



SILVANUS

VOL
02

SILVANUS Newsletter



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SILVANUS - European Green Deal Project for Wildfire Management and Climate Change

SILVANUS is a Horizon 2020 Green Deal project, named after the Roman deity of woods and uncultivated lands, whose main objective is to create a climate resilient forest management platform to prevent and combat forest fire. The project consortium includes a wide range of environmental, technical and social science experts from eighteen countries, spanning over four continents, who will support regional and national authorities responsible for wildfire management in their respective countries. SILVANUS experts will help 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.

Immerse yourself in the world of SILVANUS -
Modern and Innovative Protector Against Wildfire



This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement No 101037247



SILVANUS General Assembly Report

The SILVANUS project consortium has convened on the 5th and 6th of July in Bari, Italy, the capital city of the Apulia region, for a General Assembly Meeting where the development of the project was further discussed and consolidated. The meeting was organised and hosted by the project partner ASSET – the Regional Strategic Agency for Sustainable Development in Apulia Region.

The opening discussion of the GA meeting was focused on the contributions of SILVANUS to future mitigation and decrease of extreme wildfire events in the region of Apulia and beyond. Furthermore, technical specifications of SILVANUS platform were thoroughly discussed among partners, dissemination activities were presented, and open-ended questions were efficiently resolved.

On the 2nd day, the development of diverse pilots was presented, from such varied locations such as the Podpolanie region in Slovakia to the biodiversity of Sebangau National Park in Indonesia, from Queensland in Australia with the presentation of the fire-detecting unmanned ground vehicles, to the Gargano National Park in the hosting Italian region of Apulia.

Developments and productive discussions of both technical and project management aspects were in the forefront, such as the development of the biodiversity profile and citizen engagement programme applications, fire danger assessments and fire detection systems, ecological resilience programmes, big-data framework and platform architecture, and many more crucial building components that will craft the ambitious SILVANUS platform.

Gargano Pilot Visit

SILVANUS team has visited the pilot sites of the Gargano National Park in the scenic region of Apulia in Italy on the 7th and 8th of July.

A drone was deployed for a detailed visual analysis of the previously fire-damaged area in the vicinity of Vico del Gargano, discussions were led that brought practical real-time solutions into the forefront, interviews were conducted with representatives of ARIF Regione Puglia (the Apulian Regional Agency for Irrigation and Forestry Activities), that provided essential information from the frontlines for the further advancement of SILVANUS platform. Logistics were discussed in detail on setting up the forward command centre, the fire sensors, and the deployment of technical equipment for quick and efficient wildfire prevention, detection, and response.



Overview of Dissemination Events

Television Coverage in Italy - The General Assembly Meeting

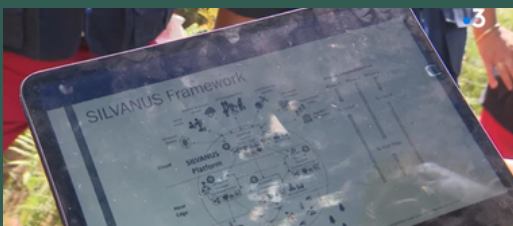
Before the General Assembly meeting of SILVANUS, in July 2022, Marino Spilotros from the SILVANUS partner ASSET was interviewed on the Italian Puglia TV station about the project, where he explained the SILVANUS activities and outcomes. Link for the full interview (7 minutes in, in Italian) is available [here](#).



A special TV coverage was filmed on the first day of the SILVANUS General Assembly (GA) meeting on July 5th, and was published by four different regional TV stations – Telebari, Tnorba TV, TRM TV, Antenna Sud - on July 6th. As an example, the article in Italian and a short YouTube clip is available [here](#) (in Italian).



Television Coverage in France - Visit to the French Pilot Site



The France 3 Nouvelle-Aquitaine television report on the SILVANUS pilot site in Haute-Vienne department in France, which featured SILVANUS partners International Emergency Firefighters (PUI), led by Iliana Korma and Philippe Besson, and the SILVANUS Scientific Coordinator Venaka TReLeaf, represented by Krishna Chandramoiuli, is available [here](#) (in French).

