SILVANUS

Integrated **Technological** and Information **Platform** for Wildfire **Management**

www.silvanus-project.eu

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SILVANUS

SILVANUS - A Holistic and Innovative Approach to Wildfire Management

Funded by the EU Horizon 2020 Green Deal program and coordinated by Università Telematica Pegaso, **SILVANUS** project includes 49 partners from the European Union, Brazil, Indonesia, and Australia, bringing together a large consortium of interdisciplinary experts from four continents to combat the threat of forest fires and improve forest resilience against climate change.

The key output of the project is the release of a climate resilient forest management platform to prevent and suppress forest fire. **SILVANUS** relies on environmental, technical and social sciences experts to support regional and national authorities responsible for wildfire management in their respective countries. **SILVANUS** scientists and research engineers will aid the civil protection authorities to efficiently monitor forest resources, to evaluate biodiversity, to generate more accurate fire risk indicators, and promote safety regulations among the local population affected by wildfire through awareness campaigns.

VISION

The development of a climate resilient and innovative technological platform providing decision-making support in preparedness, response and recovery phase of wildfire management cycle and increasing the human, environment and economy resilience to wildfires.

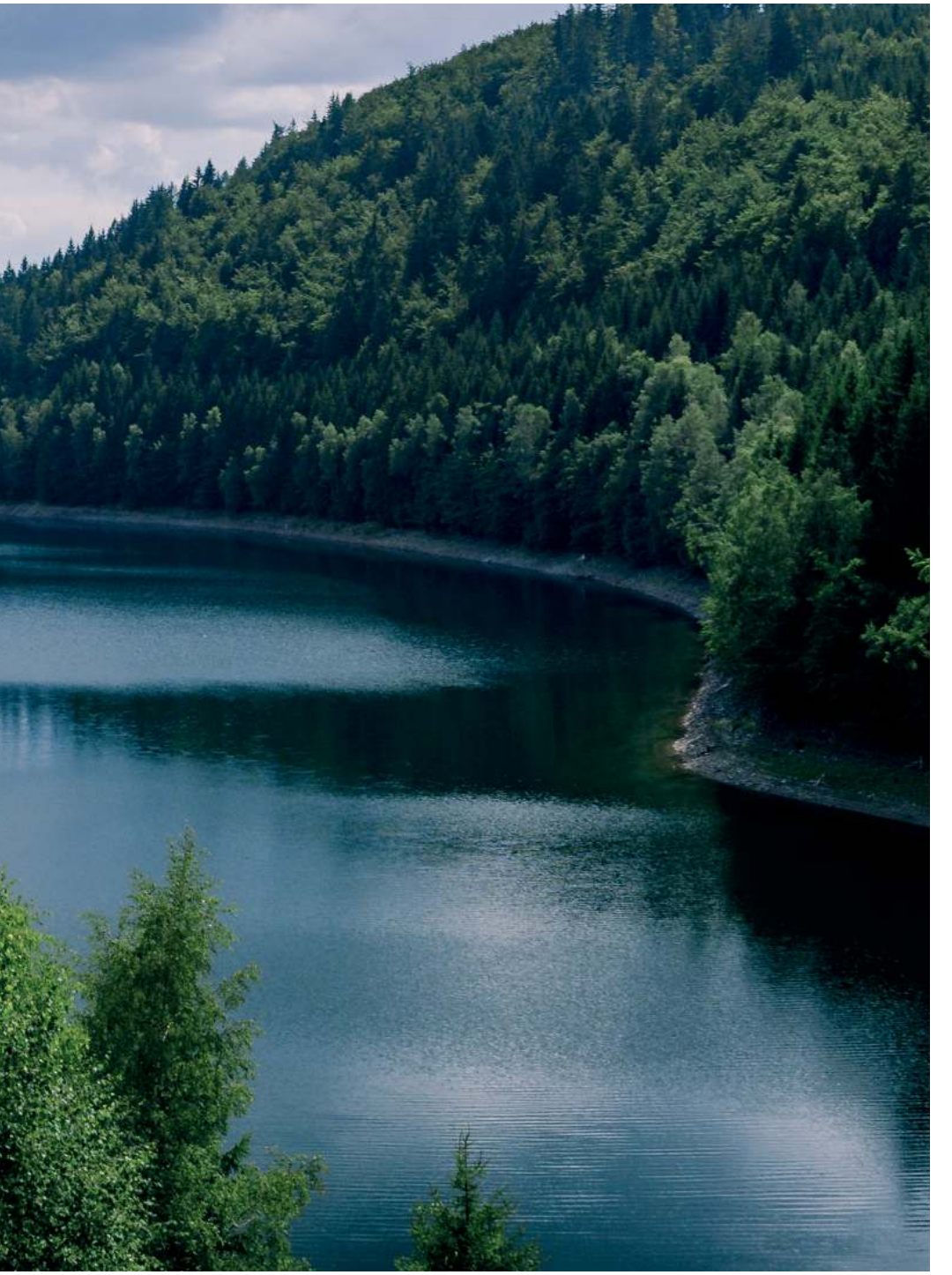
MISSION

Adopt synergistic alliance between

- Technology and scientific innovation
- Enviroment
- Human factors

PLATFORM COMPONENTS

- Citizen engagement framework
- Biodiversity models
- Wireless communication structure
- Coordination between unmanned aerial vehicles (UAV) and unmanned ground robots (UGV) for detecting forest fire
- On-site device integration
- Calculation of available fuel and weather data to model fire behaviour



PREVENTION
AND PREPAREDNESS
Fire ignition models, stakeholder engagement and advanced training programme for firefighters, simulation of real-world environments and life-saving scenarios, citizen engagement framework, mobile application for citizen engagement

