

## FIREURISK - DEVELOPING A HOLISTIC, RISK-WISE STRATEGY FOR EUROPEAN WILDFIRE MANAGEMENT

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# D6.11 – Dissemination and Exploitation Plan- v.1

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### **Executive Summary**

The deliverable D6.11 "Dissemination and Exploitation Plan-v1.0" is the first version of the deliverable under WP6 Task 6.3 "Communication and Dissemination" in the FirEUrisk project.

The FirEUrisk Dissemination and Exploitation Plan (DEP) describes the activities to be performed and the channels to be used to promote and disseminate the project and its outputs, and to exploit the project results.

The DEP outlines all relevant knowledge coming out of FirEUrisk organized as follows:

- a) STAKEHOLDERS IDENTIFICATION to ensure the timely identification and collection of Knowledge Outputs generated by FirEUrisk to inform dissemination and exploitation activities.
- b) DISSEMINATION STRATEGY- to raise awareness of the project, its rationale, its objectives and to ensure that the public and end-users are aware of the available outcomes.
- c) EXPLOITATION PLAN is oriented towards the effective and pro-active transfer of knowledge, resulting in uptake and exploitation by different end-users, which will provide measurable impacts for FirEUrisk project Intellectual Property (IP) and its adequate management.

FirEUrisk will develop and make use of the latest tools, resources and communication channels resulting in cost effectiveness and maximum impact.





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## List of Acronyms

### Table 1: List of Acronyms

List of Acronyms			
EU	European Union		
DEP	Dissemination and Exploitation Plan		
DRR	Disaster Risk Reduction		
D	Deliverable		
CPs	Civil Protection Services		
WP	Work Package		
WUI	Wildland Urban Interface		
CAGR	Compound Annual Growth Rate		
DoA	Description of the Action		
REA	European Research Executive Agency		
DG ECHO	Directorate General European Civil Protection and Humanitarian Aid Operations		
DG HOME	Directorate General for Migration and Home Affairs		
DG AGRI	Directorate General for Agriculture and Rural Development		
EEA	European Economic Area		
JRC	Joint Research Centre		
CTIF	International Association of Fire and Rescue Services		
ENTSO	European Association of Power Transmission System Operators		
EAA	European Agroforestry Association		
UN	United Nations		
FAO	Food and Agriculture Organization		
IPCC	Intergovernmental Panel on Climate Change		
IFAFRI	International Forum to Advance First Responder Innovation		
WB	World Bank		
ADAI	Association for the Development of Industrial Aerodynamics		
KEMEA	Center for Security Studies		
REEFMC	Regional Eastern Europe Fire Monitoring Center		
MoU	Memorandum of Understanding		



### **1 INTRODUCTION**

### **1.1** Purpose of the document

The goal of this document is to provide description and guidelines for the dissemination and public engagement strategy of the consortium. Several dissemination strategies will be used in order to maximize the impact of FirEUrisk, and to effectively communicate the actions and results within the consortium, enabling exploitation opportunities and development. Dissemination actions within and beyond the consortium will be supported by the communication actions that are carried out throughout the project.

The present deliverable D6.11 "Dissemination and Exploitation Plan – v.1" has as main goal to elaborate and maintain the dissemination and exploitation activities performed by the beneficiaries. It is focused on events, scientific publications and policy aspects of the project. The deliverables D6.6 "Communication plan – v.1" and D6.9 "Initial communication bundle" are describing in more detail the website, dissemination materials and social media as part of the dissemination strategy of the project. The deliverable D6.11 also analyse the options for exploitation of the results and define the exploitation strategy for wider scale applications and implementation of the project outcomes.

The main dissemination and exploitation actions beyond the FirEUrisk consortium is to fulfil the following objectives, oriented to recognise the public policy perspective of the project:

