

PARTNERS

The project consortium comprises four globally recognized research institutions from Slovakia, Finland, and Sweden, with multidisciplinary expertise in remote sensing, Earth Observation, Copernicus Services, forest ecology, integrated pest management, and more. The consortium forms a diverse team with complementary skills and backgrounds, enabling successful implementation of the project.

Institute of Forest Ecology, Slovak Academy of Sciences:

IFE-SAS specializes in GIS-based decision support systems for the management of spruce ecosystems affected by bark beetle attacks.

National Land Survey of Finland, Finnish Geospatial Research Institute:

NLS FGI is an expert in geoinformatics, remote sensing technologies, machine learning, and artificial intelligence.

University of Eastern Finland:

UEF contributes to the project with a team specializing in forest ecology and silviculture, and developing methodologies in forest disturbance ecology.

Swedish University of Agricultural Sciences:

SLU's remote sensing group specializes in remote sensing technologies and their applications in forestry.

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NETWORK FOR NOVEL REMOTE SENSING TECHNOLOGIES IN FOREST DISTURBANCE ECOLOGY



Funded by
the European Union

PROJECT SUMMARY

The primary objective of this project is to facilitate networking opportunities between research institutions in Slovakia and their top-tier counterparts in the EU, specifically those from Sweden and Finland in the context of this project. The focus of this initiative is to augment forest disturbance ecology. The project will begin by establishing an initial network and developing a joint research project concerning novel remote sensing technologies. Rigorous analysis of severe insect-induced disturbances will be conducted in test areas in Slovakia, Finland, and Sweden, using drone-acquired remotely sensed data and field data. The integrated dataset will be utilized to design new tools for landscape-level early bark beetle attack identification and to construct bark beetle infestation risk assessment models. The project aims to contribute new knowledge to this scientific field.



OBJECTIVES

The primary objectives of this research project are multifaceted and align with the urgent need to address the escalating challenges posed by forest disturbances, with a particular focus on the European spruce bark beetle (*Ips typographus*). The project aims to:

- Enhance the reputation and research profile of the Institute of Forest Ecology.
- Establish a network for innovative remote sensing technologies by facilitating the use of advanced tools.
- Strengthen research management and administrative skills.
- Enhance the scientific capabilities of researchers in the use of novel remote sensing technologies.
- Conduct rigorous, in-depth analyses for gaining a comprehensive understanding of the ecological and economic consequences of forest disturbances.
- Prepare for new joint research projects.

