forest Strategy for 2030 is taking steps to protect and restore Europe's forests and make them more resilient in the face of climate change.

Forests can foster biodiversity, provide clean air and better water flows and support valuable ecosystem services. They prevent soil erosion and are an important ally in fighting climate change by storing carbon in trees and soil. Their wood and by-products can be used to produce bio-based materials and energy. The new EU Forest Strategy for 2030 is one of the flagship initiatives of the European Green Deal and will contribute to the EU's objectives for biodiversity by 2030 and climate neutrality by 2050. Pierre Bascou, Director for Sustainability at the European Commission's DG Agriculture and Rural Development, explains why the strategy is so important.

#EUGreenDeal

? What are the key aspects of the new EU Forest Strategy?

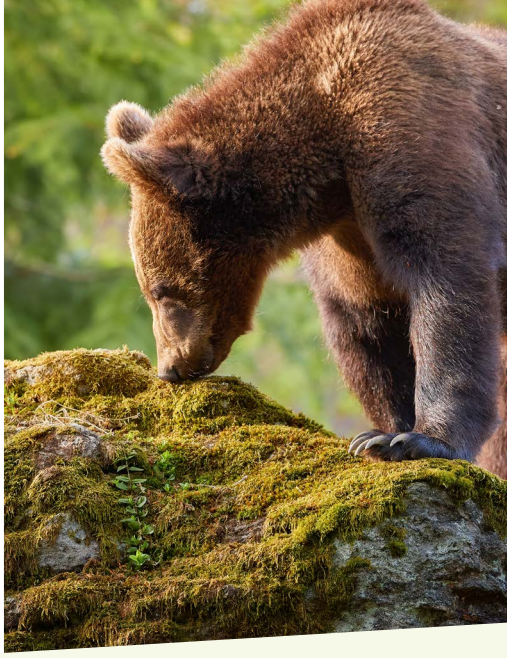
Pierre Bascou: "The strategy was set up to protect, restore and enlarge our European forests, reverse biodiversity loss, combat climate change and enhance forest resilience. These aspects are crucial to ensure multifunctional forest ecosystems in the long term. The strategy will also help preserve prosperous rural areas through jobs and other growth opportunities. It aims to support a sustainable forest bioeconomy, by promoting long-term wood products and a sustainable use of forest resources."

#EUForests

? How can the EIP-AGRI network contribute to the goals of the EU Forest Strategy?

Pierre Bascou: "Over the years, the EIP-AGRI has mobilised farmers and foresters, forest owners, researchers, advisors, businesses and other innovators to exchange knowledge and find innovative solutions for needs on the ground. In the new CAP, the EIP-AGRI can build on the success of this thriving innovation ecosystem to foster new ideas for further research and innovation and generate yet more solutions to be implemented in fields and forests. The new programming period will bring simplified aid rules, more cooperation among EIP-AGRI Operational Groups, cross-border exchanges, and knowledge exchange with research initiatives and European Horizon projects. This will support sustainable forest management, increase the productivity and sustainability of forest-based value chains, and accelerate the uptake of innovations by forest managers and owners."

▸ Learn more about the new EU Forest Strategy for 2030.

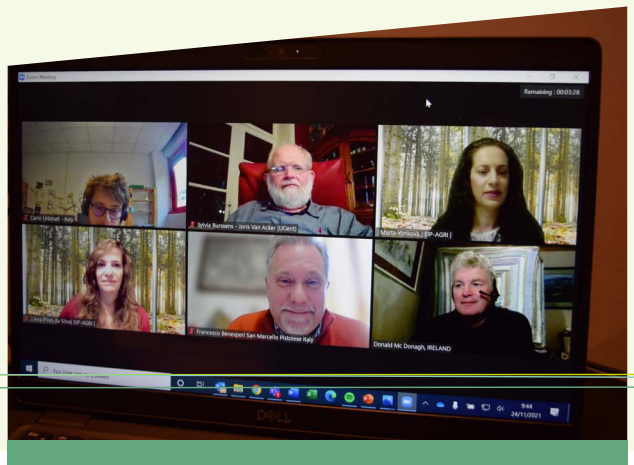


Turning forest innovation into practice

Innovation is a social process. Many challenges for forest innovation do not relate to a lack of knowledge but for instance to fragmented ownership or a limited political awareness of the importance of forest innovation. The EIP-AGRI seminar 'Turning forest innovation into practice' discussed which social aspects may support or hinder the forest innovation process.