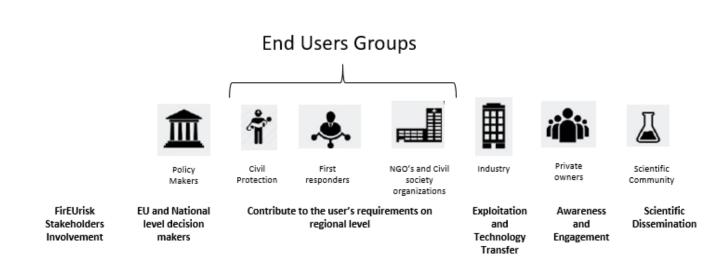
- 1. To maximise the use of the FirEUrisk solutions by the different stakeholders, raising awareness about its advantages and educating on how to use the different FirEUrisk products. The project will work on **disseminating an integrated innovative Science-Based Strategy for wildfire risk management in Europe**.
- 2. To engage stakeholders in providing first-hand experience, requirements, and real needs that will guide the development of the technological outcomes of the project.
- 3. To disseminate the technical knowledge generated as part of the consortium towards the scientific community by developing a citizen-science approach that facilitates the participation of local communities in fire prevention measures that strengthen rural economies, promote biodiversity and pursue nature-based solutions.
- 4. To demonstrate how advanced technologies, space assets, and existing EU systems can be coupled in a view of implementing a more effective emergency management, firefighting safety and risk-adapted evacuation plans.
- 5. To show how international collaboration through the consortium fosters innovation, increases European competitiveness and produces important outcomes that are relevant to our everyday lives by tackling societal challenges like climate-, population- and land-use change, estimating future fire regimes and assessing the impacts on socio-ecological vulnerability and exposure, enabling effective adaptation measures.
- 6. To promote FirEUrisk outcomes at both Regional and Global scales through the channels for Disaster Risk Reduction (DRR), in accordance with the Sendai Framework for Disaster Risk Reduction 2015-2030, the Sustainable Development Goals, the Paris Climate agreement and the European Strategy on adaptation to Climate change.
- 7. To bridge the gap between firefighters, decision makers and ICT experts in order to strengthen sustainability and uptake of FirEUrisk solutions in the middle and long run.

The DEP will be continuously reviewed and updated periodically throughout the project lifetime.



### **1.2 Stakeholder Identification**

The stakeholders relevant to the consortium (Annex 1) will be regularly monitored and reviewed in order to make necessary adjustments. In this way, responsiveness in terms of policy and legislation changes and/or scientific and technological innovations will be achieved. The different stakeholders relevant to FirEUrisk project are detailed in Figure 1.





### 1.2.1 Policy makers

The main goal of targeting this stakeholder group is to establish interactive channels between the project achievements and the policy making actors at different administration and jurisdiction level. The purpose is to facilitate spreading and sharing the FirEUrisk concept, approach and solutions to policy makers who might influence relative decisions and plans. The wildfire situation in a given region is the outcome of the application of several other policies such as forestry, environment, climate change, civil protection and security as well as land planning and development. Thus, wildfire management is a complex issue, that needs to be considered in several policies. Numerous public services, agencies, ministries and organizations are involved in the different stages of the wildfire management cycle and their operations are often isolated and do not always consider the other agencies. There is also a great diversity among the EU countries regarding the policies followed and the operational structure in place to address the wildfire issues. FirEUrisk aims to contribute addressing these long-standing disadvantages. To achieve this, synergy and interaction with decision and policy making bodies at national, EU and international level are needed. Based on the European dimension of FirEUrisk, it is crucial to open dialogue and keep informed the policy makers at the E.C. level. Therefore, contacts will be established with representatives mainly from REA, DG ECHO, DG HOME, DG AGRI, EEA, Council of Europe and JRC. Furthermore, issues related to wider policy aspects will be discussed with members of the FirEUrisk Observatory representing the International Association of Fire and Rescue Services (CTIF), the European Association of Power Transmission System Operators (ENTSO), and the European Agroforestry Association (EAA). These representatives will be invited to join project's interactive events and participate in round tables to exchange opinions and ideas regarding



the FirEUrisk approach to address current and future wildfire management challenges related to their domain of professional expertise in context of the climate change. Relation will be established with the CERIS<sup>1</sup> initiative of DG HOME (previously Community of Users) where debate sessions on wildfire management policies and technology solutions can be organized.

The consortium will establish, through the local partners, national information nodes who will bridge the project with the national policy level at the participating countries. The local partners will also support the collection of information regarding the legislative and institutional context of wildfire management in their country in order to map the current status of wildfire management policies across the Member States, as foreseen in A6.4.1. Formal correspondence and policy webinars will be considered for sharing the relevant outputs of FirEUrisk to National, EU and International policy organizations (e.g. UN, FAO, IPCC, IFAFRI, WB).

