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SCIENCE-BASED INTEGRATED
FOREST MANAGEMENT
FOR CLIMATE MITIGATION

INFORMA

SCIENCE-BASED INTEGRATED FOREST MITIGATION MANAGEMENT MADE OPERATIONAL FOR EUROPE

HORIZON-CL6-2021-CLIMATE-01-09

Funded by
the European Union's
Horizon Europe
Programme

EU forests' challenges and needs

- Regional practice-based **insights** are **not well documented**
- Need to consider **biogeochemical** and **forest-climate interactions** and provide **long-term economic incentives** to low carbon economy transition
- Few SFM practices are eligible to be funded under **carbon schemes**
- **MRV methodologies** and **monitoring networks** needed

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EU forests' challenges and needs

- EU's **carbon sink** capacity is not sufficient to **offset emissions**

- Three challenges: **maintaining** carbon sinks, **increasing** sequestration capacity and **enhancing** the production of substitutive materials and energy

- **Mitigation** and **adaptation** management practices are urgently needed

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Project objectives

General objective

INFORMA aims to **enhance** and **share** the latest **science-based knowledge** on multi-purpose **Sustainable Forest Management** (SFM) under **climate change**

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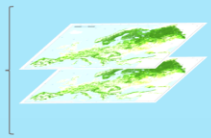
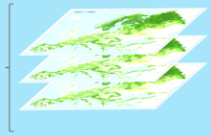
WP2. FOREST MANAGEMENT ANALYSIS

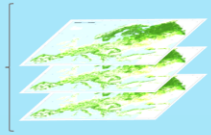
MANAGEMENT / NO-MANAGEMENT
Environmental & soil conditions



DEPENDENT VARIABLES
Cover change, forest characteristics, wood production, historical natural disturbances, etc.



INDEPENDENT VARIABLES
Albedo, surface temperature, evapotranspiration, NDVI, LAI, etc.



WP3. ANALYSIS OF BARRIERS AND OPPORTUNITIES

Includes a **META-ANALYSIS** with different approaches

TOP-DOWN

BOTTOM-UP

WP4. FOREST AND CLIMATE MODELLING

Management **OBJECTIVES**:

LOCAL scale simulation:
- Non-managed forest
- Current forest management
- Particle swarm optimization

CONTINENTAL scale simulation:
- Management portfolios transient simulations
- Climate impact quantification

Adaptation of outcomes for practical application

WP5. FORESTRY SCHEME

€ ↔ CO_2

Climate warming (carbon stock change, radiative forcing)

Other indicators will be considered (summer water deficit, biodiversity conservation and other ecosystem services)

Remote system to monitor carbon sink and other ecosystem services (e.g., water, biodiversity)

Management impacts

Stock taking case study descriptions

Pathways portfolio

Monitoring tools Certification scheme

WP1. INFORMATION & KNOWLEDGE TRANSFER

Multi-actor engagement process with scientific and non-scientific key actors participation

FIELD VISITS to exchange knowledge between key actors

TRAININGS to transfer knowledge from science to practice

WP6. COMMUNICATION AND DISSEMINATION

WP7. PROJECT MANAGEMENT

MAIN OUTPUTS

- Georeferenced forest data set
- Sustainable pathways to limit climate warming
- Guidelines to adapt forest management
- Monitoring system and forestry scheme
- Communication and dissemination activities

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Case studies

INFORMA's case studies represent the five major biogeographical regions in Europe, corresponding to 96% of the EU territory and 94% of its forests

Northern Limestone Alps
Austria, Alpine

Woods of Brabant
Belgium, Atlantic

North Karelia
Finland, Boreal

Râșca Forest District
Romania, Continental

Segre-Rialb Basin
Spain, Mediterranean

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SDGs supported by INFORMA

Subgoal 13.2 'Integrate climate change measures into national policies, strategies and planning'

- INFORMA short-term impact: 5 EU countries establish an integrated policy/strategy/plan to increase forest climate mitigation and adaptation
- INFORMA long-term impact: 10 EU countries

Subgoal 15.a 'Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems'

- INFORMA long-term impact: Supported carbon schemes will enable expenditure on conservation and sustainable use of biodiversity and ecosystems in 100,000 ha

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Outcomes and impacts

Quantitative significance of the project

Persons **informed** and **trained** in forest management practices

150 persons

+ 2 training sites
+ 30-50 persons

Outcome

Improved knowledge on **sustainable pathways** for forestry and the forest- based sector

Impact

Advanced understanding to support **adaptation** and **resilience**

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Outcomes and impacts

Quantitative significance of the project

The application of **5 SFM plans** based on the guidelines avoid the emission of

30 t CO2 eq.

60 t CO2 eq.

Outcome

Better understanding of how forest **management impacts carbon sequestration** in comparison to non-managed forests

Impact

Better understanding and enhancement of **mitigation potential** based on sustainable management of **natural resources**

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Outcomes and impacts

Quantitative significance of the project

Generation of publications based in new data available for its analysis

10-15 publications

50 publications

Outcome

- Pathways to achieve the **Paris Agreement**
- Forest managers **adapting to SFM** practices
- Increased forest-based **carbon removals** through forest management practices

Impact

Fostered **climate change mitigation** in the **primary sector**

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Outcomes and impacts

Quantitative significance of the project

Carbon Schemes and Certification Standards adopting recommendations and enabling payments for implementation of SFM projects

5-6 EU Carbon schemes
EU Carbon Removals Certification Standard

Outcome

Transfer of knowledge from science to practice

10 improved SFM projects

Impact

Efficient **monitoring, assessment** and projections to bring out solutions to **support decision-making** in climate change mitigation and adaptation policies

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