6th Forest Innovation Workshop

Overview on Operational Groups on forest-related topics

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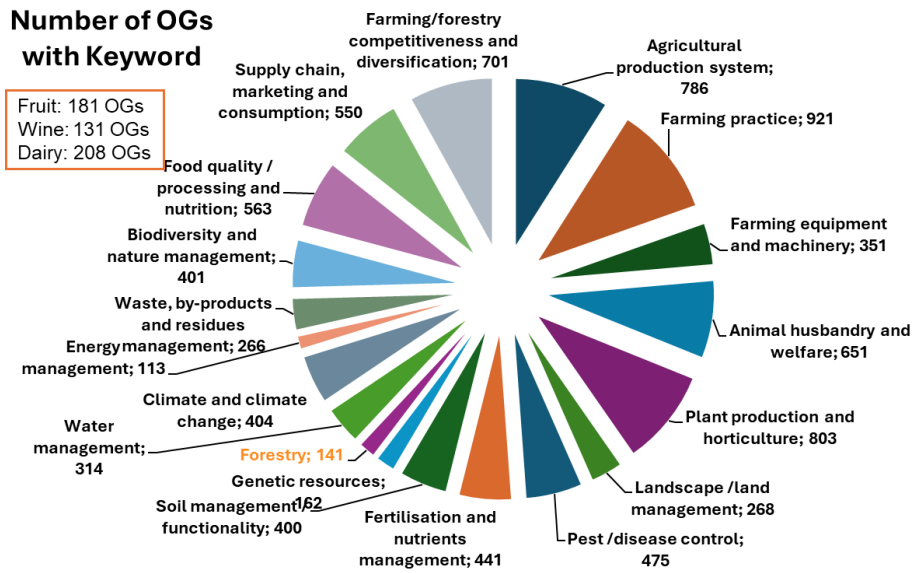
FOREST4EU

Multi-actor approach for forestry and agroforestry sector

FOREST4EU - European Innovation Partnership Network promoting Operational Groups dedicated to forestry and agroforestry - is a coordination and action support project financed by the Horizon Europe programme, which aims to link existing Operational Groups (OGs) in different European countries in order to foster the transfer of knowledge and good practices between experts in the field.

EU CAP NETWORK



Source: Pacôme Elouna Eyenga - Team Leader EIP-AGRI SF, 2023.

Forestry and agroforestry OGs in EU

Around Europe, there are hundreds of Operational Groups: small projects promoted by groups of farmers, forest managers and local communities.

They all share the same goal: advancing innovation and good practices in forestry and agroforestry sector.

However, OG results struggle in crossing national borders: innovations and best practices tend to remain in the local environment and do not reach the EU level.

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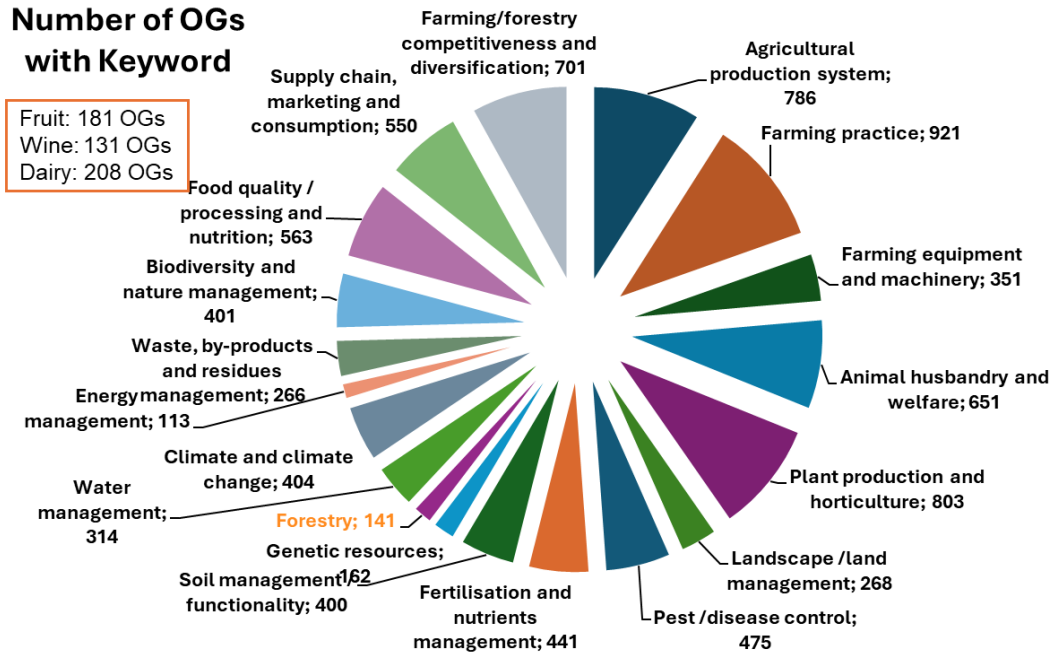
EU CAP NETWORK

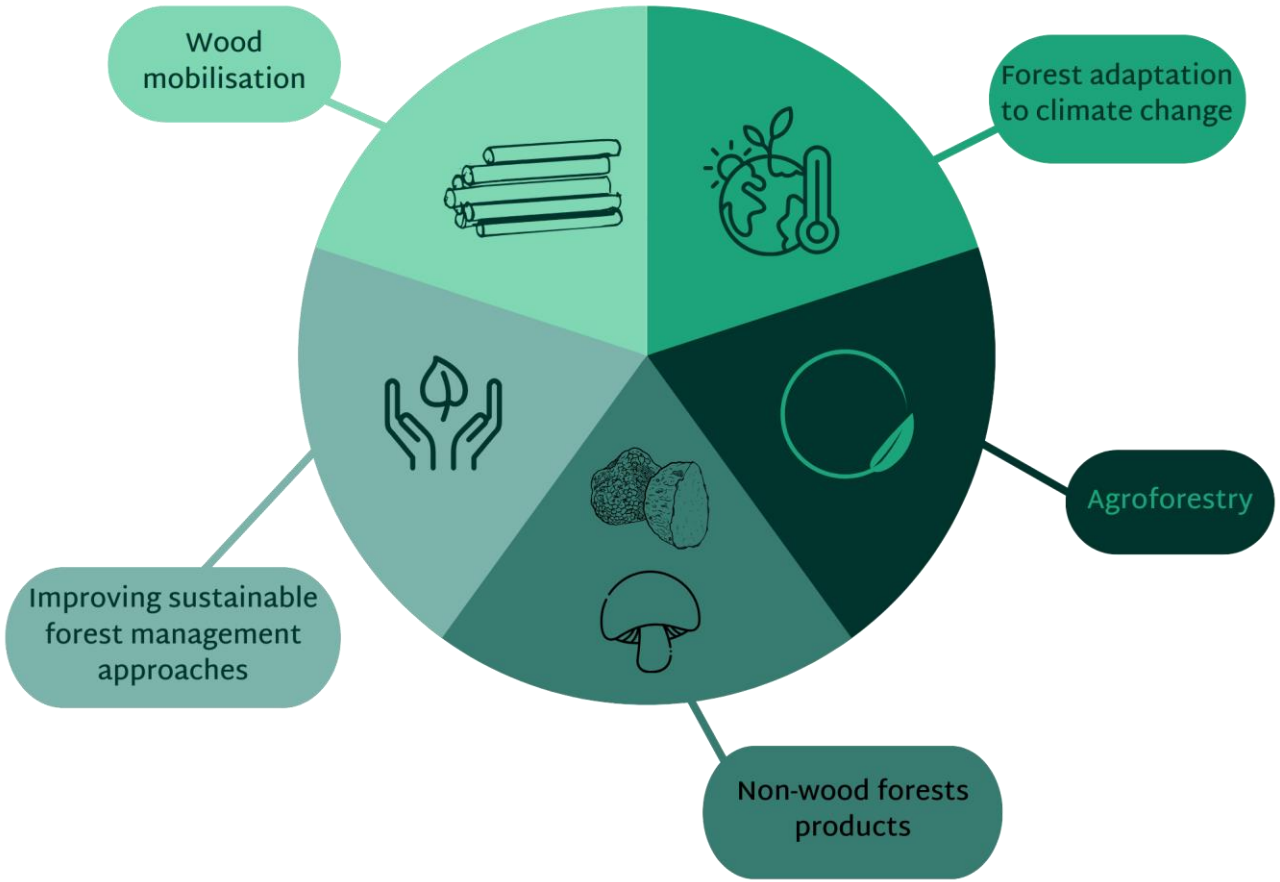


Source: Pacôme Elouna Eyenga - Team Leader EIP-AGRI SF, 2023.