The project's DoA foresees an overview of the current forest fire-related legislative frameworks and instruments at the national and EU level. Related information (e.g. from DRMKC) and consortium sources will be used for this purpose, aiming to analyze the trade-offs and synergies between the current EU policies at play (Green Deal, EU forest strategy for 2030, LULUCF, RescEU etc.) and identify policy gaps or weaknesses that need to be considered by FirEUrisk. In this line, the results of the project and relevant recomendations concerning wildfire management policies that may contribute to improving the national risk assessment of the EU member states will be shared with DG ECHO and competent National Authorities in context of policy webinars and publishing relative position papers. This activity is planned for the second half of the project.

Beyond the need to define a holistic and integrated policy framework for addressing the wildfire management challenges, the project will promote to policy makers a novel wildfire management planning organized in a 3-stage approach based on risk-based prevention, integrated response and adaptation for resilience. This will be disseminated through properly developed white papers for policy makers that will be produced in the second half of the project. The local partners will translate and disseminate these papers to the policy makers in their country raising relevant discussions. FirEUrisk consortium comprises several partners that have close cooperation with fire management agencies (ADAI, SafeCluster), ministries (KEMEA), international organizations (REEFMC) who all influence policy making at various levels. For example, the ADAI Team and the Project Coordinator have been requested by the Portuguese Government to analyse several major fires and accidents in the past, from which policy changes related to risk management and training resulted. The boards of the project such as the FirEUrisk Observatory are additional channels for sharing the results of the project to policy makers through its members, including world-wide fire experts and high-ranked officers.

A particular session on Wildfire Management Policy adaptation to the climate change challenges will be considered in context of the next Coimbra International Conference of Coimbra on Forest fire Research.

### **1.2.2 Civil Protection and first responders**

The main goal of targeting theses stakeholders is to ensure that end-users contribute to the development of the FirEUrisk products giving their requirements and having insights how they have been designed. The involvement of an important group of Civil Protection services (CPs) and first responders have been guaranteed during the proposal phase letters of support. Within CPs, there are both decision makers, who usually sit in operational centres, and first

<sup>&</sup>lt;sup>1</sup> <u>https://ec.europa.eu/home-affairs/secure-safe-resilient-societies/index\_en</u>



responders, who performed in-field operations. A preliminary database of possible stakeholders with this type of capacity has been collected during the proposal phase, including relevant end-users around Europe with a particular focus on the end-users in the areas where the training and infield demonstrations are planned, as well as the services in sensitive communities.

### 1.2.3 Environmental NGO's and Civil society organizations

The main goal of targeting these stakeholders is two folded: in one hand this is meant to ensure that the international community operating in natural and climate driven disasters are aware of FirEurisk solutions. On the other hand, we are promoting and facilitating the adoption of the project outcomes in civil society organisations. The aim is to engage these organisations with active participation though early feedbacks and information about their internal procedures and emergency related processes well in advance.

The FirEUrisk outcomes will represent a significant advancement to European local communities that are particularly affected by forest fires. At the forefront of the fight against these events are the civil society organisations and NGO's that help in large wildland fire suppression events affecting vast areas in WUI zones.

### 1.2.4 Industries and private owners

The main goal of targeting industries and private owners will be to promote uptake and commercialisation of the final developments by the project. The FirEUrisk project promotes innovation across many disciplines. The integration of data and the accessibility through multiple types of devices and services will target paper, timber, tourism, bioenergy and private owners in the final phases of the project life cycle.

### 1.2.5 Social Media

Social media professionals and agencies play an important role in wildfire management given their capacity to deal with the public, disseminating news, information and opinions on scientific activities and on fire management processes and events, at local, national and international scales. FirEUrisk will communicate with these agents in the various countries in order to facilitate the dissemination of the project activities and outcomes.

### **1.2.6 Scientific Community**

The main aim of the Scientific Community is to disseminate technological advances and methods among the scientific community and to foster international collaborations. FirEUrisk integrates high level competences across multiple sectors, like: Environmental Sciences including Meteorology, Physics; different ICT branches (Cloud computing, Big Data, Semantic data, Programming, Data Processing, Algorithms, Data Visualization, Usability and Human to Machine Interfaces), Global Navigation Satellite Systems including Copernicus based systems, Earth Observations and Radar Technologies. This combined expertise together with the technological developments generated in the project will be of interest to scientific communities.

This particular stakeholder group will be targeted through a dedicated dissemination strategy that is outlined in section 2. In order to ensure correct targeting of the strategy, a database of conferences, workshops, publications, research areas and contacts is currently being developed.