International Dissemination Events

International Workshop on Emerging Network Security (ENS 2022) in Vienna, Austria

SILVANUS was presented at the 5th International Workshop on Emerging Network Security (ENS 2022) in Vienna, Austria, on August 23rd, 2022. The workshop was organised by SBA Research, Austria. Paper on SILVANUS-related network security aspects. The project was presented by Wojciech Mazurczyk and Krzysztof Cabaj from the Warsaw University of Technology. More than 30 participants were present on each of the 4 sessions of the ENS workshop, mostly from academia and IT business.



SILVANUS Special Session at the 19th International Conference on Content-based Multimedia Indexing in Graz, Austria



SILVANUS held a special session at the 19th International Conference on Content-based Multimedia Indexing in Graz, Austria, titled MSPND – Multimodal Signal Processing Technologies for Protecting People and Environment against Natural Disasters. Krishna Chandramouli from Venaka TreLeaf, the SILVANUS technical coordinator, was presenting a paper on Ecological Impact Assessment Framework for Areas Affected by Natural Disasters, whose lead author is Kusurini Kusurini from Universitas AMIKOM Yogyakarta. The presentation of the paper was focused on depicting a forest biodiversity model as a means to quantify biodiversity, with an analysis of ecological resilience to a wildfire event. The session was followed by a presentation of SILVANUS by Maria-Eirini Pegia from Centre for Research and Technology Hellas (CERTH) with the paper on BiasUNet: Learning Change Detection over Sentinel-2 Image Pairs.

This was a long-awaited event for the SILVANUS team, and it resulted in a successful SILVANUS session where the stakeholder network was expanded and the first-year project results were presented.

SILVANUS at the Fire Ecology Across Boundaries Conference in Florence, Italy

SILVANUS had the honour of attending and participating at the Fire Ecology Across Boundaries Conference in Florence, Italy from 4th to 6th of October. The project was presented by the coordinator Michele Corleto from Universita Telematica Pegaso and Alexandre Lazarou from Zanasi & Partners, at the panel session and roundtable on wildfire risk scenarios addressing the expected Green Deal impacts related to building resilience into European landscapes, organised by Forest Science and Technology Centre of Catalonia. A wonderful opportunity for EU Fire Projects United to reunite, coordinated by the CSA project Firelogue!



SILVANUS Video - Modern and Innovative Protector Against Wildfire



Take a look at the SILVANUS promotional video, assembling footage shot on location in Portugal, Italy, Croatia, Indonesia and Australia, shot by SILVANUS partners Terraprima, Venaka TReLeaf, Micro Digital, Croatian Firefighting Association, AMIKOM Yogyakarta University, and CSIRO!

Footage locations include the pilot sites of Gargano National Park in Italy, Sebangau National Park in Indonesia, Cova da Beira in Portugal, along with footage from Natural Park Telašćica and the Kvarner Gulf in Croatia.

The video is telling a visual story on the SILVANUS platform will help in achieving a quicker and more effective response to extreme wildfire, emphasising a holistic approach, taking into account safety of households, communities, and property, durability of infrastructure, quick response of firefighters, and biodiversity restoration.

Immerse yourself in the world of SILVANUS! For the benefit of forests and humankind.

Subscribe to our [YouTube channel](#) for more.



SILVANUS has identified 18 different stakeholder target groups.
The focus in this newsletter is on the following three stakeholders:

Energy and Water Infrastructure



Through its holistic approach, the SILVANUS platform will take into account the potential impact of wildfire on energy and construction infrastructure (transmission and distribution lines, power plants, storage facilities, pipelines, roads), by assessing the magnitude and rapidness of damage extreme wildfire can inflict to energy and water infrastructure. One of the major adverse impacts of fire hazards may be a widespread loss in electricity and water supply, which could extend to areas far beyond the geographical area directly affected by wildfire.