Table 4: Keywords and relative proportion in OG projects

Keyword	No. OGs	Relative proportion of all keywords	Proportion of OGs containing keyword
Farming practice	1 157	11%	33%
Plant production and horticulture	971	9%	28%
Agricultural production system	967	9%	28%
Animal husbandry and welfare	793	8%	23%
Farming/forestry competitiveness and diversification	786	8%	23%
Food quality/processing and nutrition	729	7%	21%
Supply chain, marketing and consumption	646	6%	19%
Pest/disease control	572	5%	17%
Fertilisation and nutrient management	547	5%	16%
Climate and climate change	498	5%	14%
Soil management/functionality	477	5%	14%
Biodiversity and nature management	437	4%	13%
Farming equipment and machinery	402	4%	12%
Water management	358	3%	10%
Waste, by-products and residues management	330	3%	10%
Landscape/land management	298	3%	9%
Genetic resources	193	2%	6%
Forestry	163	2%	5%
Energy management	147	1%	4%
Total	**10 471**	**100%**	

FOREST4EU Innovation Topic Hubs - ITHubs



What is innovation?

Innovation is a new idea successfully implemented, then adopted and disseminated. Innovation can be based on new but also traditional practices in a new geographical or environmental context.

Types of innovation:

- Technological,
- Process,
- Product,
- Organisational
- Social
- Service

Guidelines on programming for innovation and implementation of EIP for agricultural productivity and sustainability, (2013).

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Total OGs

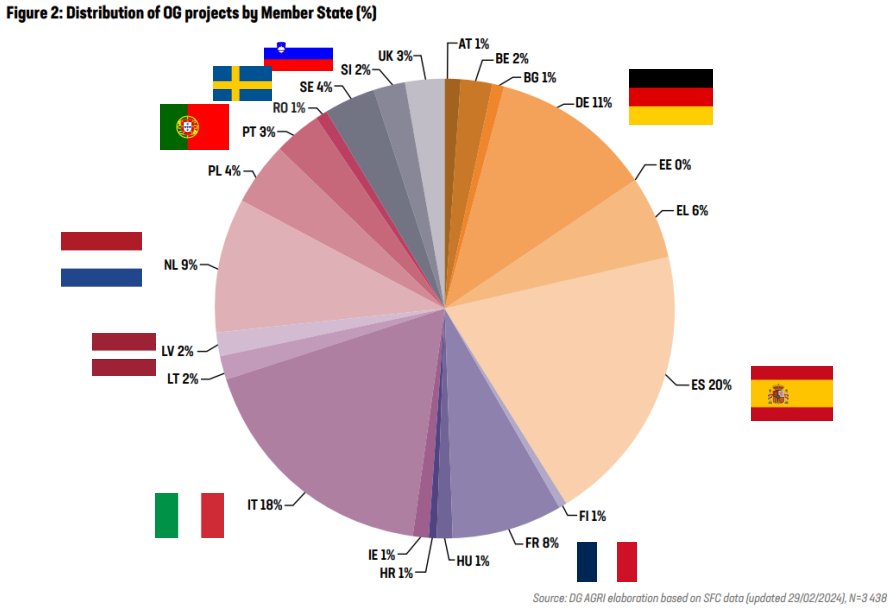
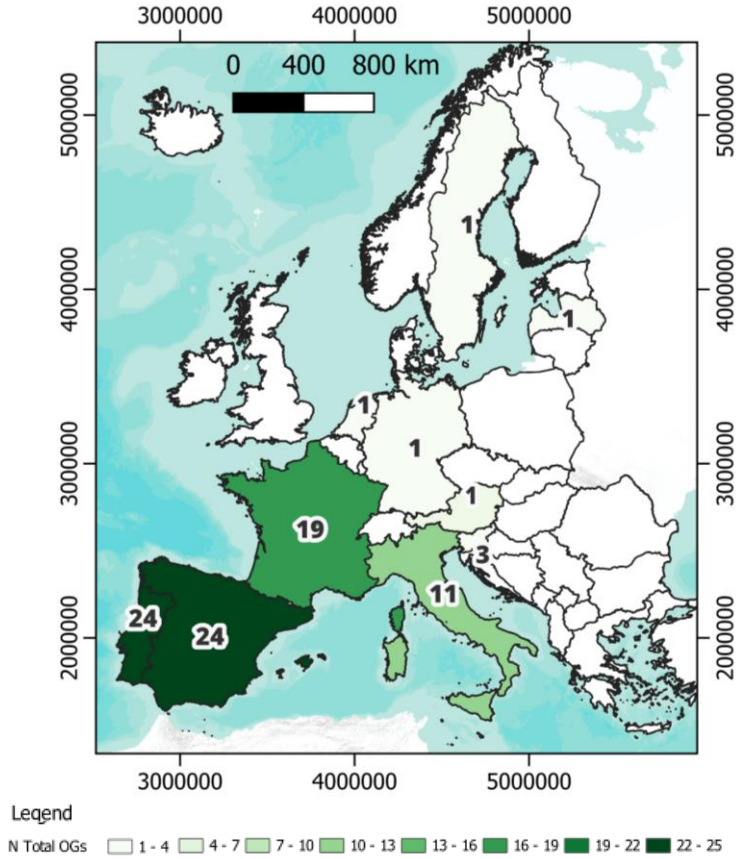
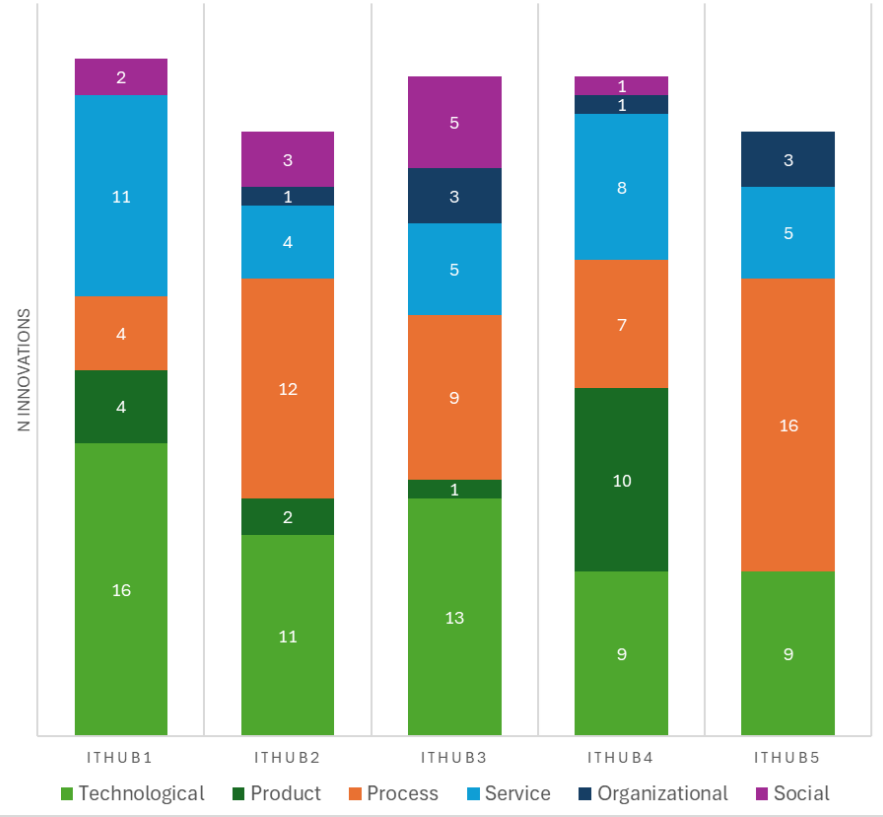


Figure 2: Distribution of OG projects by Member State (%)

Source: DG AGRI elaboration based on SFC data (updated 29/02/2024), N=3 438



Innovation types per ITHUB



Results

- A total of 175 innovations in forestry and agroforestry were collected from 86 OGs in the form of Extended Summaries. Often, OGs have developed innovations that can be classified under more than one ITHub.
- Innovation types in forestry and agroforestry OGs varies between countries and ITHubs, but are often technological and process-oriented. In many cases new services and products are introduced.

