



A Holistic Fire Management Ecosystem for Prevention,
Detection and Restoration of Environmental Disasters

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Date, Venue

PRESS RELEASE

FOR IMMEDIATE RELEASE

TREEADS Project – A Unifying Technological Ecosystem for Integrated Fire Management and Adaptive Forest Restoration in Changing Socio-Ecological Contexts

TREEADS, a large-scale EU Green Deal project, brings together a consortium of 47 partners from 13 European countries and Taiwan, in the fight against wildfires. TREEADS will increase the effectiveness of enhanced sustainable fire and forest management under changing climate conditions, by building upon state-of-the-art high TRL products and latest innovations in fields covering all three stages of fire management - namely fire prevention and preparedness, detection and response, restoration, and adaptation - and uniting them under the umbrella of a holistic Fire Management Platform Ecosystem. TREEADS will capitalise on expert knowledge and EU initiatives, but also address the need for proactive governance, change of forest management practices, community-based awareness and preparedness activities, where local communities and bio-economy sectors will play a central role.

Wildfires are a severe threat across Europe, causing significant environmental and economic damage. They are becoming more intense and widespread as a result of climate change, particular forestry practices, ecosystem deterioration, and rural depopulation. Longer fire seasons, more frequent fire events, additional fire-prone locations, and more extreme fire behaviour are all projected to enhance fire risk as a result of climate change. As of August 10, 2021, the EFFIS registered 1,877 fires across the EU and non-EU members this year, burning more than 600,000 hectares. That is roughly 2.5 times the annual average for the period from 2008-2020, both in terms of the number of fires and the total damage. Furthermore, the latest UNEP and GRID-Arendal report on wildfires foresees a global increase of extreme fire events up to 14 per cent by 2030. Extreme wildfire events, in addition to their devastating ecological impact, have an unparalleled social cost in terms of both human life and economic losses. In addition, intense wildfire episodes, which account for only around 2% of all fires, cause the lion's share of fire damage.

The TREEADS project, funded by the EU Horizon 2020 Programme under the EU Green Deal call, aims at addressing a number of major challenges that wildfires pose, including current technological and infrastructural restrictions, but also severe environmental, societal, and economic consequences. The TREEADS fire management ecosystem will include various innovative technologies and systems covering all time-interconnected stages of wildfires (before, during and after). These will cover material solutions for passive fire protection of buildings and critical infrastructures, technologies for social inclusion, the novel introduced concept of "Forestry 4.0". Additionally, it will include the related emerging technologies, such as "Internet-of-Forest-Things", "Forest Digital Twin", Unmanned Aircraft Systems (UAS) technologies -tailored for wildfire fighting and management-, computer and artificial vision, sustainable land management



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technologies and agroforestry solutions for ecological balance, and Unmanned Aerial Vehicle (UAV)-assisted forest restoration. These technological solutions will allow the TREEADS consortium to enhance forest and communities' protection against natural hazards and human-induced threats associated with climate change, to strengthen the resilience of EU forests, and to achieve a crucial step towards efficient and sustainable forest management. In total, over 26 different technologies will be optimized, developed, and validated in the implementation of TREEADS with expected results to include, among others, the minimization of the significant impacts caused by extreme fires and experience strengthening for end-users within a rich set of realistic scenarios via the project's training programme. TREEADS will focus research, development, and integration efforts on delivering systems of high relevance and benefit to the relevant end-users and the forestry market, while providing them, in turn, with an excellent opportunity to understand potential weaknesses or limitations of current technologies.

The TREEADS tools and solutions will be demonstrated and validated under actual operating conditions in eight complex pilot implementations in seven European countries and Taiwan. Among them is Austria, Norway, Spain, Italy, Romania, Greece and Germany; countries that have suffered the loss caused by extensive wildfires over the past years.

The multi-stakeholder approach implemented throughout the project will allow for the efficient integration of expert knowledge from professional foresters and actors in (i) forested social and ecological systems; (ii) forest economics and policy; and (iii) existing EU initiatives and services, in addressing wildfires through innovative means or mitigation strategies.