By assessing the threats the SILVANUS platform, a stakeholder from energy and/or construction industry can assess the risks of wildfire affecting the energy infrastructure in a given region, before, during, or after a prevention operation. The Portuguese SILVANUS pilot in the Cova da Beira National Park will show how SILVANUS platform will be applied to the protection of energy and water infrastructure.

Infrastructure and Road Network



SILVANUS platform will assess the potential impact of wildfire on infrastructure and road network, in terms of inflicted damage, and the negative impact on access of first responders during a wildfire event to households, energy, water and health infrastructure, etc. Stakeholders from infrastructure and road network sectors can therefore, with the help of SILVANUS platform, assess the threat of potential extreme wildfire and apply the appropriate measures.

Timber Industry

SILVANUS platform will provide information on the probability of wildfire in proximity to timber industry sites and will identify the best position to place firebreaks in order to minimize the damage in the event that a wildfire happens in a timber area.



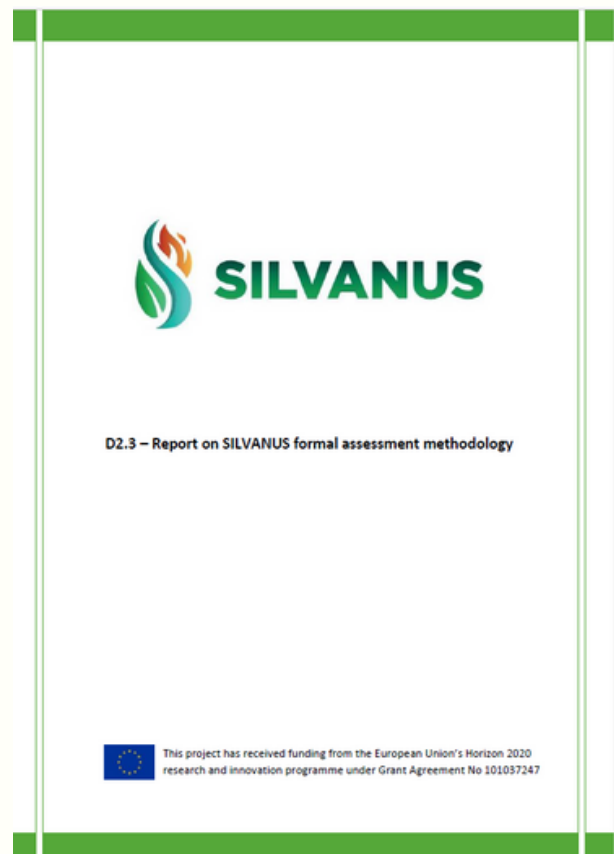
Report on Submitted Deliverables

In August and September 2022, SILVANUS submitted four Deliverables, three of which are publically available on the SILVANUS website.

Deliverable 2.2 – First Report on Environmentally Sustainable, Resilient Forest Models presents a consolidated overview of the participatory approach carried out with stakeholders on the needs and requirements of forest management authorities, fire fighters, and first responders among others. Additionally, the report includes an analysis of the different forest characteristics models, along with a historical review of the forest fires encountered in the previous years across the pilot location. More importantly, the report also outlines the measures considered by the project to meet the Green Deal 2030 objectives.