Coordinating expert Gerhard Weiss (European Forest Institute; University of Natural Resources and Life Sciences, Vienna): "Learning about inspiring projects and good practices proved valuable to gain new ideas, engage people and fuel the innovation process. It also opened up opportunities to upscale innovations and foster new connections, strengthening 'Forest Knowledge and Innovation Systems' in a solid way."

- You can find the seminar report and all other results on the event webpage.
- More inspiration? Take a look at the EIP-AGRI brochure 'Innovation for European forestry'.

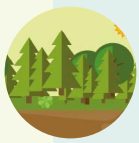


3 billion tree pledges

The new EU Forest Strategy comes with a pledge to plant 3 billion additional trees by 2030, complementing the strategy's broader forest conservation actions. Organisations, cities, NGOs, and citizens can participate. Check the 'Map My Tree' counter to see where and how many trees have been planted so far.

- FOREST EUROPE develops high-level strategies to protect and manage forests sustainably, for a wide range of countries and organisations.
- A successful Forest Strategy will help to achieve sustainable carbon cycles, and in turn the EC Communication 'Sustainable Carbon Cycles' shows how to help farmers and foresters in afforestation and reforestation efforts.
- In Finland, forests cover 86% of the land area. A report describes elements that can support closer-to-nature forest management approaches, to help achieve biodiversity targets for 2030.

#EIPagriForest



- Can't see the wood for the trees? Find all forestry-related EIP-AGRI events, publications, videos, inspirational ideas and more on the EIP-AGRI Forest spotlight page.

#IntlForestDay

- 21 March marks the International Day of Forests. The 2022 theme is 'Forests and sustainable production and consumption. Choose sustainable wood for people and the planet'.

Forest & friends

Resilient forests are the green heart of our planet, affecting our climate, society and well-being. We spoke with six 'friends of the forest' who have a passion for sustainable forest management. How do they see the future? We asked them 1 how they are improving European forests 2 what are the main opportunities and 3 who inspires them?

Boglárka Biró *(Forest engineer and advisor; farmer; finalist for Copa-Cogeca's Rural Women's Innovation Award, Hungary)*

1 Each year we sell around 200 000 seedlings from our forest nursery. As a forest advisor for private forest owners, I help reduce reforestation time by working with a smaller harvest area, well thought-out species and forest management operations, and propagation material of domestic origin. This saves costs and allows for mature forests to be harvested earlier, so we can avoid quality and quantity loss in over-mature forests.

2 We urgently need to innovate for climate change, which has already reached alarming levels. It affects the health of our natural forests with serious economic consequences. I believe that the forest as a biological community of life, as an ecosystem in itself, will become increasingly valuable to humankind.

3 Foresters of the Thuringian State Forestry helped me understand continuous cover forest management and how to adapt it to local conditions. The way they think about forest management is exemplary!

Stefan Gernert *(Regenerative farmer and agroforester, Estonia)*

1 I help farmers create healthy agro-forestry ecosystems, which work with natural dynamics. This ranges from pine plantations in Estonia and recovering clear-cut forests with pigs in the UK to restoring degraded silvo-pastoral Montado systems in Portugal. All my work is based on the principles of ecological forestry.

2 Management plans should be created with ecological forest processes in mind – understanding that there is value in the forest ecosystem in itself, which can be combined with opportunities for business interaction. If subsidies are needed for economic sustainability, they should be connected to a verified ecological outcome, land owners can be encouraged to actually restore the forest's ecosystem functions: everyone wins!

3 Francisco Alves is a fifth generation regenerative farmer. He runs 'Porcus Natura', an agro-ecological farm working within traditional Montado tree systems.

Nike Krajnc *(Researcher; Interreg project Fem4Forest – Forests in women's hands, Slovenia)*

1 Fem4Forest strengthens the capacity of the forest sector by increasing the involvement and skills of women. Their keen interest in current issues such as climate change adaptation, nature conservation, and planning forest operations is key to improving sustainable forest management, so that it works for people and the planet.

