

**Let the
dialogue
begin**



D2.6 – SUMMARY REPORT OF RESEARCH INTEGRATION BOARD I

Project: **Cross-sector dialogue for Wildfire Risk Management**

Acronym: **Firelogue**



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List of Abbreviations

Abbreviation	Meaning
CSA	Coordination and Support Action
D	Deliverable
DoA	Description of the Action
EC	European Commission
EU	European Union
GD	Green Deal
IA(s)	Innovation Action(s)
RIB	Research Integration Board
UN	United Nations
WFRM	Wildfire Risk Management
WP	Work package



Executive Summary

This document briefly summarizes the research integration activities related to the Firelogue Research Integration Board (RIB). The main objective of this board is the development of integrated and synergistic approaches and outcomes from wildfire-related EU projects. Firstly, building-up from the preparatory meeting and the clustering event, which were held online on March 16 and 5th and 6th of April 2022, several exchanges were maintained to potentiate synergies and awareness between projects. In the scope of Firelogue RIB, an online meeting will be held in October 2022, updating on current interactions and synergies. The IX International Conference on Forest Fire Research, which also integrates the 17th International Wildland Fire Safety Summit, will have dedicated sessions to wildfires-related EU projects, being an interesting moment to reinforce identified and potential synergies.



1 Introduction

The Firelogue project, as a Coordination and Support Action (CSA), has as main goal the coordination and integration of the Green Deal Innovation Action's (IAs) as well as other H2020 projects, namely FirEUrisk to reinforce their overall expected impacts (Fig 1). In this sense, Firelogue will potentiate fruitful interactions in several common or related activities between projects to avoid overlaps, but most importantly to potentiate overall outcomes for EU.