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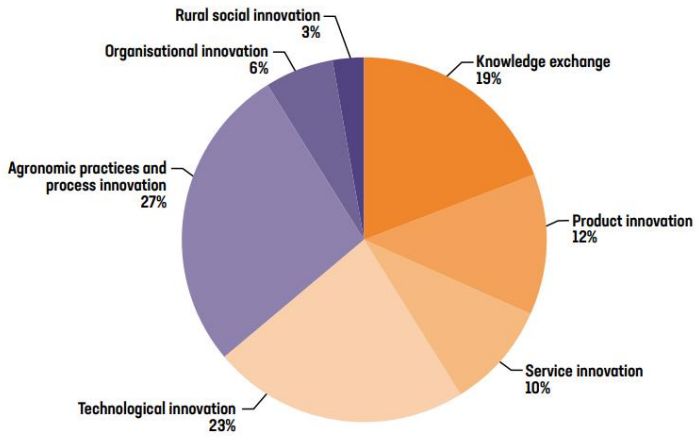
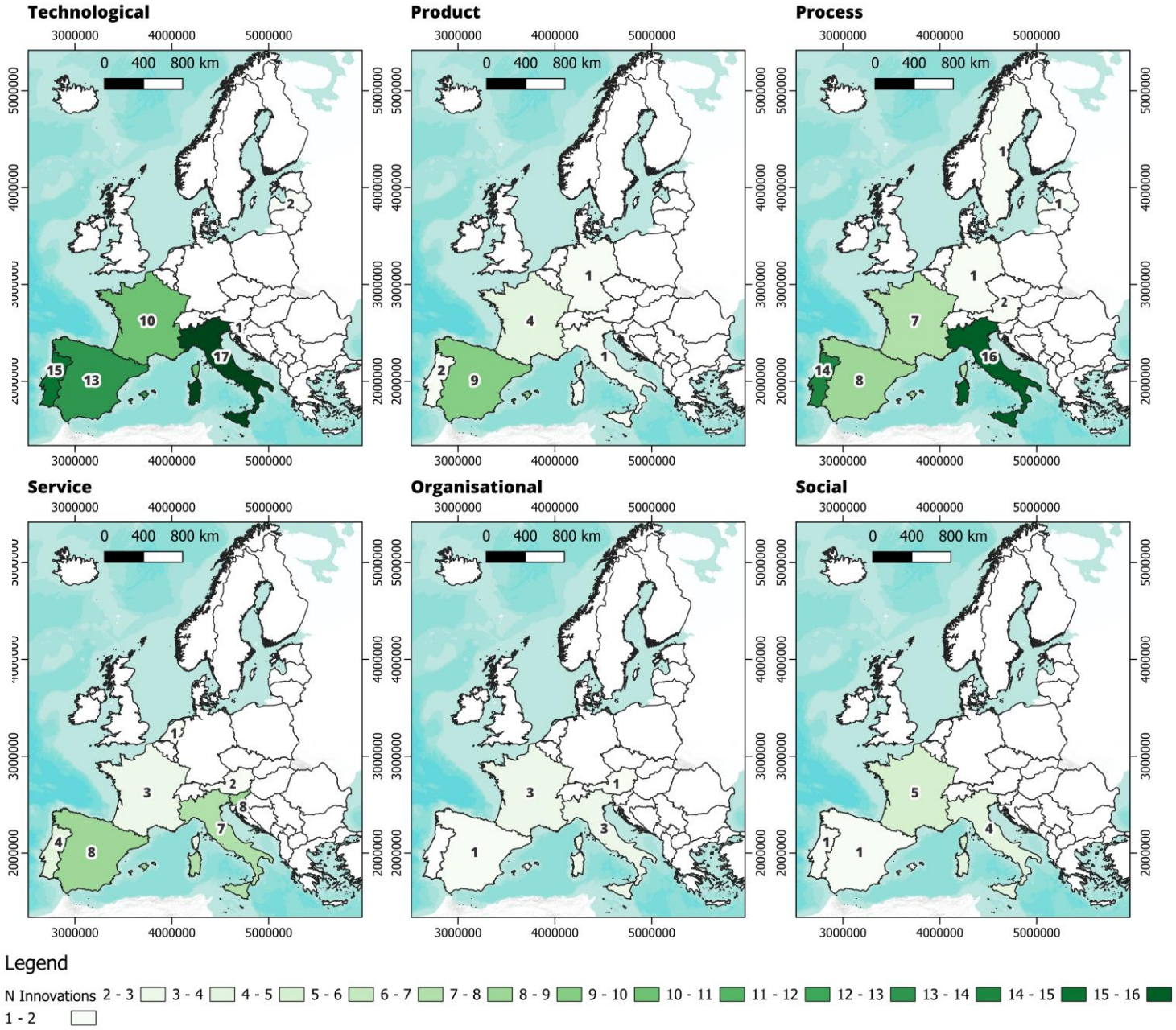
Innovation types

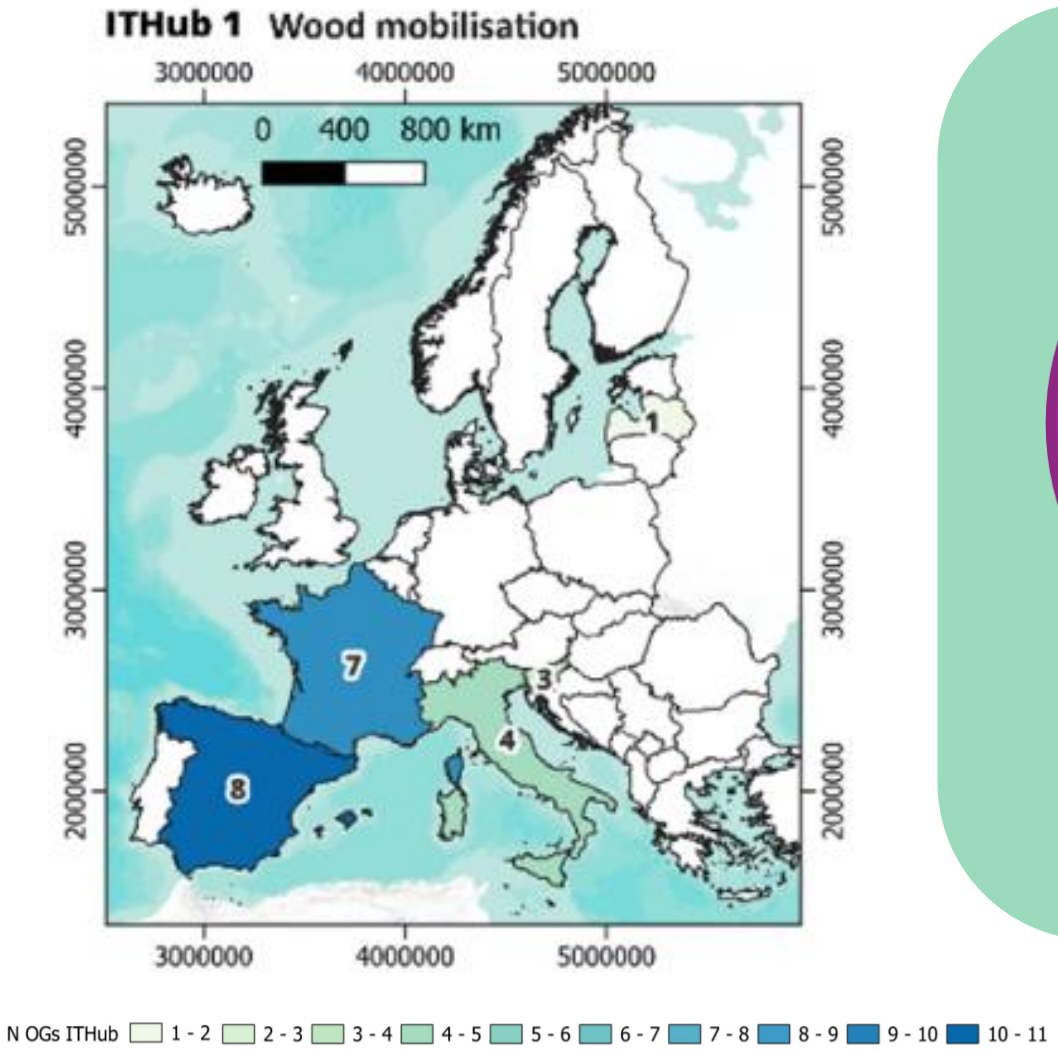
Figure 2: Types of innovative solutions developed by OG projects* (%)