2 The million-dollar question is how to balance the demand for wood with the need to protect and preserve our forests. I believe that women have different approaches and that we can make an important contribution to the forest-based bioeconomy in the Danube region and beyond. Fem4Forest offers us a new opportunity to work together and learn from each other.

3 Each of the role models we interviewed for the Fem4Forest project have fascinating life stories. They are an inspiration for all young women entering the forest sector.

Yann Fortunato *(Racines de France; 'Forêt de Brassac', South of France)*

1. In the "Forêt de Brassac", we develop innovative practices for forest regeneration, to create a diverse forest with multiple benefits. We want to protect and promote the value of the forest, reviving degraded areas and creating new forest activities and value chains that benefit the local community and the environment.
2. Forests are central to future environmental and economic policies which offer solutions for global warming and biodiversity loss, and which can support the sustainable production of biobased products for people worldwide. I am convinced that we need to foster knowledge and innovation for forest valorisation, and find a balance between economic interests and the provision of services such as biodiversity and carbon capture.
3. I am inspired by daily exchanges with people from the fields of economy, science, philosophy and politics. Nature is complex, and we need to stay curious and connected to all the knowledge that is available to meet our future needs!

António Louro *(President of the Forestry Association of the Municipality of Monção, Portugal)*

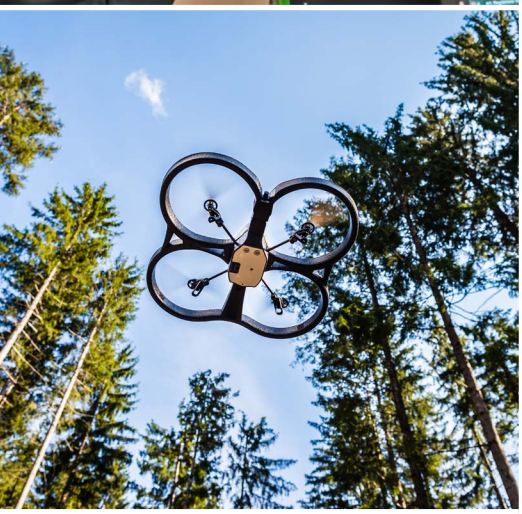
1. In 2003, our region was hit by great forest fires. To avoid future risks, we are developing integrated landscape management plans for owners of small – mostly abandoned or unmanaged – forest holdings. We want to create additional value and profitability through joint management and by diversifying their activities. With the forest as main activity, this includes olive groves, vineyards, honey production, goat and sheep herding, and tourism. In a time that is marked by climate change, this can bring environmental, social and economic sustainability.
2. Forests are our most efficient tool to capture carbon. Developing slow-growing forest areas for carbon fixation and quality wood production can have an important long-term impact. Also short-cycle forest products can offer an alternative to fossil fuels.
3. The *Landscape Transformation Programme* described in 1 will help construct a truly sustainable landscape, helping us escape from the cycle of forest fires in recent decades.

Gaëlle Marion

Head of Unit, Environmental Sustainability, Directorate-General for Agriculture and Rural Development, European Commission.

"Forests are the lungs of our earth, breathing oxygen into our environment, society and economy. We cannot underestimate their value. Healthy, resilient forests are vital in tackling the climate and biodiversity crises, in growing prosperous rural areas and building a sustainable forest bioeconomy.

The new EU Forest Strategy embraces this multifunctionality and shows that environmental ambitions can go hand in hand with socio-economic goals. With the support of the new Common Agricultural Policy, this strategy can further engage foresters and others in the forest value chain, reinforce sustainable forest management, and help us use, protect and restore our European forests for a greener future."



A living platform for forest innovation and digitalisation

Rosewood4.0 fosters knowledge exchange for sustainable wood mobilisation using digital tools

Every link in the wood value chain, from production, harvesting and processing to final products, is essential for the development of a circular bioeconomy that contributes to a more sustainable forest sector. Horizon 2020 Thematic Network ROSEWOOD4.0 promotes innovation and good practices with a focus on digital tools.

With more than 20 partners and 5 Regional Hubs across Europe, ROSEWOOD4.0 connects stakeholders from the forestry and wood sector in a participatory way. "The living community of foresters, forest owners and experts really enables knowledge sharing, good practices, technological innovations and training solutions", says Uwe Kies of InnovaWood. "Our online open platform now includes over 250 best practices, illustrating how digitalisation can enhance performance, communication and collaboration between forest professionals. Everyone can contribute."