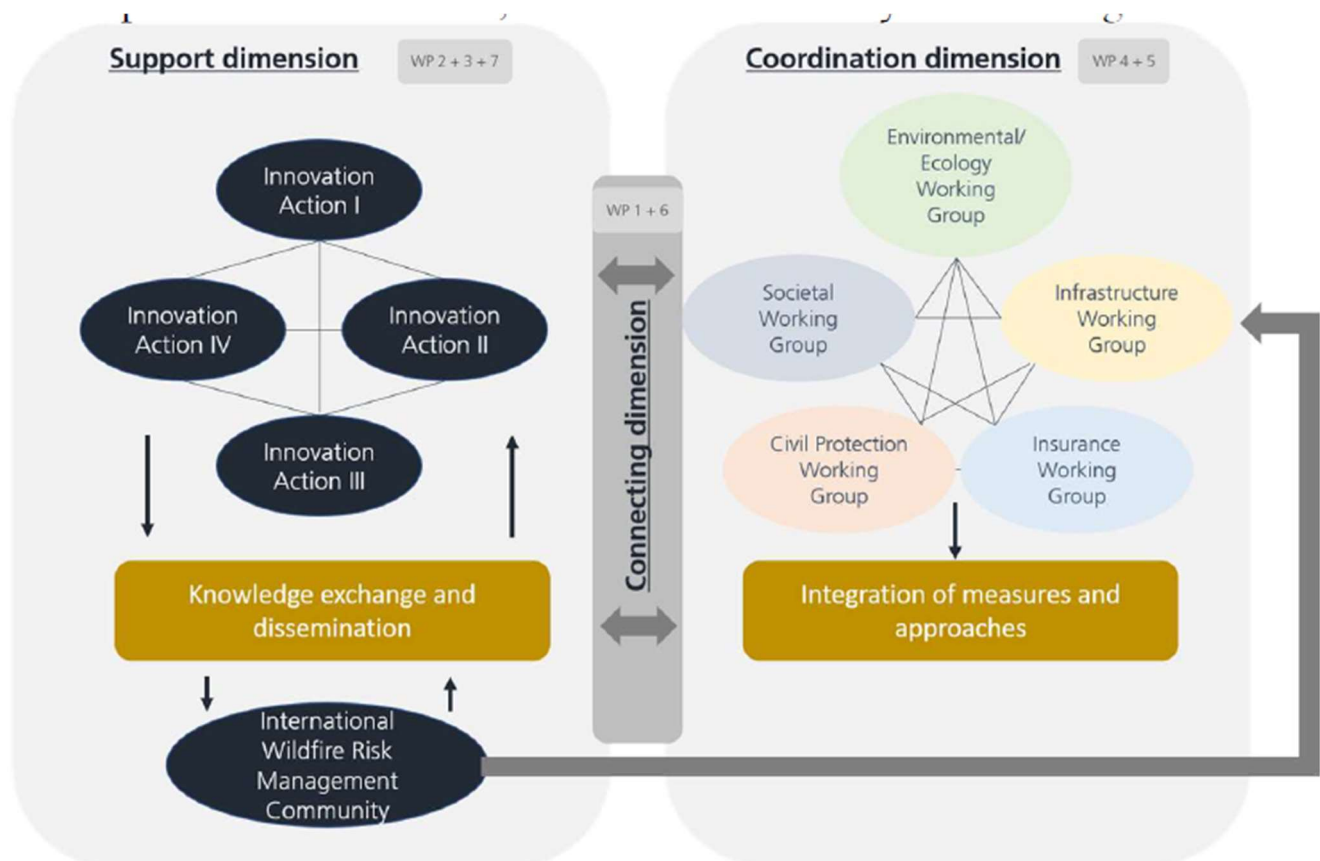


Figure 1 - FIRELOGUE's Coordination and Support Dimensions; Source: Firelogue DoA

The RIB is chaired by Prof. Viegas from ADAI, but it is highly supported and guided by Firelogue coordination as well. This board is composed by project coordinators of IAs as well as FirEUrisk and other relevant projects at EU level. RIB will meet once a year aiming to exchange knowledge and updates on recent research findings and policy developments as well as gaps, synergies and needs identification. These events will be an opportunity to reinforce overall and strategic coordination and integration among EU projects.

The deliverable 2.6 is a brief report that summarizes key activities and topics related to RIB scope, namely towards improved wildfire EU projects overall outcomes and impacts.

1.1 List of WFRM-related EU projects

In the Table below, a list of all the relevant WFRM projects can be seen.

Table 1: List of WFRM EU research projects

Project full name	Project acronym	Funding line	website	Coordination
A Holistic Fire Management Ecosystem for Prevention, Detection and Restoration of Environmental Disasters	TREEADS	Green Deal Call, LC-GD-1-1-2020 - Preventing and fighting extreme wildfires with the integration and demonstration of innovative means. GA: 101036926	https://treeads-project.eu/	RISE FIRE RESEARCH AS
Fire and Rescue Innovation Network	FIRE-IN	H2020 call 3.7 (Secure Societies), SEC-21-GM-2016-2017 - Pan European Networks of practitioners and other actors in the field of security. GA: 101037247	https://www.fire-in.eu/	ASSOCIATION PEGASE
Fire in the Earth System: Science & Society	FIRELinks	COST (European Cooperation in Science and Technology) action. CA: 18135	https://firelinks.eu/	University of Valencia and Swansea university
Cross-sector dialogue for wildfire risk management	FIRELOGUE	Green Deal Call, LC-GD-1-1-2020 - Preventing and fighting extreme wildfires with the integration and demonstration of innovative means. GA: 101036534	https://firelogue.eu/	Fraunhofer
Innovative technologies and socio-ecological-economic solutions for fire resilient territories in Europe	FIRE-RES	Green Deal Call, LC-GD-1-1-2020 - Preventing and fighting extreme wildfires with the integration and demonstration of innovative means. GA: 101037419	https://fire-res.eu/	CTFC - CONSORCI CENTRE DE CIENCIA I TECNOLOGIA FORESTAL DE CATALUNYA
Developing a holistic, risk-wise strategy for European wildfire management	FirEUrisk	H2020 – Call 3.5 (Societal Challenges), LC-CLA-15-2020 - Forest Fires risk reduction: towards an integrated fire management approach in the E.U. GA: 101003890	https://fireurisk.eu/	ADAI - Association for the Development of Industrial Aerodynamics
Structured approaches for forest fire emergencies in resilient societies	SAFERS	H2020 – Call 3.5, SC5-16-2019 - Development of commercial activities and services through the use of GEOSS and Copernicus data. GA: 869353	https://safers-project.eu/	FONDAZIONE LINKS - Leading Innovation & Knowledge For Society
Climate resilient forest management platform to prevent and suppress forest fire	SILVANUS	Green Deal Call, LC-GD-1-1-2020 - Preventing and fighting extreme wildfires with the integration and demonstration of innovative means. GA: 101037247	https://cordis.europa.eu/project/id/101037247 https://silvanus-project.eu/	Universita Telematica Pegaso