### **2** SCIENTIFIC DISSEMINATION

### 2.1 Dissemination Strategy

Dissemination activities will be conducted during the project in order to help promote the project concept and initial results to the large European and more International R&D community and public associations, and raise opportunities for synergy with other projects and activities. This section presents the scientific dissemination plan set for the project, reporting some relevant venues to the project scope.

The objectives for scientific dissemination activities have been defined as follows:

- To raise and foster awareness of the project concept and objectives, and initial results, among public association and the R&D community.
- To establish synergies with related projects, in particular within the H2020 programme and Green Deal in order to promote a coherent overall approach and develop a consistent technological framework.

FirEUrisk will target the production of high-impact contributions to be disseminated through peer-reviewed publications, presentations, demonstrations, panels, workshops, round-table discussions, webinars, conferences and other events. In particular, FirEUrisk has set out the following measurable objectives for dissemination activities:

- Publication of scientific articles at reputed conferences and journals.
- Workshops organization and participation to promote the project vision and work done within the FirEUrisk research activities, as well as to promote the interaction with other project activities.
- Delivery of presentations promoting the project vision, concept and initial results.
- Demonstration of project related solutions at events/case studies.
- Additional core skills for technology development within the project academic partner's curriculums, where PhD and MSc theses on specific topics related to FirEUrisk are performed.

As far as conferences, journals and events are concerned, a list of possible venues that are relevant to the project topics are suggested possible candidates for partner's contributions in Table 2, Table 3, Table 4, and Table 5.

Title	Website	Publisher	Impact Factor
Natural Hazards	https://www.springer.com/journal/11069	Springer	3.102
International Journal of Disaster Risk Reduction	https://www.journals.elsevier.com/international- journal-of-disaster-risk-reduction	Elsevier	4.320
Information Systems (IS)	https://www.journals.elsevier.com/information- systems	Elsevier	2.309
Expert Systems with Applications (ESWA)	https://www.journals.elsevier.com/expert- systems-with-applications	Elsevier	6.954

#### Table 2: Initial list of relevant Journals



Big Data Research	https://www.journals.elsevier.com/big-data- research	Elsevier	3.578
IEEE Transactions on Big Data (IEEE TBD)	https://www.computer.org/csdl/journal/bd	IEEE	Not Yet Available
IEEE Transactions on Knowledge and Data Engineering (IEEE TKDE)	https://www.computer.org/web/tkde	IEEE	2.476
International Journal of Wildland Fire	https://www.publish.csiro.au/wf	CSIRO	3.20
Fire Ecology	https://fireecology.springeropen.com/	Springer Open	2.927

### Table 3: Initial list of relevant international conferences

Conference Title
European Conference on Applied Climatology (ECAC)
International Conference on Climate Change (ICCC)
Geo IoT World
International Conference on Information Systems for Crisis Response and Management (ISCRAM)
International Conference on Natural Disasters and Emergency Management (ICNDEM)
IEEE Global Communications Conference (IEEE GLOBECOM)
IEEE International Conference on Communications (IEEE ICC)
IEEE International Conference on Computer Communications (IEEE INFOCOM)
IEEE International Conference on Big Data (IEEE BigData)
ICFFM 2023: International Conference on Forest Fire Management
3rd International Conference on Fire Behavior and Risk 2022
Fire Ecology Across Boundaries: Connecting Science and Management 2022
Aerial Firefighting
ICWFMP 2023: International Conference on Wildland Fire Management and Prevention
ICFPM 2022: International Conference on Forest Policy and Management



### 2<sup>nd</sup> International Conference on Environmental protection and Disaster Risks and 10<sup>th</sup> Annual CMDR COE Conference on Crisis Management and Disaster Response 2022 (hybrid participation)

#### Table 4: Initial list of relevant international Workshops

#### Workshop Title

Workshop on Emergency Networks for Public Protection and Disaster	
<b>Relief, co-located with ACM WiMob</b>	

Workshop on Big Data and Analytics for Emergency Management and Public Safety, co-located with IEEE BigData

IEEE International Workshop on Big Spatial Data (BSD), co-located with IEEE BigData

**Global Platform for Disaster Risk Reduction forum** 

Seventh Session of the Global Platform for Disaster Risk Reduction (GP2022)

Up-Scaling Community Resilience through Ecosystem-based Disaster Risk Reduction (Eco-DRR)