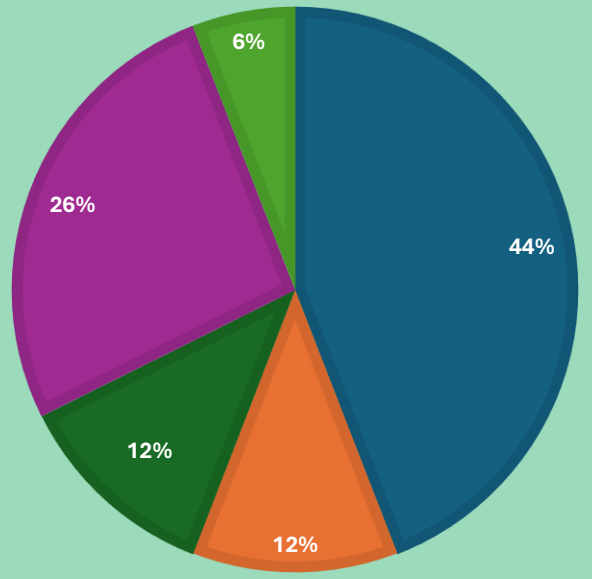
Source: EU CAP Network supported by the Evaluation Helpdesk for the CAP - OG survey data (N=458 survey responses - OG Lead partners)
**Multiple answers allowed.*



ITHub 1 – Wood mobilisation



INNOVATIONS



24 Operational Groups

34 Extended Summaries

Most used keywords:

Decisional Support System, digital platform; supply chain, market and consumption; remote sensing data, sustainable forest management, forest industries.

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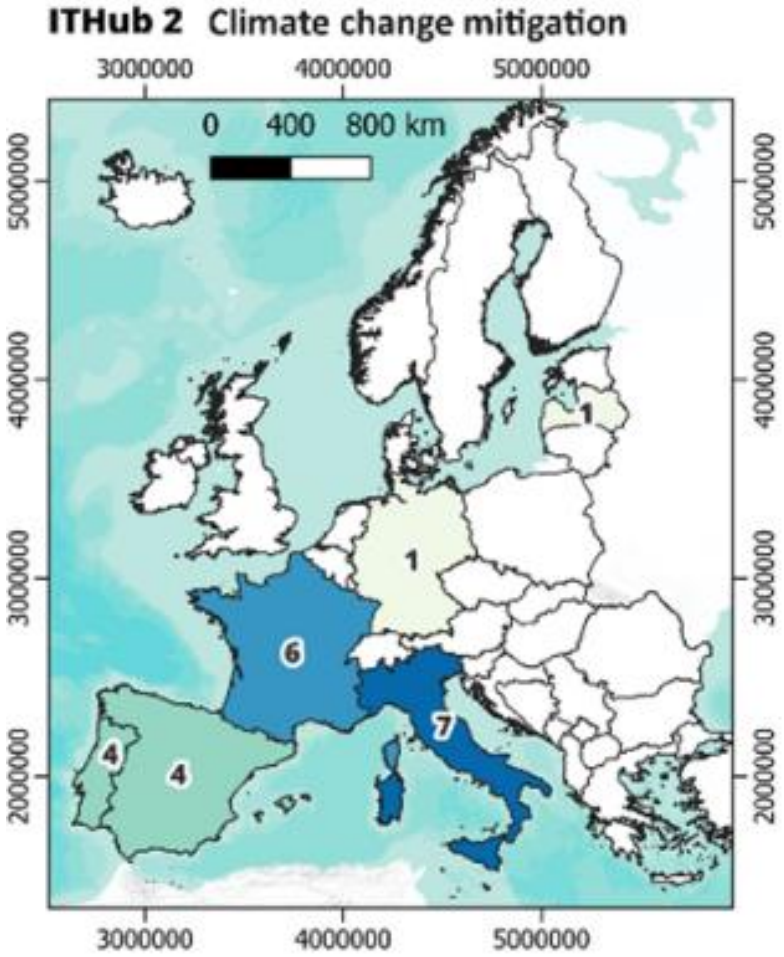
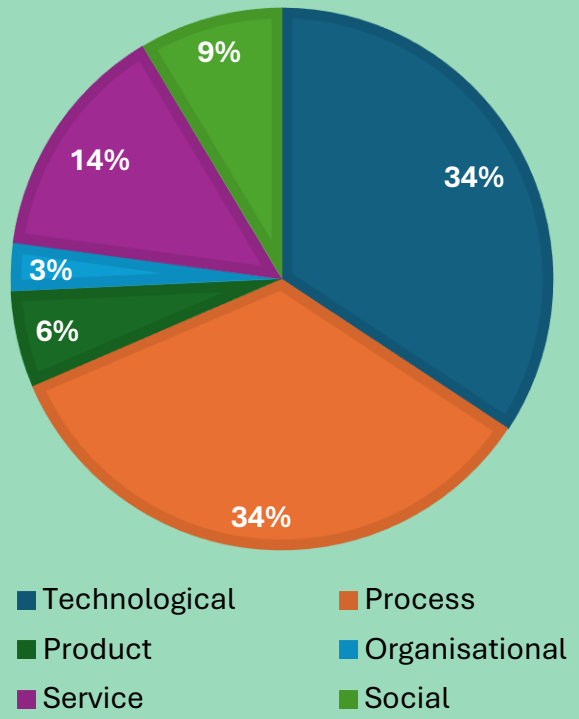
ITHub 2 – Climate change mitigation and adaptation



INNOVATIONS



24 Operational Groups

35 Extended Summaries

Most used keywords:

Non-wood forest product, wood mobilization, pest/disease control, decisional support system, sustainable forest management, landscape/land management