1.2 WFRM-related EU projects logo and main objectives

In this section, we briefly present the main objectives of the key projects at EU level involved in WFRM. In the scope of RIB, we will try to keep these projects involved as well as other that may be willing to join.



The EU-funded TREEADS project will focus on the forests at risk of wildfire to develop new products and integrate them in a holistic Fire Management platform aimed at optimising and reusing the existing socio-technological resources.



The overarching result of the project will be a proven process for organising F&R capability-driven research based on a wide practitioner and research and innovation network. The network will be linked at cross-domain and cross-border level and will feed harmonised operational requirements (or challenges) into national and EU capability development, i.e., research, innovation, procurement and standardisation programmes.



The main aim of FIRElinks is to power synergistic collaborations between European research groups and stakeholders with the objective to synthesise the existing knowledge and expertise, and to define a concerted research agenda which promotes an integrated approach to create fire-resilient landscapes, taking into account biological, biochemical and-physical, but also socio-economic, historical, geographical, sociological, perception and policy constraints.



The EU-funded Firelogue project aims to support and coordinate the consolidation of knowledge from the wildfire risk related Green Deal Innovation Actions and the wider community. It integrates the findings across stakeholder groups and fire management, and promotes discussion via forums and workshops, leading to exchange among a large range of stakeholders.



The EU-funded FIRE-RES project will promote the implementation of a more holistic fire management approach and support the transition towards more resilient landscapes and communities. By integrating research, technology, civil protection, policy and governance spheres related to wildfires, the project will generate new knowledge about sustainable integrated fire management models.



The main objective of the firEURisk proposal is to develop, test and disseminate an Integrated and Science-Based Strategy for wildfire risk management in Europe. This integrated strategy will: 1) expand the capabilities of existing wildfire risk assessment systems, including critical factors and processes not currently addressed; 2) use risk-assessment to drive wildfire management and reduce current fire risk conditions, and 3) adapt fire management strategies to expected future climate and socio-economic changes.



The EU-funded SAFERS project will develop a complex emergency management system capable of acting along the whole emergency management cycle, thanks to the coupled use of heterogeneous Big Data, advanced models, and AI. Earth Observation data from Copernicus and GEOSS will be the primary data source, which will be combined with data from social media, smoke detectors, and mobile applications.



The key project output is the release of a climate resilient forest management platform to prevent and limit the spread of forest fire. SILVANUS relies on environmental, technical and social sciences experts to support regional and national authorities responsible for wildfire management. The project will develop intelligent fire ignition models using climate and weather data, as well as a stakeholder engagement programme in forest regions to assess fire risk indicators.

2 Initial clustering actions and topics explored

Following the need to synergistically develop activities among EU WFRM related projects, several actions were taken to initiate fruitful interactions and improved coordination under the umbrella of the CSA, Firelogue. Two initial events are described below.

2.1 Pre-RIB preparatory meeting held online on the 16th of March 2022

This preparatory meeting was held in order to people from the different EU projects in WFRM get acquainted. FirEURisk, as precursor project, presented main objectives and developments. The clustering event was also introduced and discussed.