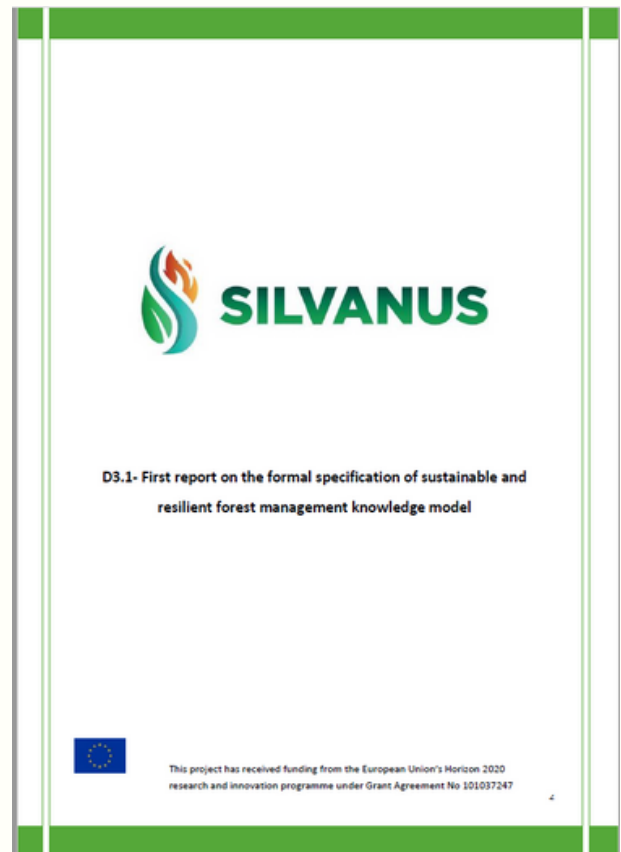


Deliverable 2.3 – Report on SILVANUS formal assessment methodology presented the first version of the impact assessment framework that will be used for the evaluation of the SILVANUS platform. This Deliverable illustrated the procedures adopted to evaluate the first release of SILVANUS platform through the pilot activities, defining the Key Performance Indicators for User Products – a limited set of functionalities for the Minimal Viable Product stage of the SILVANUS platform during the pilot trials. A basis was also made for a survey which will be filled out by platform users to evaluate the User Products.



Report on Submitted Deliverables

Deliverable 3.1 - First report on the formal specification of sustainable and resilient forest management knowledge model presented the outcome of the SILVANUS ontology design effort. An ontology is an explicit formal description of concepts that make up a single domain of knowledge (e.g. domain describing a forest may include the concepts of trees, soil, water, etc.). Along with the ontology, a Metadata Index is developed, which will serve to catalogue and provide an expressive search interface to SILVANUS data objects. Combined with the SILVANUS ontology, these components will work in synchronise promoting an expansive, semantically linked view of the forest, from high level concepts and observations to the data objects and lineage that provide new insights. The main purpose of the Metadata Index is to serve as a searchable catalogue of data objects held both internally within the SILVANUS Big-data Framework storage solution, as well as references to data objects contained within external repositories (e.g., Earth Observation datasets).



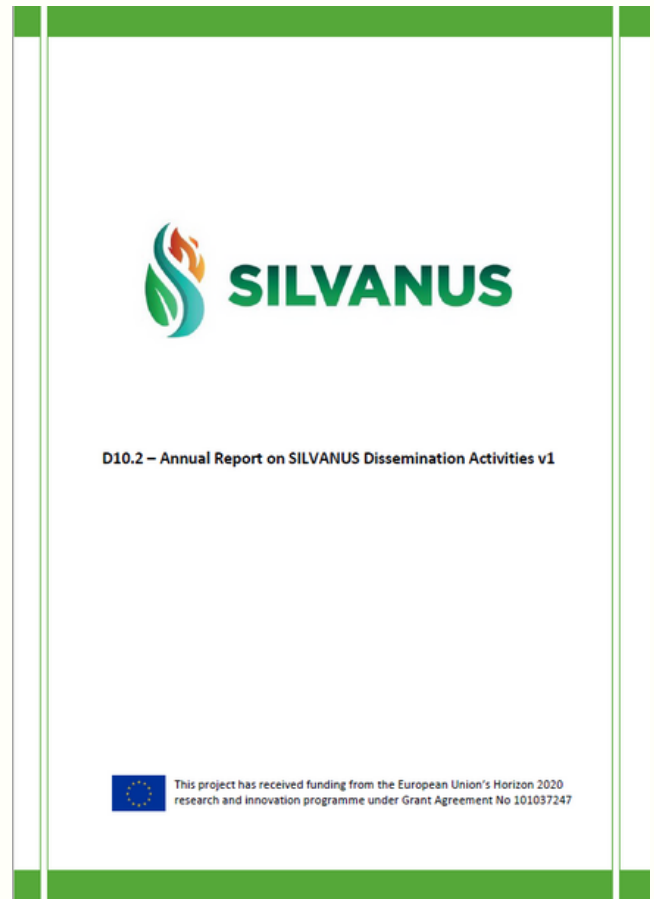
The SILVANUS ontology is available on the SILVANUS website [here](#).