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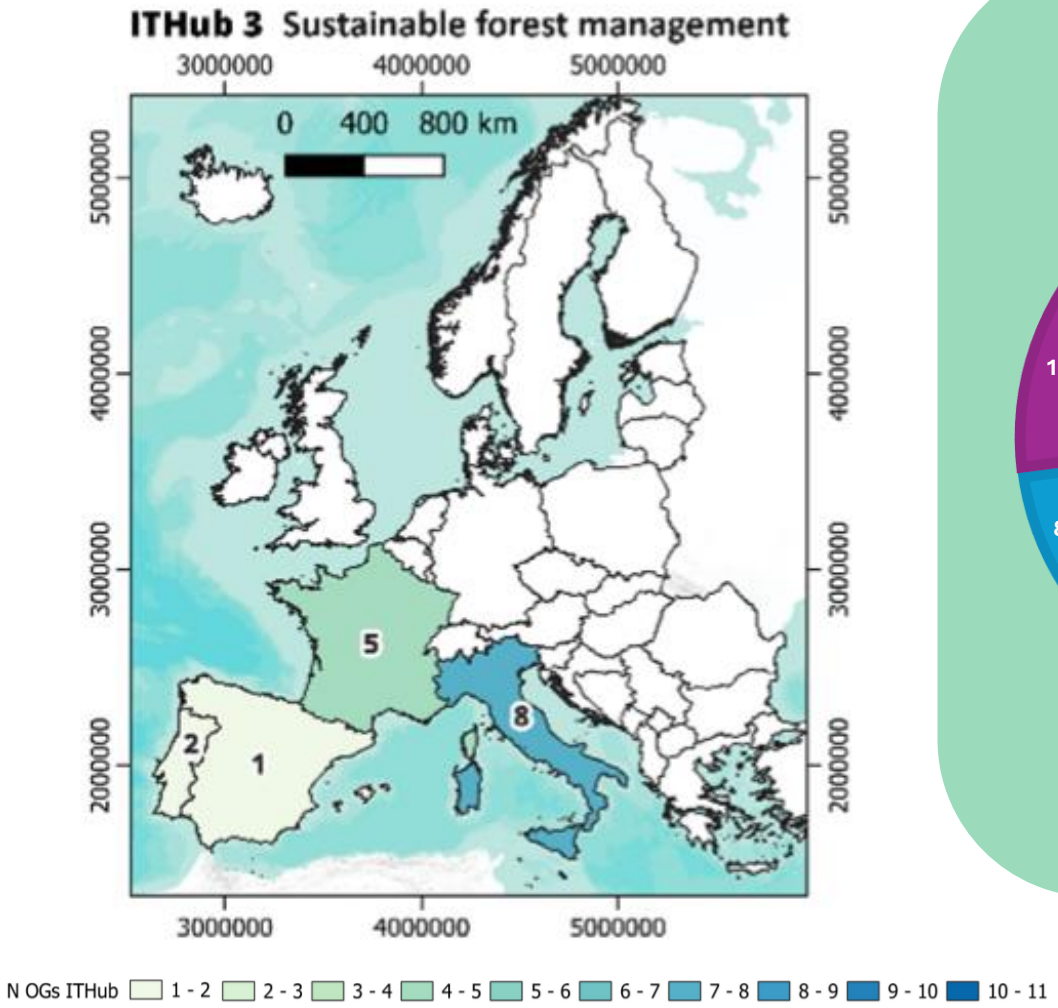
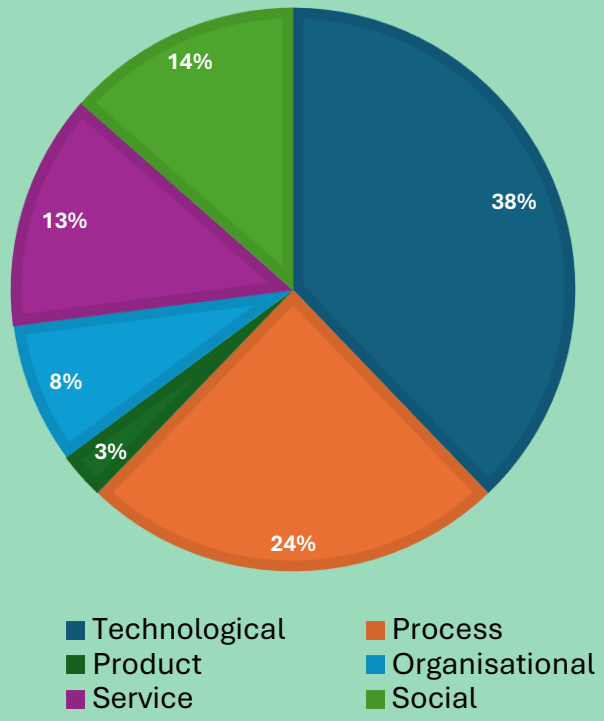
ITHub 3 –Sustainable Forest Management



INNOVATIONS



16 Operational Groups

37 Extended Summaries

Most used keywords:

Decisional Support System, silviculture, farming/forestry competitiveness and diversification, ecosystem services, cooperation, multifunctional forest management.

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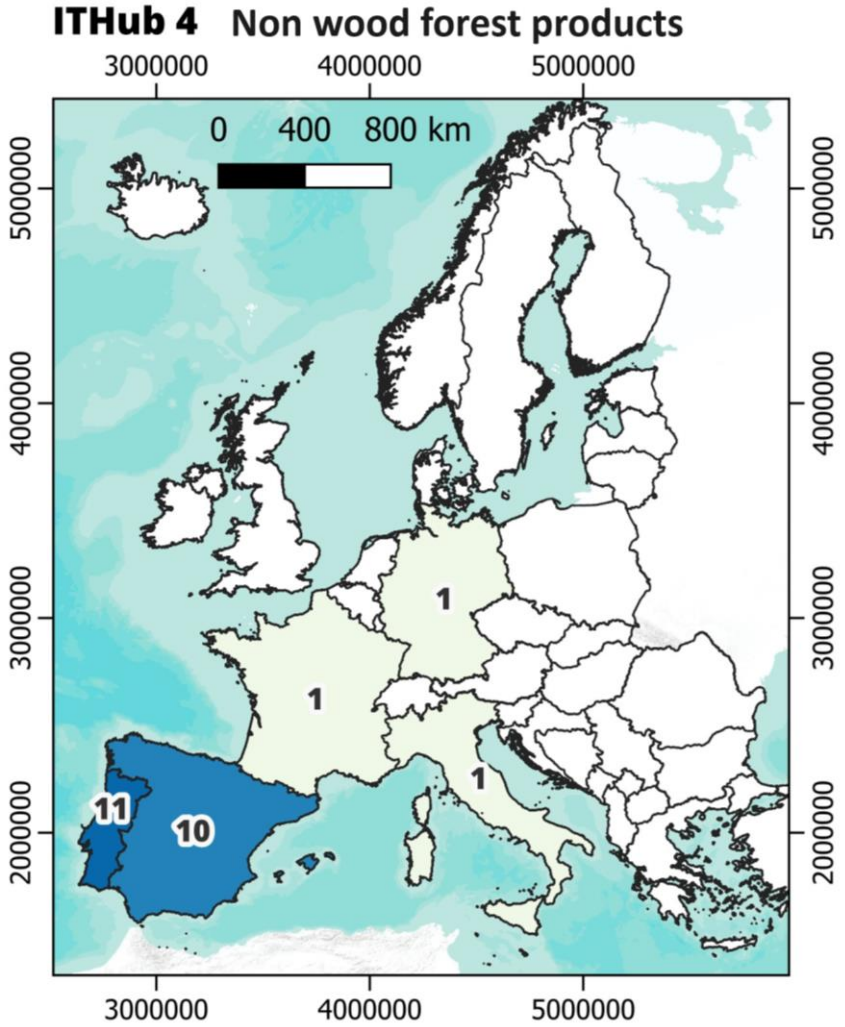
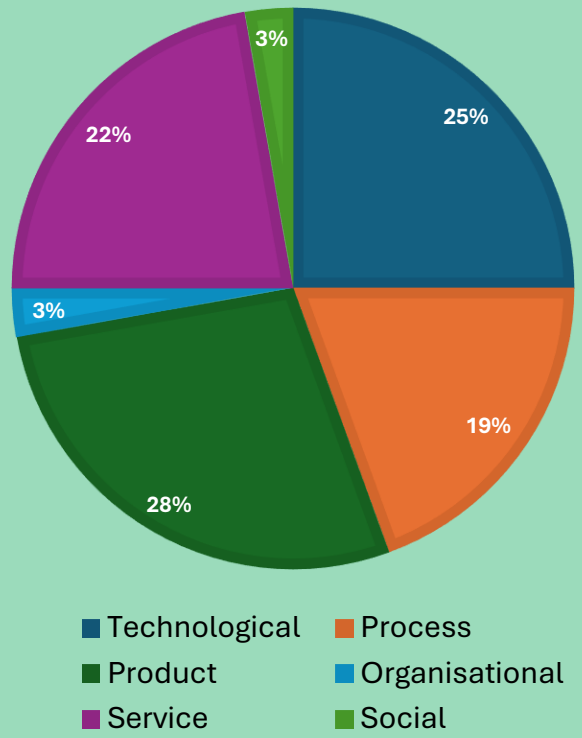
ITHub 4 – Non wood forest products



INNOVATIONS



24 Operational Groups

36 Extended Summaries

Most used keywords:

Supply chain, market and consumption; multifunctional forest management, circular bioeconomy.