The official **Kick-Off Meeting** of the TREEADS project took place as a virtual event on February 21st and 22nd, 2022, with the participation of more than 100 experts that will work closely for the next 3,5 - years to deliver an impactful and fully adaptable solution for wildfires prevention, detection and restoration of environmental disasters.

[The main role of LAMMC-FI in this project is to develop the most-promising contents for the seed pods meant for burned-out area reforestation. LAMMC-FI will be tasked with selecting the most suitable plant propagation material, microbial inoculants, and nutrient composition that will work in harmony.



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NOTES TO THE EDITOR

PROJECT SUMMARY

TREEADS is an H2020 project consisting of 47 partners from 12 EU countries, 1 associated country (Norway) and Taiwan. Motivated by the need for a more effective, science-based wildfire management and risk-informed decision-making, the TREEADS consortium will build upon state-of-the-art high TRL products and unite them in a holistic Fire Management platform that optimizes and reuses the available Socio-technological Resources in all three main phases of Wildfires. By adopting a multi-stakeholder, multi-actor approach at its core, the TREEADS solutions will contribute to sustainable development as an inclusive societal process and secure sustainability and resilience of natural environment, as well as local human societies. TREEADS advances will be demonstrated and validated under actual operating conditions in eight complex pilot cases in seven EU countries (Romania, Spain, Italy, Greece, Norway, Austria, Germany) and Taiwan.

GENERAL INFORMATION

Duration: 42 months | Starting from 1 December 2021

Total cost: €22.8 million

Coordinator: RISE Fire Research AS

Website: <https://treeads-project.eu/> | Twitter: [@TREEADSH2020](https://twitter.com/TREEADSH2020) | LinkedIn: [@treeads-h2020](https://www.linkedin.com/company/treeads-h2020)

TREEADS Consortium: RISE Fire Research AS, NO | Jotne EPM Technology AS, NO | Bundesanstalt fuer Materialforschung Und -Pruefung (BAM), DE | Capgemini Engineering, FR | Drone Hopper, ES | Universidad de Salamanca (USAL), ES | Squaredev BV, BE | Fundacion Cartif, ES | Universitat de Girona, ES | National Centre for Scientific Research "Demokritos", GR | Software Imagination & Vision SRL (SIMAVI), RO | The Otto-von-Guericke-University Magdeburg (OvGU), DE | Adrestia R&D Private Company, GR | Center for Research and Technology Hellas (CERTH), EL | Eight Bells LTD, CY | ACCELIGENCE LTD, CY | INNOV Limited, CY | Frontier Innovations, GR | VIPO Solutions, NO | Global BioDesign, BE | Engineers For Business S.A., GR | Lithuanian Research Centre for Agriculture and Forestry (LAMMC), LT | Schmitz OneSeven GmbH, DE | Copenhagen Business School, DK | Woodify AS, NO | K3Y LIMITED, BG | Maggioli S.P.A, IT | National Observatory of Athens, GR | Ministry of Environment, Waters and Forests, RO | Romanian Forestry Association (ASFOR), RO | Fundatia Pentru SMURD, RO | Johanniter Ausbildung und Forschung gemeinnützige GmbH (JOAFG), AT | Disaster Competence Network Austria (DCNA), AT | Ing. Feischl Richard, AT | Freiwillige Feuerwehr Gumpoldskirchen (FGK), AT | Professional fire brigade and civil, protection department Graz, AT | Sviluppo Tecnologie e Ricerca per l'Edilizia Sismicamente sicura ed ecoSostenibile Scarl (STRESS), IT | Agenzia Campana Mobilità Infrastrutture e Reti (ACaMIR), IT | Comune di Sorrento, IT | Pompiers de l' Urgence Internationale, FR | Federación de las Asociaciones Forestales de Castilla y León, ES | Diputación Provincial de Ávila, ES | Technical University of Crete, GR | Mediterranean Agronomic Institute of Chania, GR | Decentralized Administration Authority of Crete, GR | National Taiwan University of Science and Technology, TW | Denmark Technical university (DTU), DK

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