2.1.1 Agenda

Figure 2 - Preparatory meeting

Time	Agenda Item
14:00 - 14:05	Introduction
14:05 – 14:20	Tour de table
14:20 – 14:40	FirEURisk Overview of Status Quo & 1 st result
14:40 – 14:50	Q & A
14:50 – 15:40	Research Integration Identification of topics & 1 st steps: <ul style="list-style-type: none"> • Development of a European Fuel Map • Creation of a fire events data base • Clustering of wildfire landscapes / case study collaboration • Other <i>Note: Intended use of online White Boards (Miro) to develop and document the topics.</i>
15:40 – 16:00	Clustering Event in April Topics of interest & Agenda items <i>Note: Short introduction by EC and Fraunhofer</i>

2.1.2 Main takes

- FirEURisk presentation available here:
<https://adaicloud.quickconnect.to/d/s/ppr14N49B27yb02DPkOHuEsoyc3IWUCQ/Sogr11bgG2yBDPV2WfADuhHacXusNX7p-lbkAAOD8vAk>
- Topics of interest identified:
 - FirEURisk fuel classification and maps for EU territory;
 - Extreme fire events data base for EU territory;
 - Living labs and pilot site as places of great involvement between projects.



2.2 Clustering event held online on the 5th and 6th of April

The Clustering event was an idea of the EC, which was supported by Firelogue, to formally initiate a coordinated interaction between EU projects, which ultimately, will maximize their overall impacts towards improved WFRM in EU.

2.2.1 Agenda

Figure 3 - Clustering event – agenda day 1

Time	Agenda Item
10:00-10:30	Welcome and Introduction (EC + Firelogue) Aim: Presentation of the WFRM Clustering concept, opportunities and expectations
10:30 – 10:45	Tour de table
10:45 - 11:15	Presentation of Firelogue survey (PCF) Aim: Presentation of synergies and overlaps already identified; Introduction of the collaboration topics for the interactive session. <i>Note: IAs and FirEUrisk would be asked to share additional project flyer/two-pagers in advance to familiarise everyone with the projects.</i>
11:15 - 11:30	Break
11:15-11:45	Advanced Project Pitches (FIRE-IN, FireLinks, SAFERS) Aim: Presentation of generated project results and suggested insight and legacy up-take by the “new” projects; <i>Note: This should include SHORT presentations by FIRE-IN, FireLinks and SAFERS of 10 minutes max. including up to three suggestions for the uptake of results/insights.</i>
11:45-13:00	Interactive session on collaboration topics (all, moderation FhG) Aim: Specification of high-level synergies between the projects (to be further discussed on Day 2) <i>Note: This session will build on the Firelogue survey results and suggestions by the “advanced” projects. Making use of Miro Boards, this session will be held in plenary. Planned topics are:</i> <ul style="list-style-type: none"> - Impact Assessment (towards Green Deal 2030 targets) - Research Integration (Fuel Maps, Fire Event database, others) - Knowledge Management on research results and WFRM practices - Case study collaboration and exchange - (Technical) exploitation legacy uptake - Communication & Dissemination incl. Joint Events <i>The overall aim is to define the fields of collaboration where the more content related discussions could take place on Day 2 by involving the respective project teams.</i>
13:00 – 13:15	Break
13:15 - 13:45	Wrap-up (EC FhG)

Figure 4 - Clustering event - day 2

Time	Agenda Item
10:00 - 10:10	Welcoming address by the Head of Department - Green Europe (EC)
10:10 – 10:30	Opening remarks by DG ECHO (Guillermo Grien) and the Joint Research Centre, European Forest Fire Information System (EFFIS) (Jesús San-Miguel-Ayanz)
10:30 – 10:35	Overview over Day 1 (FhG)
10:35 – 11:20	Break-Out Sessions – Round I: Aim: Specify synergies and collaboration topics between the projects, discussion of more concrete activities and content related overlaps. Planned break-out groups: <ul style="list-style-type: none"> - Impact Assessment (towards Green Deal 2030 targets) - Research Integration (Fuel Maps, Fire Event database, others) - Knowledge Management on research results and WFRM practices - Case study collaboration and exchange - (Technical) exploitation legacy uptake - Communication & Dissemination incl. Joint Events <i>Note: Each group will use its own Miro Board and have a moderator. Participants are the respective project content experts and WP leaders that may discuss in more detail the existing overlaps and synergies</i>
11:20 – 11:30	Break
11:30 - 12:30	Break-Out Sessions – Round II: <i>Note: This session continues the exchanges in the break-out groups. Participants will return to their groups. At the end of the session, the collaboration potential between the projects should be clear. Potential next steps to be presented in plenary should have been sketched using a template provided to the sessions' moderators.</i>
12:30 - 13:30	Closing Session (EC FhG) Aim: This session will provide an overview of the break-out group results and should specify the potential next steps in collaboration. Conclusions from the meeting will serve as the backbone for the WFRM Cluster framework and will be communicated through internal channels (EC + Projects consortia) <i>Note: This will take place in plenary. Each break-out group should summarise their results (no more than 5 minutes per break-out group). The session should include concluding remarks by the project managers and the EC, linking back to the options/expectations as defined on Day 1. By the end of the session, projects should have a clear sense of future collaboration and ways to engage with the other WFRM projects.</i>