Good practices include online portals where forest owners can enter their forest data and get advice on better forest management. The database also includes communication campaigns to mobilise forest owners. "The main goal is to boost knowledge exchange across Europe", Uwe continues. "It would be a great success if our platform could grow into a Forestry Knowledge and Innovation System tool, that foresters across Europe use to share information."

- More information on the event webpage

- Search the ROSEWOOD best practices database for innovative tools, platforms and initiatives, from forest management and timber recycling to local networking activities. ROSEWOOD also published a full report on "100 best practices and digital innovations for sustainable forestry".

- Find individual roadmaps for sustainable wood mobilisation, training courses and learning materials to build new skills and strengthen the digital transformation of the wood value chain.

- Find details on AFINET, AGRIFORVALOR, BRANCHES, INCREDIBLE and other thematic networks on the EIP-AGRI website

Inspirational idea

When forest meets field

Knowledge network helps agroforestry branch out in Austria

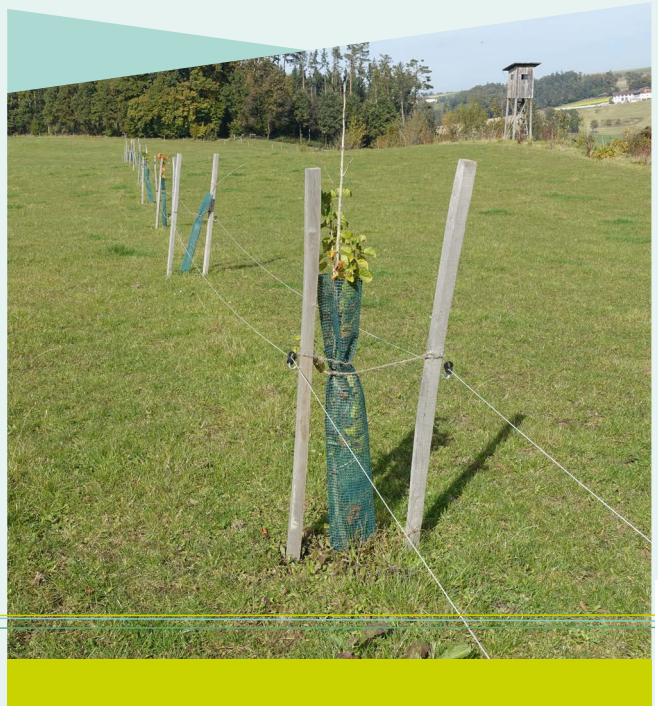
Farm businesses across Europe are increasingly exploring agroforestry as a way to improve their resilience to the growing effects of climate change. Also in Austria, farmers have an increasing interest in introducing agroforestry on the farm. To boost the awareness on benefits and possibilities, an Operational Group is setting up a knowledge network with demonstration farms.

Well-planned agroforestry systems integrating trees on farm lands can offer economically viable solutions for climate change effects, soil, biodiversity, water balance and diversification. Despite the advantages, agroforestry is currently still limited in Austria due to complex regulations and a lack of peer examples. An Operational Group project is developing a national network of farmers and researchers to foster knowledge exchange. Six pilot farms are implementing agroforestry systems to offer inspiring examples.

Project coordinator Theresia Markut: "Agroforestry systems need to be well-planned and managed with a long-term perspective. That's why it's so important for interested farmers to have a contact point where they can find the right knowledge and know-how. Our six pilot farms cover a wide spectrum of agroforestry. We have an arable farm with nut trees for instance, a horticulture farm with old varieties of fruit trees, and a farm with trees for timber production, and more. Some of these farms are testing the long-term economic efficiency and contribution of agroforestry systems to mitigate greenhouse gas emissions through carbon sequestration."

We have many interested farmers and our network is growing, so it's important to close the knowledge gaps and engage everyone. We have organised several pilot farm visits, as well as workshops on agroforestry farms in Austria and Switzerland. We are now preparing a brochure for farmers, a guidance document for advisors, and new knowledge exchange activities.