DETECTION
AND RESPONSE
Weather data analytics, on-site device integration, calculation of available fuel and weather data to model fire behaviour, coordination between unmanned ground vehicles and unmanned aerial vehicles for detecting forest fire, wireless communication infrastructure for coordinating first responders

RESTORATION
AND ADAPTATION
Knowledge on geographic data, biodiversity models, forest growth models, ecological site classification, policy recommendations on forest governance, soil rehabilitation strategy recommendation, restoration roadmap services for natural resources

OUR APPROACH

The SILVANUS project embraces a holistic approach to extreme wildfire prevention and suppression, including a high level of stakeholder engagement. From first responders to the health sector, from forest owners to the construction and energy industry, the SILVANUS platform will address the needs and requirements of stakeholders by addressing the challenges outlined in three distinct Phases (A – Prevention and preparedness, B – Detection and response, C – Restoration and adaptation).

OBJECTIVES

The objective is to implement and validate the SILVANUS sustainable forest management platform and methodologies for monitoring and protecting natural resources in the fight against extreme wildfire. The technical and scientific innovation will develop novel methodologies in monitoring and analysing ecological growth of natural resources to complement the analysis of biodiversity models. The environmental monitoring framework developed within SILVANUS will be supplemented with cutting-edge technologies for the early-stage detection and response coordination of wildfire. Finally, the SILVANUS platform will offer support for rehabilitation, restoration, and adaptation of natural forest growth.

PILOTS

SILVANUS will validate the innovation and applicability of its platform through the implementation of 12 pilots in 11 European Union and international countries (Australia, Brazil, Indonesia), featuring a wide scale of case studies, such as sites sensitive to wildfire that are close to electricity and water supply infrastructure, sites with potential explosion risks in an industrial area, and sites with use of ground robots.