#### Table 5: Initial list of relevant international events and summits

Title of the event or summit		
AIDF Global Disaster Relief Summit		
Annual Natural Hazards Research and Applications Workshop		
The World Conference on Disaster Management		
AFAC - Fire & Emergency Management Conference		



### **3 COMMUNICATION STRATEGY**

### 3.1 Timing of the communication actions

The communication strategy has been planned in order to maximise the effectiveness of the proposed measures by performing them in a timely manner. Continued actions **(M1-M48)**: For the whole duration of the project, presence in all communication channels will be performed, in order to progressively build a community. This will be accomplished through regular newsletters, brochures and leaflets, community management of different social networks, website's news section, and audio-visual graphic materials in Youtube channel.

### 3.2 Communication Actions

The different communication actions as part of the consortium activities have been customised in order to specifically target different stakeholders.

### 3.2.1. Website

The project website will be the showcase of all online communication materials produced by the consortia members during the project lifetime. All of the dissemination materials like: papers, conference abstracts, conference talks, videos, posters, webinars, events will be presented to the general public.

A website has been established at: <u>https://fireurisk.eu/</u> and the project team is committed to keep the website maintained and updated regularly throughout the project's funding period. In the final phase of the project life time all possibilities to make the website content available on the DRMKC projects explorer platform will be evaluated (<u>https://drmkc.jrc.ec.europa.eu/Knowledge/Project-Explorer/Projects-Explorer</u>).

Overall, the project's website will be readily linked with all the project's social networks, it's content will be shareable and user friendly and will be customised to address the information requirements of each stakeholder needs.

### 3.2.2. Social Networks

The stakeholder analysis of the project target is a diverse audience. In order to reach these groups, and maintain an enduring web presence and awareness of the project, the project has assessed the available social media channels. The LinkedIn (https://www.linkedin.com/company/fireurisk) consortium has set up both and Twitter (https://twitter.com/FirEUrisk) accounts for the project needs that will be primarily devoted to account for the progresses of FirEUrisk and provide extensive information on the context and the knowledge gap that the consortium fill. This aims to will be covered the accounts Twitter, Youtube by on (https://www.youtube.com/channel/UC5lkJIYhl0eHofEQ86oVsUA) and LinkedIn.

Through these channels, the audience will be mostly stakeholders with a primary interest in the project topic. The aim of these networks will be to disseminate the project's results and findings promoting uptake of the FirEUrisk solutions. However, the corporate communications have their limits to reach large citizens communities for the FirEUrisk solutions, thus Twitter will be the main channel to address that group of potential stakeholders.



### 3.2.3. Audio-visual and graphic material

**Graphic identity:** A solid identity has been generated for the consortium in order to portray a memorable and reputable image in all the presence of the consortium in the press, to brand all the different technological products developed in the project. The logo and the graphic identity representations are included in Deliverable 6.6 "Ccommunication plan v.1".

The project presentation through motion graphics animation and infographics: These two formats will greatly aid the understanding of the project by a wide audience. Whereas the infographics is a more condensed representation of the project, the motion graphics video is a lively animation of the project's dynamics. Together they are good tools to raise awareness on extreme weather events like large wildfires. A version of the initial motion video in Youtube is available at the link - <a href="https://www.youtube.com/watch?v=0jcWbghA294">https://www.youtube.com/watch?v=0jcWbghA294</a>. More details can be found in the Deliverable 6.9 "Initial communication bundle".

### 3.2.4. Brochures, newsletters, leaflets

In order to report on the project's achievements and technical developments, regular summaries will be produced in a newsletter, brochure or leaflet format. The main aim of these communication tools is to establish the grounds for adoption of the FirEUrisk products in both the public and the private sectors, being a key platform for promoting the use and commercialization of FirEUrisk results. These marketing tools will be specifically addressed to potential end-users, governments and most importantly industry partners with potential interest in purchasing one or more of the FirEUrisk solutions. Moreover, citizens with particular interest for the topic can subscribe to these promotional materials via the project's website.

### 3.2.5. Social Media Campaigns

Social media is a powerful tool for communication and engagement of citizens. Therefore, in addition to the regular project updates and interaction with the users via Twitter, specific social media campaigns will be launched to amplify the horizons of the project's impact. The frequency and style of these campaigns will vary ranging from extensive posting on specific hot topics related to relevant dates or events to more punctual and engaging formats where the proactive collaboration of the users will be required for example by sending pictures or videos. Involving the citizens in the activity of social media platforms will simultaneously improve the public perception of the project by showing more proximity to and interest for them.