▸ More information in the EIP-AGRI database or on the project website



Inspirational idea

Stronger skills for forest professionals

For.Italy coordinates training across Italian regions

Many European countries see the need to increase training and skills development for forestry sector professionals. The initiative For.Italy is organising training campaigns across Italian regions to provide foresters with new knowledge, demonstrations of good practices, and opportunities to strengthen their skills.

"With the exception of the Alpine regions, forests have long been neglected in Italy, because they lost economic relevance when industry became more important. Now we see a renewed interest in forest management, mostly for environmental reasons. That's why we need new, qualified know-how to support forest operators in their daily work", says Raoul Romano of partner CREA.

For.Italy is setting up six demonstration sites in five different regions, for forest operators, public administrators, and secondary school and university students. Seven training courses for forest instructors are organised across seven regions. These focus on felling, timber preparation and site security, and aim to train 90 new forest instructors nationwide.

For.Italy is the first initiative of its kind in Italy. "Training in forestry differs from region to region – ranging from non-existing to excellent, with hardly any coordination between the regions", says Raoul. "Various regions are now working together to standardise the skills of forest operators, organise training and disseminate good practices in sustainable forest management. These skills can then be transferred to local workers, resulting in more qualified manpower benefitting a fast-growing sector. The high participation in our demonstration events (around 100 people per event) proves that the local forestry sector is embracing the need for training.

- More information on the For.Italy website.

- More inspiring examples of training and extension services are promoted by Horizon 2020 multi-actor project i2connect, strengthening advisory skills to boost interactive innovation for European farmers and foresters.

- Get more information on Agricultural Knowledge and Innovation Systems in the EIP-AGRI AKIS brochure and on the AKIS spotlight page.

Inspirational idea

Data-based decisions for better farming

Farmers are increasingly using new technologies to gather and process data to deliver economic and environmental insights and increase farm performance. Smart ways to collect, manage and share data can help farmers work more precisely, efficiently and sustainably. The Swedish innovative project 'Better decisions for cultivation strategy' is creating a digital data service for farmers, advisors and researchers to optimise their daily decisions.

Project manager Anna-Carin Almqvist explains: "Our service will provide data from seven years of field trials across Sweden, registered in the Nordic Field Trial System, merged with geological and weather data. It will allow users to search a range of crops and varieties, and compare different varieties and characteristics including region and trial year, soil and cultivation type, yield and weather parameters, straw strength and thousand grain weight, but also different diseases and more. By entering their on-farm conditions, farmers will get customised results that are relevant for their farm."

The service now covers cereals, legumes, potatoes and oil crops, both for conventional and organic farmers. It will offer Swedish farmers and advisors user-friendly cultivation information to help choose the best varieties, improve crop management, use resources efficiently, cut costs and improve business value, helping them to become more competitive. Anna-Carin continues: "We are currently running tests with pilot groups, and are exploring ways to improve the service with new data access points. We want to exchange with other initiatives across Europe that are creating digital services with farm data, to discuss best practices and ways for us to create an optimal user experience.

- Watch the project video and get more information on the project website.

- The EIP-AGRI workshop 'Farm data for better farm performance' highlighted best practices and successful projects on farm data collection, use and sharing.

EIP-AGRI Focus Groups

Inspiration for innovation

In every EIP-AGRI Focus Group, 20 experts from diverse backgrounds, including farmers, foresters, researchers, advisors, NGO and business representatives, focus on a specific topic from the field of agriculture and forestry. They take stock of challenges and solutions, and share knowledge and good practices to inspire further innovation and collaboration across Europe.

Focus Groups have tackled more than 40 themes so far – ranging from livestock emissions and bee health to renewable energy, frost damage in fruit production, and tropical crops.

Three new Focus Groups were launched at the end of 2021:

- Sustainable ways to reduce the use of pesticides in pome and stone fruit production.
- Digital tools for sustainable nutrient management.
- Water: nature-based solutions for water management under climate change.
- All Focus Groups have their own page on the EIP-AGRI website. Visit the Focus Group page to discover all topics and results.

What's new? Fresh Focus Group videos

- Dutch poultry farmer Gerhard reduces antimicrobial use through on-farm hatching.
- Spanish Operational Group tests ways to avoid debris from bioedegradable plastic mulch.
- More results from the Focus Groups Reducing the plastic footprint of agriculture and Antimicrobial use in poultry farming on the EIP-AGRI website.