2.2.2 Main takes

- FirEURisk will share their European Fuel Map to be used by the IAs;
 - Fire behavior models may be of interest as well;
- FIRE-RES project presented its multi-layer approach:
 - At Living Lab (LL) level, each one uses what they have
 - In addition, a PAnEU system aims at creating an integrated system (fuels + weather scenarios + simulations + Decision Support)
 - Finally, innovations to define fuel moisture content are developed.



- Several aspects to be considered in the development process have been expressed:
 - How is Europe defined? It would be important to also apply the approach to
 - North Africa or UCPM Participating States;
 - -Frequent updates: It is important to look into options to update the fuel model as landcover changes every year. A simple approach is hence desirable.
 - Resolution: 1 km resolution is good for fire risk, but not enough for fire behaviour so which resolution should be applied?
 - Integration of different (satellite) data sources.
 - Joint approach needs to be applicable by end-users, i.e., needs to be usable for modelling of fire behaviour. Related with this is the need for a better understanding of modelling tools used. The FireLinks project ran a survey on the use of fire behaviour modelling and tools.
 - The integration of regional and local classification approaches will be critical. More generally, integration of additional data sources should be possible. The necessities from landscape management and suppression are quite different. For real time uses, it is better to work on a regional or national scale with specific info, since a pan-EU approach requires harmonization and simplification.
 - Correspondence with US Fire Behaviour systems (as those being widely validated and used worldwide); guidelines to use them; custom fuel models (e.g. criteria for fuel load in size classes, surface area/volume ratio, fuel bed depth etc.) w/ proper and sound validation; both surface and crown fuel (stand height, canopy bulk density, canopy base height) profiles (e.g. for EWE, stochastic fire simulations, crown fire spread, fuels management, fire effects).
- European Wildfire events database
 - It was agreed that it was important to share a data base on fire events at the EU level based of course on the existing EFFIS system, but eventually complementing it with more specialised data. EFFIS is maintaining a fire data base for each event but this includes only very basic information. Besides this joint data base, countries run their own data bases including different types of information.
 - FirEURisk studied 10 major fires of the past year 2021 in countries of the Mediterranean basin, and a respective report will be published together with the Joint Research Centre (JRC), including information on smoke dispersion, and emissions, among others. This report will also result in a suggestion for a guideline to document large fires more concisely. Respective reporting could complement the EFFIS data base well by going into much more detail.
 - FIRE-RES is collecting lessons from extreme wildfire events worldwide including fire behaviour, suppression and protection aspects.
 - The challenge in collecting wildfire event information is in the voluntary reporting and not all countries have the relevant data to report accordingly, although national authorities usually do their best. For example, some countries do not report on the causes of fire (which would be important) but the identification of causes is also resources intensive due to the effort related to investigations. At the same time, many countries rely more and more on remote sensing data and



put less effort into collecting on the ground information. A legal mandate to collect or report certain information would be supportive to a more concise reporting.

- Overall, also the expertise and experience in collecting data differs largely between countries and the relevant data might be distributed across geographic scales and institutions in several of them. It could hence be worthwhile to explore whether some of the countries would like to receive support/peer learning activities in terms of data collection and accident investigation.
- Taxonomy and risk/danger concepts
 - A need for a common taxonomy for fuel classification was expressed. In addition, the concept of hazard (danger) and risk shall be defined in a more harmonised way.