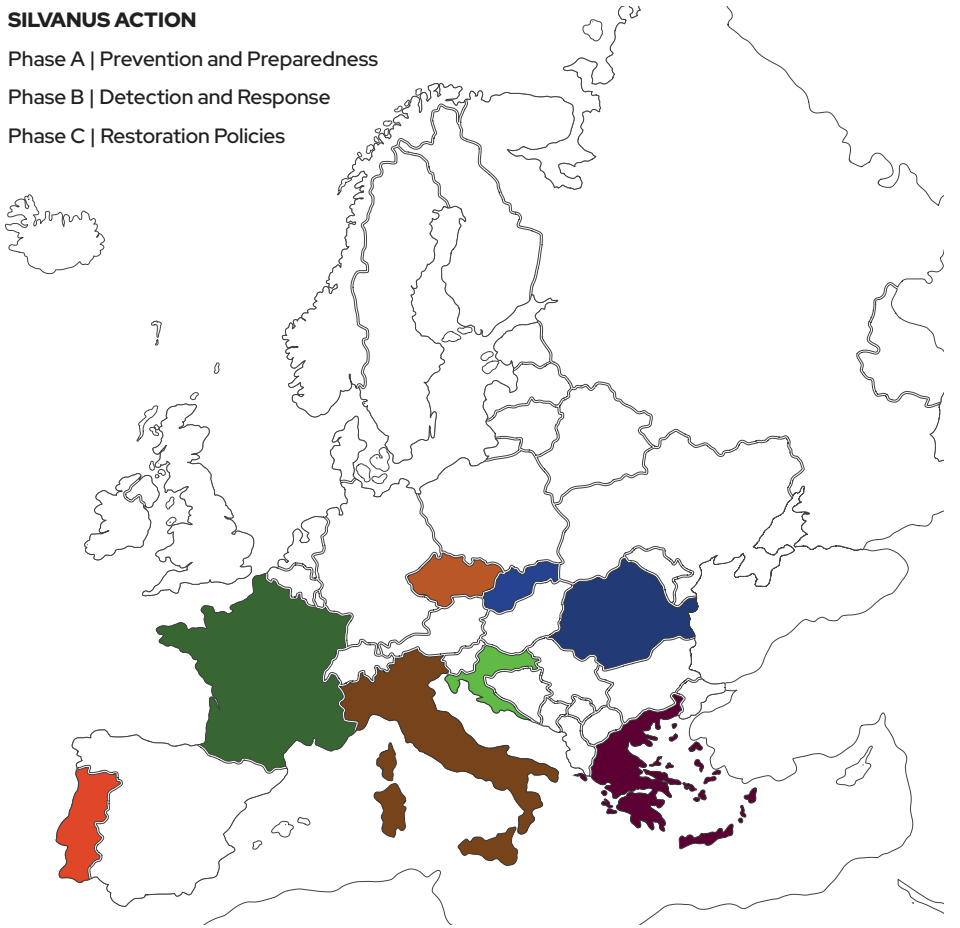

Protecting
and
restoring
ecosystems
and
biodiversity
SILVANUS

SILVANUS ACTION

Phase A | Prevention and Preparedness

Phase B | Detection and Response

Phase C | Restoration Policies



EUROPE

Phase A Phase B Phase C

AUSTRALIA

Phase B

BRAZIL

Phase A Phase C

INDONESIA

Phase C

Industrial partners

THALES Building a future we can all trust

FINCONS GROUP

Atos

DELL Technologies

SIMAVI Software Imagination & Vision

netcompany intrasoft

Stakeholders

SME Organizations

Venaka Media

Zanasi & Partners Security Research and Advisory

MASSIVE DYNAMIC SWEDEN

expert.ai

3MON rescue partner

iTTi

Micro Digital

catalink The catalyst for innovation

NEW by EDP & CTG

SYNTHESIS

EXUS

RiniGARD Smart Technology

Academic/Research Partners

PEGASO Università Telematica

UNIVERSITY OF BORÅS

CERTH CENTRE FOR RESEARCH & TECHNOLOGY HELLAS

cmcc Centro Euro-Mediterraneo sui Cambiamenti Climatici

IST-ID Associação do Instituto Superior Técnico para a Investigação e Desenvolvimento

VELEUČILIŠTE VELIKA GORICA UNIVERSITY of APPLIED SCIENCES VELIKA GORICA

INSTITUTE OF INFORMATICS SLOVAK ACADEMY OF SCIENCES

Politechnika Warszawska

Internationl partners

UNIVERSITAS AMIKOM YOGYAKARTA

CSIRO Australia's National Science Agency

UFRJ UNIVERSIDADE FEDERAL DO RIO DE JANEIRO

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