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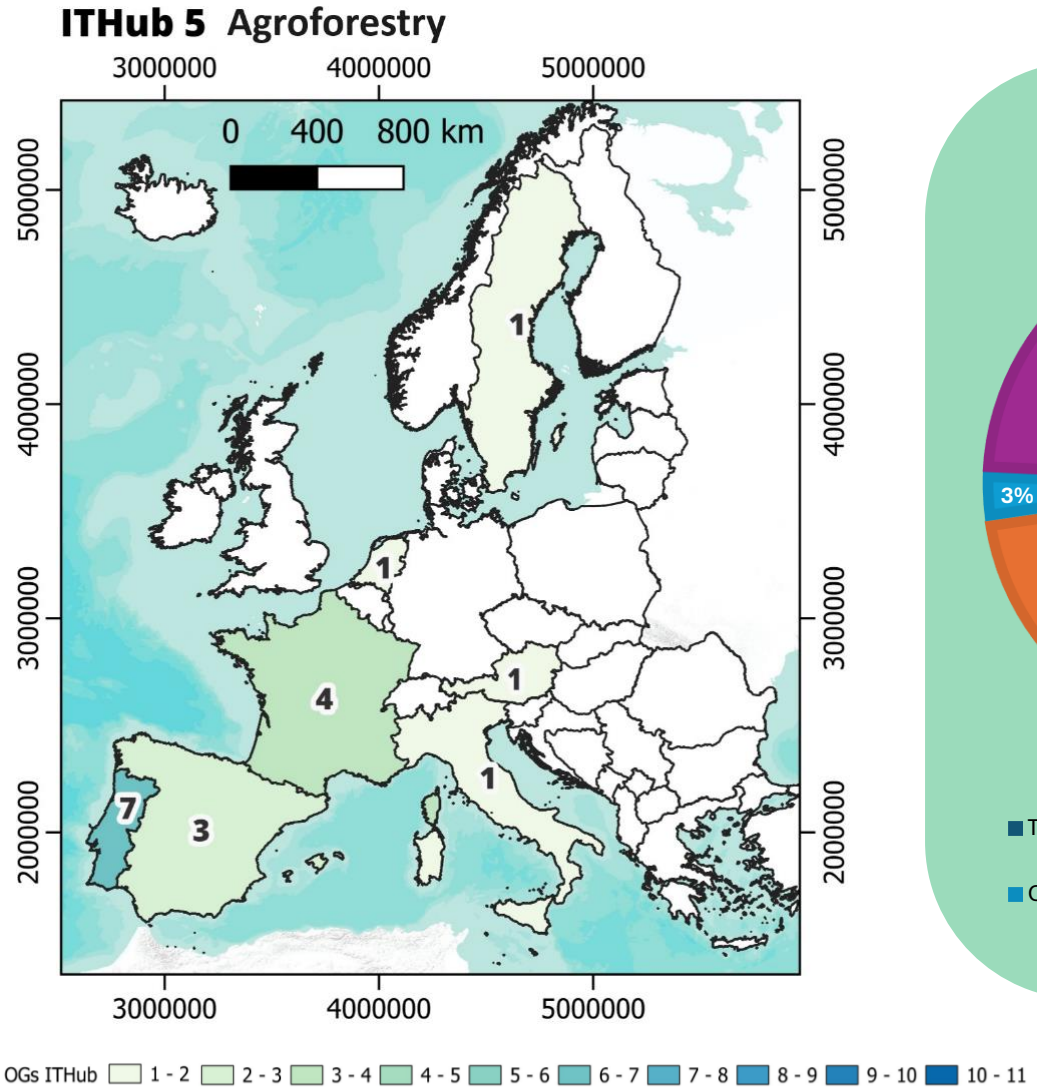
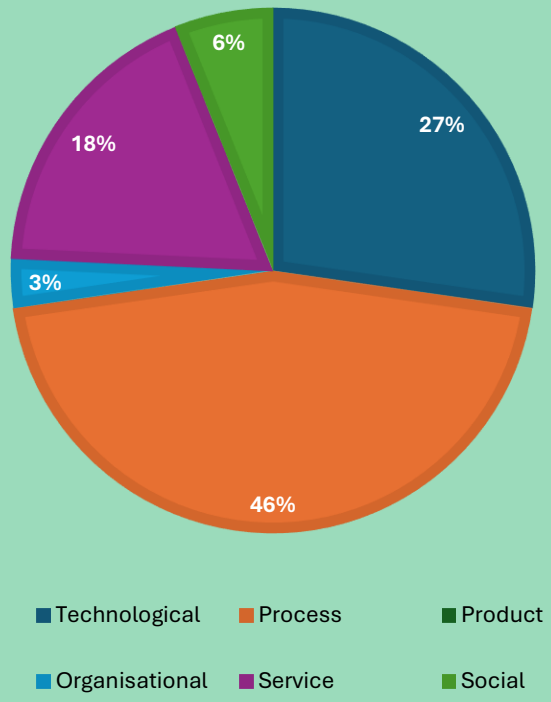
ITHub 5 -Agroforestry



INNOVATIONS



18 **Operational Groups**

33 **Extended Summaries**

Most used keywords:

Soil management/functionality
Remote sensing, climate and climate change, soil management/functionality, remote sensing data, climate and climate change, agricultural production system, farming practices.

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Multi-actor approach for prioritising innovations

Community of practice (ITHub managers & NSPOC)

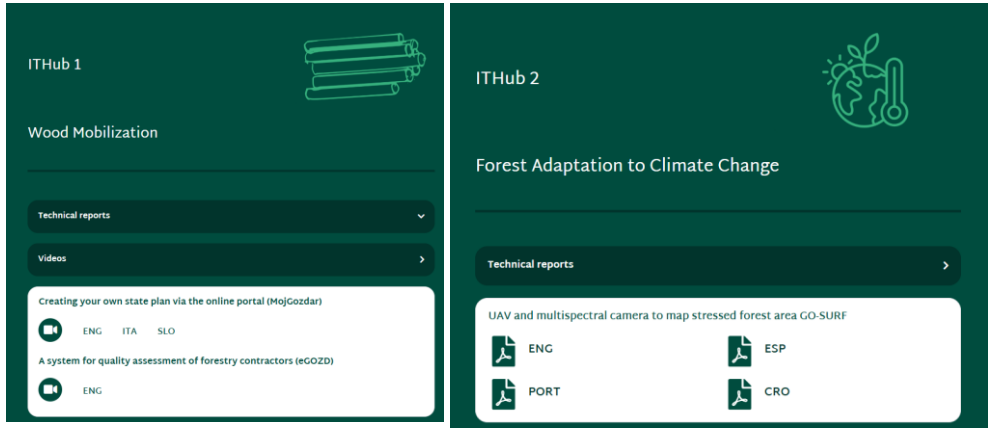
Invited experts

Invited stakeholders

33 Innovations → 20 Innovations → 10 Innovations → National Prioritization workshops → 5 Innovations + 3 OGs for study visits

Overcoming Language Barriers in Forestry Innovation

- Multilingual collaboration enhances knowledge exchange.
- Terminology differences can slow innovation adoption.
- Standardized frameworks help bridge gaps.