#### 3.2.6. Mailing

Mailing will be the channel used for the distribution of the newsletters, brochures or leaflets to industry leaders interested in the project topic, relevant authorities (EU, national, regional,) and end-users. The existing contact databases of individual partners (articulated through their communication offices), together with the different databases described, the Stakeholder identification section (1.2) as well as the subscriptions on the website will be used to target these communications.



### 3.2.7. EU Dissemination Opportunities

The consortium will be in close contact with the project officer and provide up-to-date information on the project's development and content. We will specifically target the following EC dissemination opportunities: Horizon magazine, Research EU Focus magazine, Research EU Magazine and Cordis website. In addition, press releases will also be sent to EuropaWire.

### 3.2.8. International Cooperation

A possible communication can be established with the UNESCO, UN specialised organisation in Science, with the joint participation of the Regional Bureau for Science and Culture in Europe (Venice) in synergy with the Section on Earth Sciences and Geo-Hazards Risk Reduction, Natural Science Sector based at the UNESCO HQs in Paris. With these activities, we can give the opportunity of FirEUrisk project to link technical partners and a wider community of potential users. UNESCO can scale up FirEUrisk efforts in dissemination and international cooperation activities in Disaster Risk Reduction (DDR) in the cases of large wildfires from a regional (European) to a global perspective.

### 3.2.9. Interaction with past and present projects

At FirEUrisk we aim to leverage on past experience from similar and complementary EU-funded projects. The new approved Green Deal projects like FireLog are also explored for possible communication and knowledge exchange. Thus, through different channels the consortia members contacted with close to our project goals coordinators in similar funded ideas in order to establish collaborations and share knowledge and experiences. In addition, a database of relevant EU projects for FirEUrisk is currently being created by the WP 6 leader, which will be made available to the common consortium sharepoint platform for the respective partners involved in these activities. The list will be further elaborated during the project lifetime and respective MoU's will be signed where overlapping ideas and initiatives can bring mutual benefits for the signing parities.

### 3.2.10. Citizens Engagement

Natural disasters and in particular the large wildfires are at the heart of some of our society's biggest challenges, and FirEUrisk has both an opportunity and a responsibility to ensure we find innovative and relevant ways for members of the public to engage with the important research carried out within the consortium.

The engagement of those stakeholders that are more directly interested in the outcomes of FirEUrisk (firefighters, civil protection services, civil society organizations, citizens) will have two tasks: engagement of the professionals (through End Users Board and similar activities) and engagement of citizens.

In particular, all described online tools provide an ideal platform for bidirectional communication with citizens, as they allow us not only to deliver information but also very importantly to get their valuable feedback, ideas or concerns and to actively involve them in the project.



### **4 EXPLOITATION PLAN**

### 4.1 Role of the exploitation plan

FirEUrisk 's goal is to bring high academic, technological and social impact in improving fire risk management across Europe in the context of global climatic and land-use changes. The project consortium aims to work with a wide range of stakeholders to ensure maximum reach and uptake. The different stakeholders of FirEUrisk have different motivations, objectives or values, thus the dissemination and exploitation actions are targeted to suit the various needs, interests and levels of knowledge.

### 4.2 Exploitation strategy

The forestry market was worth USD 3.9 billion in 2019 and is projected to reach USD 6.1 billion by 2024. On a global scale, the forest market size can grow at a Compound Annual Growth Rate (CAGR) of 9.0% in the period 2019–2024 [1]. Major drivers for a precision forestry market include increasing mechanisation of forestry operations, growing demand for forestry products, including new bio-based materials and renewable energy, decreasing cost of advanced monitoring and surveillance technologies, and increasing government support to adopt modern forestry techniques to curb illegal logging.

The FirEUrisk project outcomes will be made accessible for exploitation to different stakeholders, including private sector, research institutes, ministries, and their special agencies responsible for fire prevention and suppression. The value and impact of the research and innovation contributed by the development of FirEUrisk are concretized especially when addressing specific societal challenges associated to safety, security, resilience, sustainable development. A consolidated consortium exploitation roadmap along with individual partner exploitation plans are under development. The formulated exploitation roadmap will cover operational, societal, scientific, and political use of the project results to enhance the integrated fire management in the EU by improving knowledge and action plans. The project consortium partners will apply the results individually or in collaboration with others by utilizing the results directly, or by integrating them with some existing operational services or when developing new services. A particular exploitation effort will be dedicated to the connection of the FirEUrisk results with the Disaster Risk Management Knowledge Centre (DRMKC), maintained by the EC JRC Ispra Disaster Risk Management Unit and its Risk Data Hub [2].