Inspirational idea

Mobile technology to prevent wolf attacks

A growing wolf population is increasingly causing problems for Spanish extensive livestock farmers. Operational Group GELOB has developed and tested a technological solution that can help monitor grazing animals and keep them safe from attacks.

Wolf attacks cause millions of euros worth of damage to Spanish livestock every year. Especially in remote mountain areas, extensive livestock farmers need solutions to keep their grazing animals safe. Operational Group GELOB has worked with the Union of Small Farmers and Cattle Ranchers (UPA), the Rey Juan Carlos University of Madrid, tech company Digitanimal and other experts to develop a neck collar that lets farmers monitor their animals, and an additional prototype that helps detect and prevent wolf attacks.

Project leader Paula Sánchez: "Seven farms in Madrid, Castilla y León and Galicia, which frequently suffered from wolf attacks, have tested an innovative collar that works as a GPS and monitoring device. They also tested a second system that sends an alert to the farmer's mobile phone when the animal's behaviour, temperature or heart rate has changed and an attack could be taking place. Because our animals graze in the mountains, it can take too long for us to respond. That is why we have tested the option of triggering LED diodes or (ultrasonic) sounds that can chase the wolves away, without disturbing the animals. We had the best results with the barking of mastiff dogs, but we need further research to turn the prototype into a marketable product."

The GPS monitoring technology has been well received by more than 800 farmers, including many young farmers. They attended information sessions and tested the collar to better manage their grazing livestock. Knowing where the animals are, and where they prefer to graze saves time, allows for a better use of the pastures, and improves productivity.

- More info about this project through the EIP-AGRI database

Learn more? The EIP-AGRI Focus Group 'Wildlife and agricultural production' mapped innovative and sustainable practices to prevent wild animal damage on farms and at the same time protect wildlife.

In a number of EIP-AGRI Focus Groups, experts have taken a close look at challenges and opportunities for forestry-related topics, including the sustainable mobilisation of forest biomass, forest practices and climate change, agroforestry: woody vegetation and (sub)tropical food crops.

Small-scale vanilla production in 'hotspot' for forest biodiversity

In Guadeloupe, an overseas region of France in the Caribbean, innovative project VALAB has developed methodologies for small-scale vanilla farming in forest undergrowth, as an alternative to monocultures. Developing sustainable, agro-biodiverse forest farming practices has shown benefits for biodiversity and agricultural production. Through a close collaboration with European project SIMRA, VALAB placed the needs and knowledge from the forest farmers themselves at the very centre of the project. Their expertise helped to create a shared vision of multifunctional forest farming and social innovation.

▸ This collaboration was presented at the EIP-AGRI seminar 'Turning forest innovation into practice': watch the video or read the press article.

In French Guiana, farmer Julien Villard grows pineapples, bananas and cacao with a strong focus on agroforestry. To make his farm as sustainable and resilient as possible, he grows trees and associates them with crops as much as he can. On his participation in the EIP-AGRI Focus Group on (Sub)tropical food crops in the EU, Julien says: "It became obvious that most problems in vastly different regions were strikingly similar to ours in French Guiana. I enjoyed being able to discuss ideas with this very diverse panel of experts, composed of researchers, advisors and farmers. It definitely helped me grow my network! We are keeping in touch and continue planning together."

▸ More info: https://www.villandia.fr/

Forests in women's hands: "Yes we can!"

Fem4Forest empowers women in forestry

Forestry is an important economic sector in the Danube region, but it is traditionally dominated by men. The Interreg project Fem4Forest, 'Forests in women's hands, is boosting women's skills and involvement in the forest business.

"Women are increasingly active in the forestry sector, showing great interest in issues ranging from nature conservation to planning forest operations – which are key to sustainable forest management", says Fem4Forest coordinator Dr. Nike Krajnc from the Slovenian forestry Institute. "Supporting female forest owners and professionals in developing their skills and presence in the business can help them tap into new job opportunities, increase income from their forests, and enter new markets."

Fem4Forest involves partners from 10 countries in the Danube region. "We study and compare the role of women in these countries, and develop training and mentoring programmes to foster skills and career development, knowledge transfer across regions and effective collaboration", Nike explains. For example, networks such as the Austrian 'Forstfrauen' foster collaboration from local to transnational levels. In Bavaria (Germany), forest walks are organised to facilitate exchange and encourage women to assume active roles in forest management. Fem4Forest promotes female role models from the forest workforce to inspire and motivate women to engage in all forestry fields.