Most selected innovations on Wood mobilisation in Europe

GO eGOZD (Slovenia)

Web-based due diligence and traceability system for forest timber assortments

Service innovation

Selected by France, Italy, Spain

GO FAGUS (Spain)

LVL (Laminated Veneer Lumber) of *Fagus sylvatica*

Product innovation

Selected by Italy, Spain

A system for Quality assessment of Forestry Contractors

Organisational innovation

Selected by France, Portugal, Spain

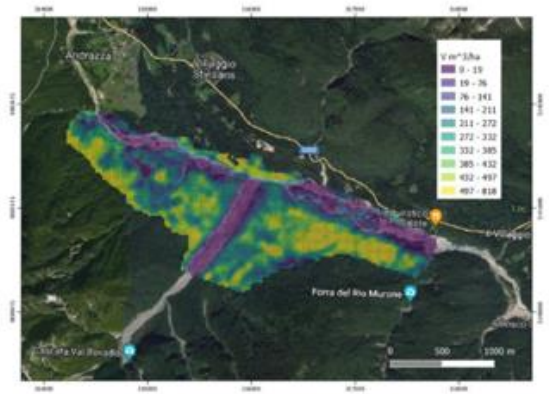
GO FOR.TRACK (Italy)

Growing Stock Volume Map to support forest operation planning

Process innovation

Selected by France, Portugal, Spain

GO PRI.FOR.MAN (Italy)



UAV to map growing stock volume for sharing forest management plan

Technological innovation

Selected by Portugal, Spain

PRI.FOR.MAN Dashboard: Overview of Wood Resources at NUT3 Level to Support Wood Mobilization and Value Chain

Technological innovation

Selected by Portugal, Italy

Funded by the European Union

Most selected innovations on Climate change adaptation in Europe

GO SURF (Italy)

UAV and multispectral camera to map stressed forest area

Technological innovation

Selected by Portugal, Italy, Spain

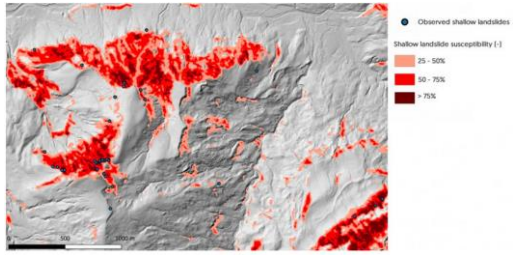
GO EUROFORNORM (France)

Educational module 'foresters, it's your turn to play»

Service innovation

Selected by France, Italy

GO BIOSEIFORTE (Italy)

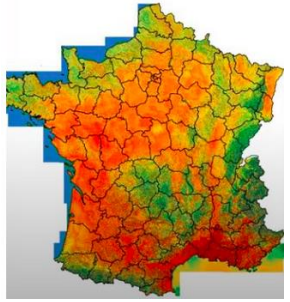


Application of SlideforMap for the hydrological risk assessment in sustainable managed forests

Technological innovation

Selected by France, Italy

GO SPNA (France)



Bioclimsol : a decision support system integrating future climate and ground conditions

Technological innovation

Selected by France, Spain

GO GEOSUBER (Portugal)

Geosuber Tool - Monitorization of the vitality of cork oak stands

Process innovation

Selected by Portugal, France

GO Bee forest (Germany)

The "sustainable bee forest" concept and implementation

Process innovation

Selected by Portugal, Spain

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Most selected innovations on Forest Sustainable Management in Europe

GO SURF
(Italy)

Biomass accounting for Sustainible Forest Managment Plans

Technological innovation

Selected by France, Portugal, Spain

GO PRI.FOR.MAN
(Italy)

Support multi-object forest management plans through easy-access information

Service innovation

Selected by Italy, Spain

PRI.FOR.MAN.dss
Shared PRIvate FORest MANagement in Eastern Alps

Community forest arrangement as ideal instance for the realization of the profit-sharing model of PRIFORMAN Project

Organisational innovation

Selected by Italy, Portugal

GO CO2MARCHE
(Italy)

Efficient Sampling Methodology for Calculating Soil Carbon Credits.

Process innovation

Selected by France, Portugal

Funded by the European Union

Most selected innovations on Non-Wood Forest Products in Europe

GO Bio-Chestnut-IBM (Portugal)

Biological Treatment of cancer chestnut (*Cryphonectria parasitica*) in Portugal

Process innovation

Selected by Portugal and Italy

GO INGECA (Italy)

Endotherapic treatments with Trichoderma spp. to control fungal diseases in chestnut groves

Technological innovation

Selected by Spain and Italy

Mobile charcoal pile prototype for biochar production in situ

Technological innovation

Selected by France and Italy

GO PLATISOR (Portugal)

Methods for managing cork oak forest with platype attacks from the Sor region

Process innovation

Selected by Portugal and Italy

GO Sambucus Valor (Portugal)

Valorization of a neglected plant

Product innovation

Selected by Portugal and France

Funded by the European Union

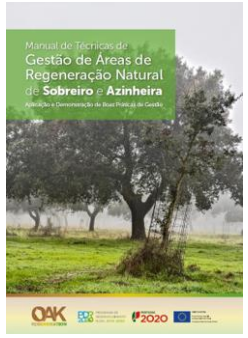
Most selected innovations on Agroforestry in Europe

GO SILVPAST (Portugal)

Review assesses the state of the art regarding the use of livestock for ecosystem management in Mediterranean landscapes

Process innovation

GO Oak Regeneration (Portugal)



Increase and transfer knowledge to producers about the natural regeneration processes of cork oaks and holm oaks in agro-forestry systems in Alentejo region, Portugal.

Product innovation

Selected by Italy, Portugal

GO ECOMONTADO XXI (Portugal)

Use of Keyline for planting cork oaks and holm oaks in agro-forestry systems

Process innovation

Selected by Italy, Portugal

GO NEWTON (Italy)

Evaluation of the impact of different grazing intensities of Maremma cattle on the components of the agroecosystem: soil, tree vegetation (structure, natural regeneration and biodiversity)

Process innovation

Selected by France, Portugal

Criteria and indicators for the certification of the sustainable management of an agroforestry system PEFC

Process innovation

Selected by France, Portugal

GO FORESTCELTA (Spain)

Development of an autonomous and digitalized feeding system for pigs of the Celtic trunk in Atlantic deciduous forests

Process innovation

Selected by France, Spain

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What are the reasons behind the OGs?