### 4.2.1. IP and Knowledge Management Strategy

The IP and knowledge management strategy will be based on the procedures and agreements included in the Consortium agreement (CA) and Grant Agreement (GA) of the FirEUrisk project and also will consider methodologies elaborated by the European IP helpdesk [3] (guide to IP and contracts or guide to IP in European reports). The starting point will be the background and foreground identified in the CA an in the DoA, as well as the existing patents identified. The strategy will assess the knowledge generated and identify tentative IP mechanisms to preserve the ownership of the results (joint or individual).



### 4.2.2. Identification of Results

The batch of exploitable results already identified in the DoA and in the CA will be updated and increased after finishing a screen and detection activity in the first year of the FirEUrisk project and with the involvement of the partners of the consortium. A new list will be created and a proper monitoring activity will be carried out in parallel to the development of the project. The approach will ensure "keeping alive" the identification throughout the lifetime of the FirEUrisk project.

### 4.2.3. Evaluation of Business and Innovation Potential

The enhanced pool of exploitable results identified in the initial evaluation processes will be analysed for business and innovation perspectives. Dissemination and Exploitation Board (DEB) will be established in the first year of the project lifetime with main objective to ensure flow of information and sharing of findings between the consortium and the stakeholder groups. Under the responsibility of the DEB Manager (DEBM) the board will coordinate dissemination and exploitation activities within WP6. DEB will be responsible for developing the strategy to access policy- and decision-making organisations and for determining the proper plan to share efficiently the foreground knowledge, as defined in the Exploitation Plan (WP6). Furthermore, the DEB (i) is in charge of regularly analysing the latest business and industrial innovation trends and reporting to the other management bodies; (ii) identifies the barriers hindering the FiREUrisk outcomes ability to reach the market; (iii) encourages relationships between entrepreneurs, policy-makers and researchers for promoting the integrated strategy of wildfire risk management. Each result will be assessed bearing in mind the following pillars: strength of business idea, target sector and competition issues, target market and customers, stakeholder's analysis and financial issues. As an outcome, those results that will be evaluated with a real potential will become products and services utilized in the further developed methodology.

### 4.2.4. Product Standardization Framework

A proper market uptake requires the fulfilment of key regulation, standards and certifications to ensure a smooth commercialization. In the forestry sector, these standards are defined by European or International standardization bodies and can come from the potential buyers (e.g. paper, timber, tourism, bioenergy and private owners, etc.). This activity will be in charge of identifying and informing about applicable standards and the possibility to create new standards demanded by the market.

#### 4.2.5. Exploitation and Business Plan Creation

Individual exploitation plans and a joint business plan will be built under the DEB and DEBM monitoring. Establishing connections between the individual partners solutions and the general project plan will be built synergies and relationships already identified in the preliminary business plan included in the DoA. As a post-project activity, it will be analysed the possible "embedment" of such plans within the business/exploitation plans of each of the organizations. Due to the fact that FirEUrisk project is a Research and Innovation Action (RIA), the exploitation plans will identify a proper technology assessment and upscaling roadmap identifying key development activities that will be need to implement until reaching TRL-level satisfying the market launch.

### **5** CONCLUSIONS

The **diversity of stakeholders** of the FirEUrisk project calls for a thorough analysis and planning. Thus, an important effort is placed on compiling databases in order to identify each stakeholder and systematise the targeting. In addition, a transversal effort will be the generation of a sensitive community database including areas that suffered extreme weather or areas that are currently at risk of large wildfires.

The **dissemination** strategy leverages on the combined expertise of the consortium to access different areas of knowledge through publications, workshops, webinars and conferences.

The **communication** strategy is diverse in formats, reach and scope. It ranges from audio-visual material to explain the project to a large audience to the more technical account of the project progression through the promotional materials. The social media accounts will serve to publicise the project's achievement and results reaching out professionals and citizens as main targeted stakeholders.