Nike is convinced that nurturing women's potential will support innovation towards a more resource-efficient, sustainable and competitive forest sector: "I believe that the Fem4Forest project is just the beginning of a new movement to empower women working in forestry throughout the EU. We are currently establishing a global umbrella organisation for women in forestry, to improve collaboration. I want women to be visible and networked, and I believe that the entire forestry sector can benefit from this."

- All results can be found on the project website or on the Fem4Forest Facebook page.
- Nike Krajnc presented this project at the EIP-AGRI forestry seminar.

Inspirational idea

"Together, we are stronger"

French farmers establish local value chain with wood from hedgerows

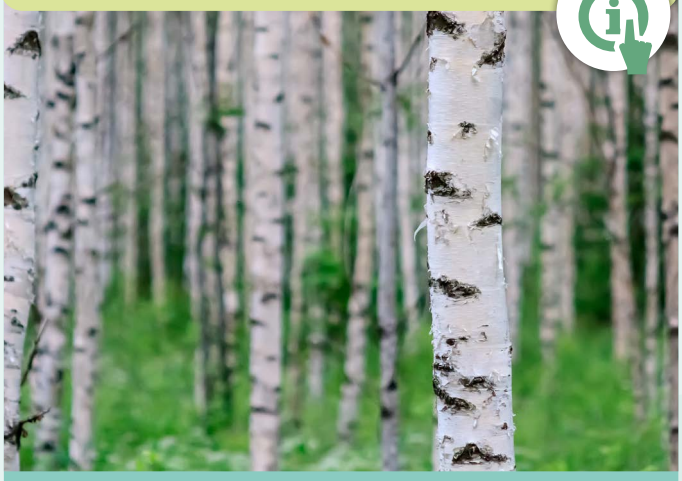
Barbecue season is approaching! And that is good news for the farmers of the 'Association Bois Paysan' in the French Cévennes region, who established a local collective that produces logs, woodchips and "barbecue wood" from old hedgerows on their farmlands.

The idea for the wood producing collective originated a few years ago when a number of farmers and breeders from the Cévennes attended an infoday on wood. They organised themselves into a group, to find outlets for wood that is harvested on their farmlands, and that traditionally does not have a quality that is rewarded on today's wood market.

Bringing together 12 local farmers, the 'Farm wood association' now produces wood logs, kindling wood and wood chips for mulching. The wood comes from on-farm woodlands, hedgerows and woody undergrowth that is harvested when maintaining farmlands and grazing pastures. Instead of neglecting these woodlands, the farmers turn them into products that can give them additional revenue. By joining forces, they can share costs for labour and logistics, and get better market conditions. The products are now distributed through local shops, but the farmers hope to further expand their sales channels. While this will take time, the goal is to turn this into a viable business, complementing their main farm activities. The initiative can further develop their farms, and stimulate a local sector with job opportunities in the wider region.

▸ More info on the project's Facebook page or webpage

Birch trees are one of the most common indigenous species in Finland. While they are often used fortimber, small Finnish companies have added value through the production of birch sap alongside birch wood production. The sap is collected through new techniques, and new value chains are set up with a growing demand on export markets. Read the inspirational idea on the EIP-AGRI website.



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Spotlight on AKIS

Effective Agricultural Knowledge and Innovation Systems (AKIS) can help ensure that farmers, foresters, advisors, researchers and many others in the AKIS ecosystem are well-connected, and that knowledge and innovative solutions are shared and taken up in practice.

The EIP-AGRI regularly highlights information, publications, events and inspiring examples on AKIS through the EIP-AGRI website and social media.

- Find all relevant information, key documents, publications, videos, events and inspirational ideas on the AKIS spotlight page
- Understand AKIS at a glance through the animated video
- Watch more than 30 testimonial videos on the EIP-AGRI YouTube channel
- Read inspiring stories in the AKIS brochure and other relevant publications
- Get more #AKIS inspiration through social media
- Keep an eye out for the AKIS networking event in autumn 2022!
- ...

www.eip-agri.eu

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