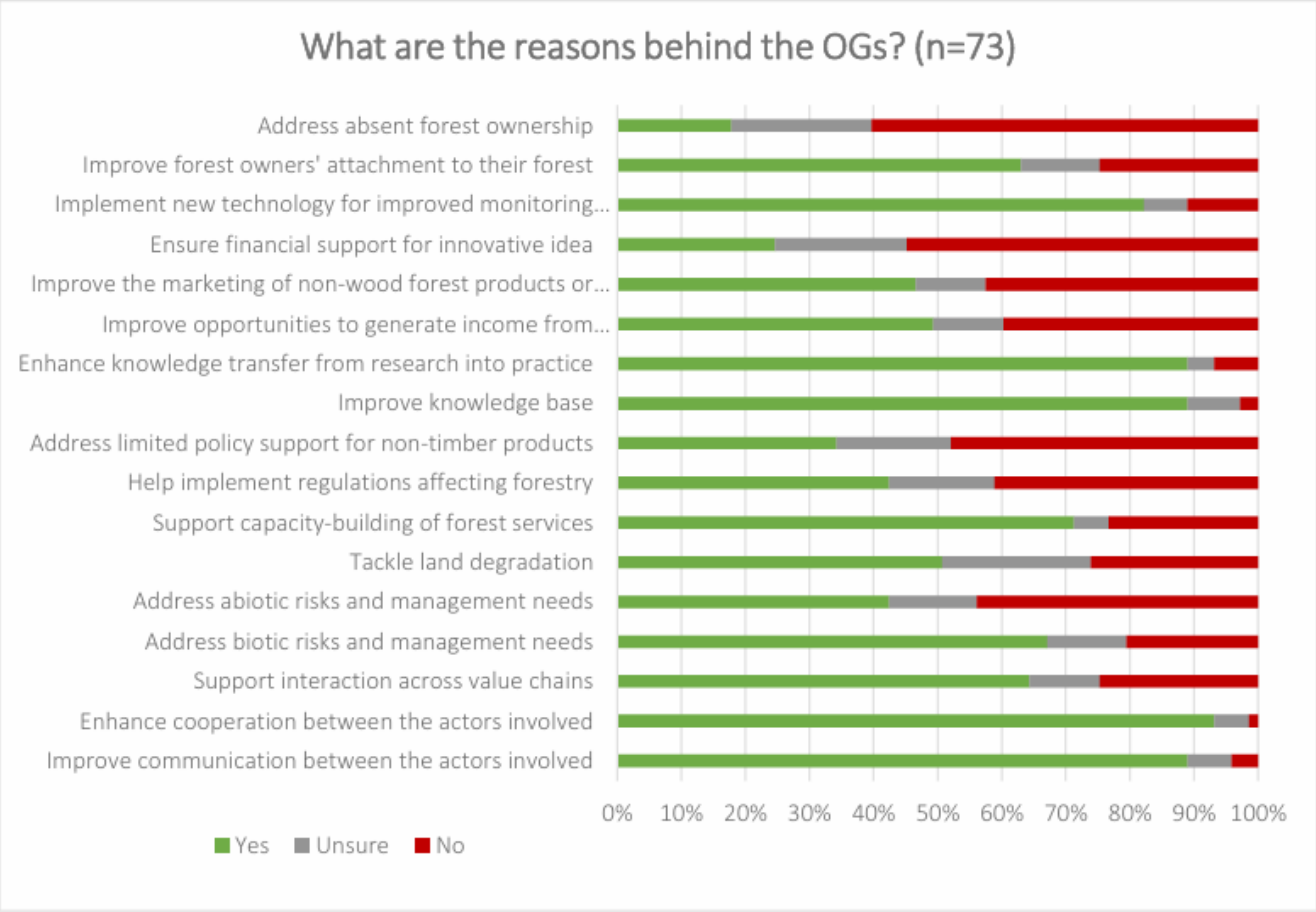

Figure 5: Reasons behind OGs

A major result is that the selected OGs reflect the funding requirement of EIP Agri to stimulate and cooperation based on a bottom-up approach (see Regulation (EU) 2021/2115, Art. 127, p. 130).

- ≥ 90% enhance cooperation and communication
- Roughly 90% facilitate knowledge transfer and improve knowledge base
- > 80% help implement new technology for improved monitoring and decision-making.

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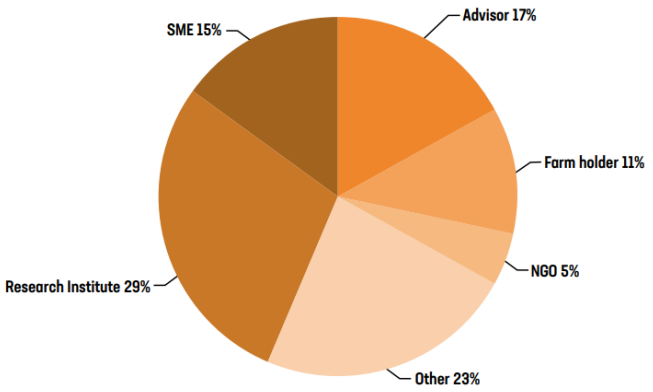
Which actors facilitated the OGs innovations?

Figure 8: Number of lead partners by category (% on total number of OGs)



Source: EU CAP Network supported by the European Evaluation Helpdesk for the CAP based on SFC data (updated 29/02/2024)

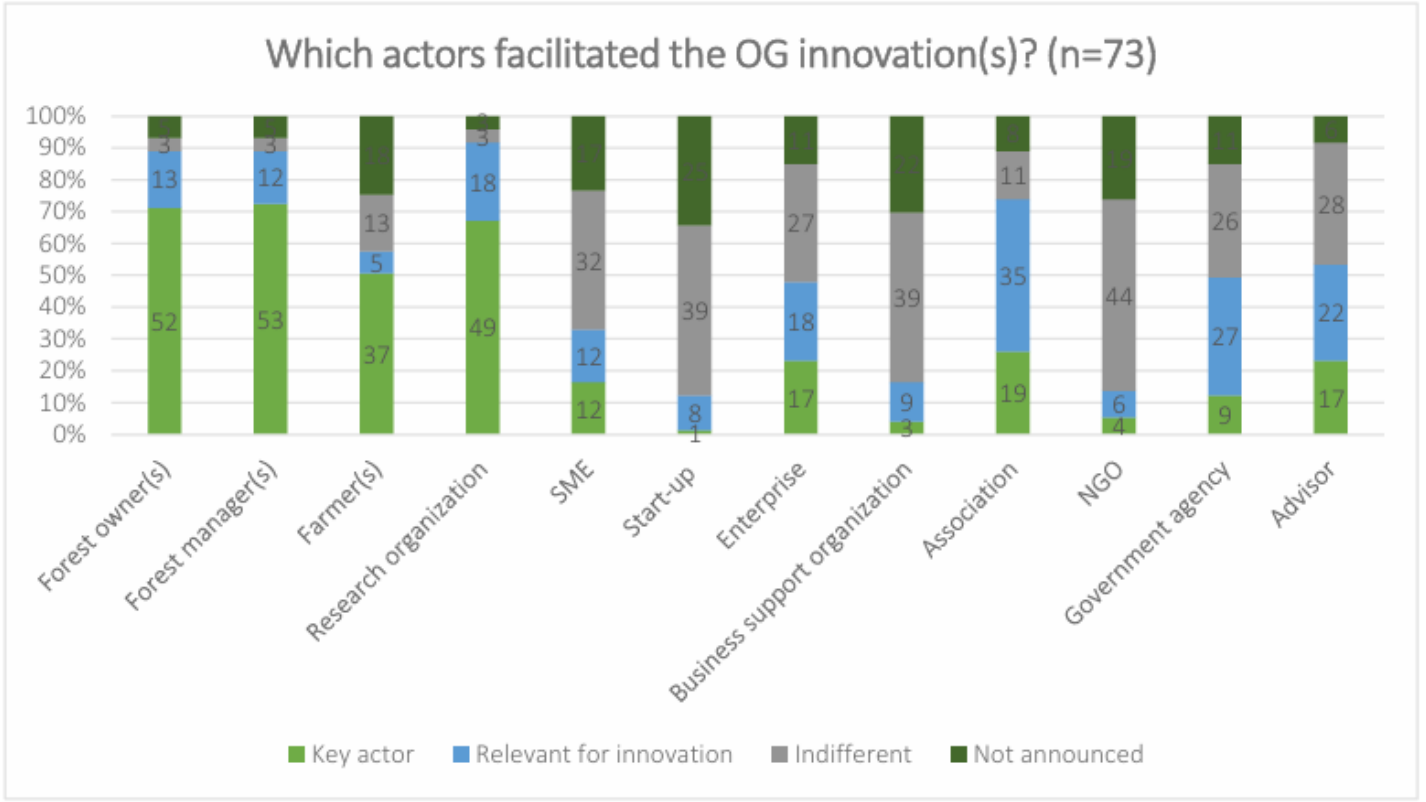


Figure 2: Actors of innovation in OGs (numbers in bars represent absolute numbers)

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INNOVATION SURVEY – In my country, the forest sector is innovative if....

Whereas the innovation drivers are largely the same across Europe, the understandings of what characterizes the forest sector's innovativeness are not.
This finding underscores the project's design to reach out to policymakers and practitioners with tailored offers and approaches that help supporting the innovativeness of the forest sector. Nonetheless, across all macro-regions there seems to be broad agreement that innovation in the forest sector requires knowledge transfer from research into practice. According to the OG members who participated in the survey, the most important channels for knowledge transfer are: **foreign contacts**, **talking to colleagues**, and **social media** – followed by other channels incl. **Printed journals.**

Regional pattern	'Sustained yield' – sustainable timber production	'Multipurpose forestry' – multifunctional sustainability	'Ecosystem management' – ecological sustainability
Goal	Maximum possible periodic timber yields (in terms of quantity and quality)	Maximum periodic yields from sales of 1) timber and 2) other forest services	Improvement and/or maintenance of the ecological state of forest ecosystems
Major premises	Maximum quantity of timber harvest must not exceed periodical prescribed yield	Maximum quantity of timber harvest must not exceed periodical prescribed yield	Maximum of forest ecosystem services aspired; Minimum quantity of timber maintained
Countries	Finland, Sweden, Estonia, Latvia, Lithuania, Austria, Poland	France, Germany, Czech Republic, Slovakia, Slovenia, Bulgaria, Romania, Hungary	Greece, Italy, Portugal, Spain
Forest area	Large in relative terms	Relatively large, partly fragmented forests	Parcelled forests
Importance of forest sector for national economies	Great	Moderate	Little

Table 1: Regional patterns of sustainable forestry across Europe (adapted from Winkel et al. 2011: 366-7)

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COORDINATOR

PARTNERS

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