The deliverable D6.11 "Dissemination and Exploitation Plan – v.1", builds the foundations of the scientific dissemination with the support of the communication plan in deliverables D6.6 "Communication plan – v.1" and D6.9 "Initial communication bundle". The initial scientific dissemination strategy goes along with the specific stakeholder's groups identification where wildfire assessment and management are in place.

At this stage of the project, the exploitation plan is still under development, thus the main aspects and steps to follow have been outlined in D 6.11 v.1 with more general descriptions of what the possible outcomes will be. However, the collaboration with the other WPs in the project will add more content to this plan in D 6.12 v.2, where further elaboration and improvements will be detailed.



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### 6 References

[1] GA\_101003890 - Annex 1 - Description Of Action (part B) – page 36, section 2.2.2.4 Exploitation strategy

[2] EC JRC Ispra Disaster Risk Management Unit and its Risk Data Hub [online] Available at: < https://drmkc.jrc.ec.europa.eu/ >

[3] European IP helpdesk [online] Available at: < https://intellectual-property-helpdesk.ec.europa.eu/regionalhelpdesks/european-ip-helpdesk\_en>



### 7 Annex 1

The Annex 1 content is directly taken from the GA -Annex 1 - Description Of Action (part B), where on page 34, a preliminary analyses is provided on the Stakeholders identification during the proposal phase. In a nutshell the information is summarised as follows:

"FirEUrisk will dedicate a large effort to co-develop concepts, integrate methods and implement actions with stakeholders related to wildfires, including fire managers, forest owners, farmers, livestock breeders, paper industry, insurance companies, NGOs and policymakers. Table 6 includes a description of the main stakeholder target groups included in the project.

Target Group	Examples (sub-categories)	Relevance/motivation for FirEUrisk
Scientific community	Broad Scientific community in diverse fields linked to the proposal, including other related EU proposals.	Experts in different complementary fields that can provide their insights and knowledge, and foster international collaborations
First responders	Civil protection, firefighters, forest agents, police, military, pilots	First-hand experience, training, validation.
Landowners/ managers	Private and public landowners, forest managers, land tenants, local authorities	Scientific-based assessment on the effects and costs of different management and policy options, on ecological vulnerability, on interactions between fuel hazard and forest management
Policy- and regulation- makers	Local/Regional, National or EU/International levels	Authorities at various levels of action have direct influence on regulations over land use, planning, environmental and civil protection, and economic activities. Impact at these four levels is sought
Industrial stakeholders	Pulp and paper, communication and power, furniture, house construction, service providers, tourism, insurance, equipment developers	Scientific-based assessment of the economic impacts of fires, support in infrastructure vulnerability assessment, look for opportunities to develop new products and services to create new jobs.
Civil society organisations	Professional bodies, scouts, media, foundations, training centres, charities, NGOs	Provide public attitudes and perceptions data. Channel policy, prevention and preparedness project outputs. Identify and analyse 'good practices' in ET countries
Risk prevention Communities	Local communities affected by fires, protection organisations, local volunteer units	Test the methodological framework for communities' vulnerability and coping capacity assessment, strengthen adaptive capacities and overall resilience at the WUI level
General public	Urban and rural communities, teachers and local leaders	Participate in citizen-science tasks

Table 6: Stakeholder identification during the proposal phase

FirEUrisk consortium includes already end-users, Third Parties and a wide group of other stakeholders to extend the operational and field knowledge, experience and expertise of the consortium members. Some of the outstanding end-users and stakeholders are:

- 1. International and European centres (EFFIS, IUFRO,),
- 2. National civil protection agencies (PT),
- 3. National Weather Services (IPMA-PT, FMI),



- 4. **National and Regional fire offices** (Bouches du-Rhone Fire department, FR; Generalitat Valenciana, SP; Escola Nacional de Bombeiros, P)
- 5. Managers of protected areas (Krkonoše Mountains National Park Administration, CR),
- 6. **Decision makers** (Ministry of Environment, Waters and Forests, ROM; Split-Dalmatia County Prefect, HR; Region Autonoma de Sardinia, IT),
- 7. Research Centres (Ramboll FR; Forest Research UK; Swedish Agricultural University),
- 8. Forest Owners (Centre de la Propietat Forestal, SP),
- 9. **Companies** (Vodafone, Rede Eletrica Nacional, P). Some of these users will be part of the partnership as third parties. (please refer to Technical Annex, Part B, Sections 4-5 in ANNEX I- Supporting Documents)."