2.3 Key topics of interest under development

- Coordinated dissemination initiatives, i.e., following the [#EUfireprojectsunited](#), working synergistically with WP6 Communication and Dissemination
- Sharing of knowledge and scientific activities, i.e., [European fuel map](#) developed by FirEUriSk project;
- Joint participation in several events strengthening collaboration and discussions.



3 1st Research Integration Board meeting

Building-up from the previous online events and work developed, this meeting is aimed to further exchange on current updates, developments and needs from each project. The initial part of the meeting will be dedicated to a brief presentation from each project identifying main achievements and topics of interest that could be shared/reinforced by other teams/projects.

3.1 Agenda

Figure 5 - Draft agenda for the 1st RIB meeting

Time	Agenda Item
10:00 - 10:10	Introduction
10:10 – 11:30	Brief presentation from each project (1-4) 15' Brief Q & A after each presentation
11:30 – 11:40	break
11:40 – 12:40	Brief presentation from each project (5-8) 15' Brief Q & A after each presentation
12:40 – 13:00	General discussion

3.2 Main takes expected

- Updates concerning the topics already identified and under development:
 - EU fuel map provided by FirEUrisk;
 - Extreme fire events data base for EU territory;
 - Living labs and pilot site as places of great involvement between projects;
 - Coordinated dissemination activities;
- Identification and strengthening of specific topics and activities of common interest.



4 IX International Conference on Forest Fire Research – organized by ADAI

Firelogue is an associated scientific project of the IX International Conference in Forest Fire Research, which also integrated the 17th International Wildland Fire Safety Summit. In addition, two intensive courses are also associated to the conference, dedicated to fire behavior and safety, which gather relevant speakers and many stakeholders.

Taking advantage of the excellent audience, namely many of the best researchers worldwide in this area, key sessions will be organized to potentiate project dissemination as well as fruitful interactions and discussions on the European WFRM, engaging current wildfire-related EU projects.

4.1 H2020 research projects plenary session coordinated by Firelogue CSA

During the second day of the IX International Conference in Forest Fire Research, the Coordination and Support Action Firelogue is going to coordinate a plenary session dedicated to forest fire research in Europe. The session will start with a lecture on EU wildfire policy from a high-level officer from the EC. Afterwards, the green deal innovation actions, SILVANUS, FIRE-RES and TREEADS projects together with the precursor project FirEUrisk, are going to present the main objectives and recent outcomes. In sum, the main objective is to strengthen and better integrate mutual objectives in the scope of European WFRM.

4.2 Firelogue and FirEUrisk session on "WFRM research cooperation roadmap for Europe and beyond"

Building up from the previous session, FirEUrisk and Firelogue will moderate this additional session to further exchange and network on these topics, including:

- Impact Assessment of projects and their innovations towards Green Deal targets
- Case Study collaboration and comparability of results
- European Fuel Map

Ultimately, this session will potentiate a fruitful discussion on the major steps required to define a roadmap to synergistically cooperate towards improved WFRM research in Europe.

4.3 Session with other research projects to potentiate networking and potential synergies

In this dedicated session, worldwide R&D projects will be presented fostering fruitful discussions and networking activities.



5 Conclusions

Firelogue, as a coordination and support action, is coordinating the synergistic interactions between WFRM-related EU projects, namely between FirEUrisk and GD IA's. Although this represents a complex process that needs time, some of the outcomes and shared activities going on are an encouraging signal for the future. In this sense, several activities are already integrated between projects, including scientific activities as well as dissemination activities. The RIB will build-upon the interactions established, trying to keep project coordinators and their teams highly involved to improve overall outcomes. In this sense, the upcoming activities, namely the 1st RIB meeting and the sessions integrated during the IX ICFFR, will certainly contribute to synergistically-driven outcomes by EU WFRM projects, nowadays referred as #EUFireProjectsUnited.



6 References

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