Deliverable 8.1 - Report on SILVANUS Reference Architecture describes the architectural components that will be developed and integrated in the first version of the SILVANUS platform (which should be ready in mid-2023), aggregating, managing and processing data from sensors, edge devices and third-party data sources in order to support the SILVANUS services. The selected set of functionalities and use cases that will be demonstrated in the first phase of the project are described providing the framework of functional operation of the SILVANUS platform.



Report on Submitted Deliverables

Deliverable 10.2 – Annual Report on SILVANUS Dissemination Activities focused on all the communication, dissemination and standardisation activities in the first year of the SILVANUS project. It includes dissemination event reports from workshops, conferences, and webinars either organised or participated by SILVANUS partners at events with diverse stakeholder pools and geographical regions at European and global level. Descriptions and visual depictions of communication and dissemination tools such as website and social media, newsletter, brochures, videos, and television coverage are included. Stakeholder engagement procedure with the accumulation of important external stakeholders is explained. The Deliverable also presents a first draft of exploitation plans being adopted by the project's end. Standards and compliance for interoperability of SILVANUS platform, on the topics of fire prevention, fire detection and fighting, along with post-fire reconstruction, are elaborated in detail. Collaboration with the Coordination and Support Action project Firelogue and other Wildfire Risk Management Cluster projects (TREEADS, FIRE RES, FirEURisk, SAFERS, FIRE-IN) during the first year is summarized.



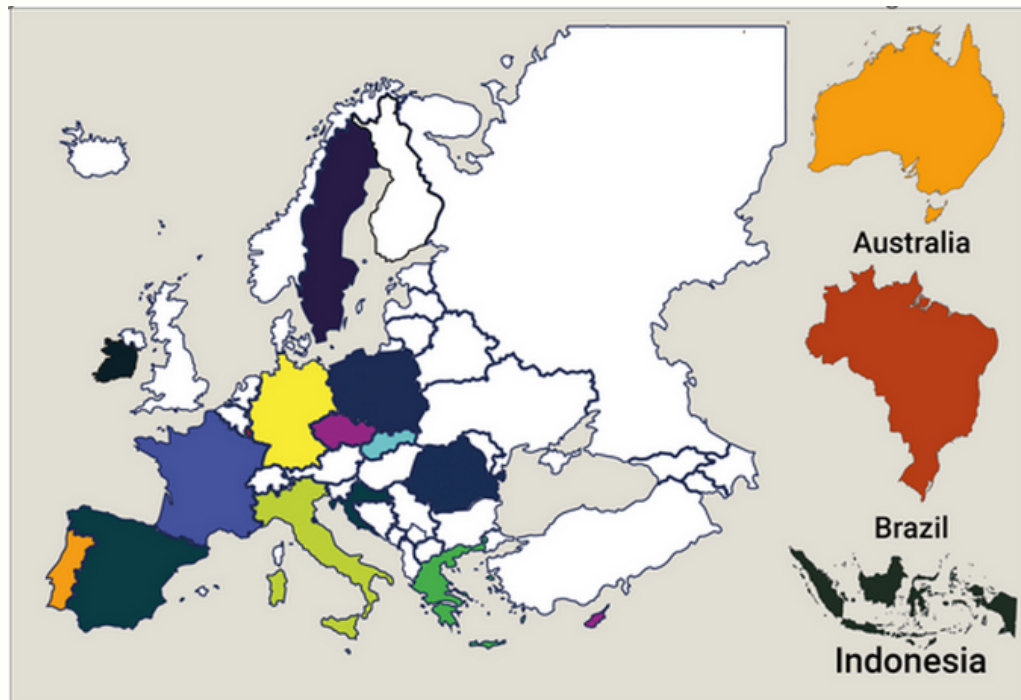
The public deliverables are available on the SILVANUS website [here](#).



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Stakeholders



SME organisations



Academic/Research Partners

