

**Let the  
dialogue  
begin**



## **D1.2 Consolidated WFRM Knowledge Base – Report on the mapping of WFRM actors, approaches, measures and strategies and SOPs**

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

Acronym: **Firelogue**





## Document Information

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## Document History

Version	Issue Date	Stage	Description	Contributor
D0.1		Draft	This deliverable is intended to present the working methodology of the Firelogue project to retrieve the results of the 3 IAs and FirEURisk projects, in order to make them available on our platform, to give it as material to work on to our Working Groups and to create synergies between the different projects.	Damien BALLEREAU, Sébastien LAHAYE, Mariza KASKARA, Thomas SCHINKO, Eva PREINFALK
F1.0		Final		

## Disclaimer

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## Table of Content

List of Tables.....	4
List of Figures.....	4
List of Abbreviations.....	5
Executive Summary .....	6
1 Introduction.....	7
A. Connecting dimension: establishing synergies between WFRM-related projects.....	7
B. Purpose of the document.....	8
2 Rationale and objectives .....	9
3 Integration of research results by projects - template design .....	9
A. Identity of the solution.....	10
B. Types of knowledge.....	10
C. Phase during which it is relevant.....	10
D. Target stakeholders.....	11
E. Benefits/Results.....	13
F. Website and references .....	13
G. Working groups and discussions .....	13
a. Working groups .....	14
b. Inter-WG discussions.....	16
4 Template final for IAs .....	18
5 Template for updates based on working group's dialogue format.....	22
6 Conclusion .....	24
Annex – First research results by projects .....	25
A. <i>The Eight Step Training Model: Improving Disaster Management Leadership</i> .....	26
B. <i>Building local level engagement in disaster risk reduction. A Portuguese case study</i> .....	29
C. <i>Data Fusion and AI processus from hyperspectral Satellites</i> .....	31
D. <i>CBFIM - Village Defense</i> .....	33
E. <i>Guidelines to increase the benefit of social media in emergencies</i> .....	36
F. <i>Firefighters Plus</i> .....	38



## List of Tables

---

Table 1: Identification of the Solutions .....	10
Table 2: Types of Knowledge.....	10
Table 3: Different Phases of Relevance .....	10
Table 4: Targeted Stakeholder(s) .....	12
Table 5: Benefits and Results .....	13
Table 6: Website and References.....	13
Table 7: Relevant Thematic Working Group .....	14
Table 8: Comments from the Working Groups (Cycle I and II).....	15
Table 9: Comments from cross-WG exchange (Cycle I and II) .....	17
Table 10: Final Template for IAs.....	18
Table 11: Final Template for Firelogue Team (Internal Use Only) .....	22

## List of Figures

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Figure 1: Activities under the Firelogue connecting dimensions .....	8
Figure 2: Firelogue's proposed stakeholder clustering .....	11
Figure 3: FIRELOGUE working groups (WGs).....	15
Figure 4: Firelogue Inter-WG discussions and Cross-WG exchange.....	16





## List of Abbreviations

Abbreviation	Meaning
FIRE-IN	Project funded by the European Commission, “EU-wide collaborative platform for First Responders researchers and industries”
IAs	Innovation Action projects funded by the European Commission
SOPs	Standard Operating Procedures
WG	Working Groups
WFRM	Wildfire Risk Management
<b>Consortium Partners</b>	
ADAI	Association for the Development of Industrial Aerodynamics
CMCC	Centro Euro-Mediterraneo sui Cambiamenti Climatici
CTFC	Consorci Centre de Ciència i Tecnologia Forestal de Catalunya
EDGE	EDGE in Earth Observation sciences Monoprosopi IKE
FhG	Fraunhofer Gesellschaft für Angewandte Forschung e.V. (FhG)
IIASA	International Institute of Applied System Analysis
INESTEC	Instituto de Engenharia de Sistemas e Computadores, Tecnologia e Ciência
KEMEA	Centre for Security Studies
NOA	National Observatory of Athens
PCF	Pau Costa Foundation
SAFE	SAFE Cluster
TIEMS	The International Emergency Management Society
TRI	Trilateral Research
UAH	Universidad de Alcalá
VOST	Virtual Operations Support Team from Portugal





## Executive Summary

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This document (D1.2) presents the first edition of the deliverable "Consolidated WFRM Knowledge Base - Report on the mapping of WFRM actors, approaches, measures and strategies and SOPs".

In this first edition is detailed the working methodology of task 1.2 "Knowledge Consolidation and Integration into Firelogue platform", the methodology for recovering and standardizing the results of the Green Deal projects for which we support (through the realization of a detailed template below), the methodology to take into consideration the reflections carried out by the Working Groups and finally, the first results identified in the field by the FIRE-IN project, while waiting for the 3 IAs and FirEUrisk to produce their results (which will be incorporated into the final deliverable).





## 1 Introduction

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The Firelogue project has a core objective the creation of a network for the discussion on the future of European Wildfire Risk Management (WFRM), identifying and engaging relevant stakeholders within the wildfire community. It thereby focuses mainly on the support of the Green Deal (LC-GD-1-1) Innovation Actions [TREEADS](#) [1], [FIRE-RES](#) [6], and [SILVANUS](#) [13] (IAs henceforth) and the Research and Innovation Action (RIA) FirEurisk [8] (funded under the call LC-CLA-15), as well as other projects working on wildfire management. Thus, Firelogue will simultaneously coordinate the integration of stakeholders and findings into cross-sectoral WFRM recommendations as a roadmap toward meeting the 2030 desired impacts and beyond.

To achieve the above-mentioned purpose, Firelogue presupposes that it is crucial to bring together the multitude of different WFRM stakeholders to uncover their potential synergistic and conflicting interests, aims, and means to achieve them in order to enable holistic planning. Therefore, to properly manage the interaction with all the stakeholders, the project promotes the design and implementation of discussion and knowledge sharing formats, including an Annual digital conference, Peer Review, Joint Impact Assessment, webinars, or networking events.

More specifically, these activities intend to facilitate multi-stakeholder networking, exchange, and continuous engagement and to collect and synthesise their voices across the whole spectrum of politics, economics, civil protection and civil society.

### **A. Connecting dimension: establishing synergies between WFRM-related projects**

Firelogue contributes with a connecting dimension focused on the collection of knowledge, insights, and solutions from the WFRM-related projects, their integration, upscaling, and broader dissemination, as well as the joint management of stakeholder in the project. It will gather the measures and solutions from the projects and their case studies and enrich this knowledge.

Results will be analysed in terms of consistency and relevance at the European level and will be used as a base for further discussion and integration (see Figure 1).

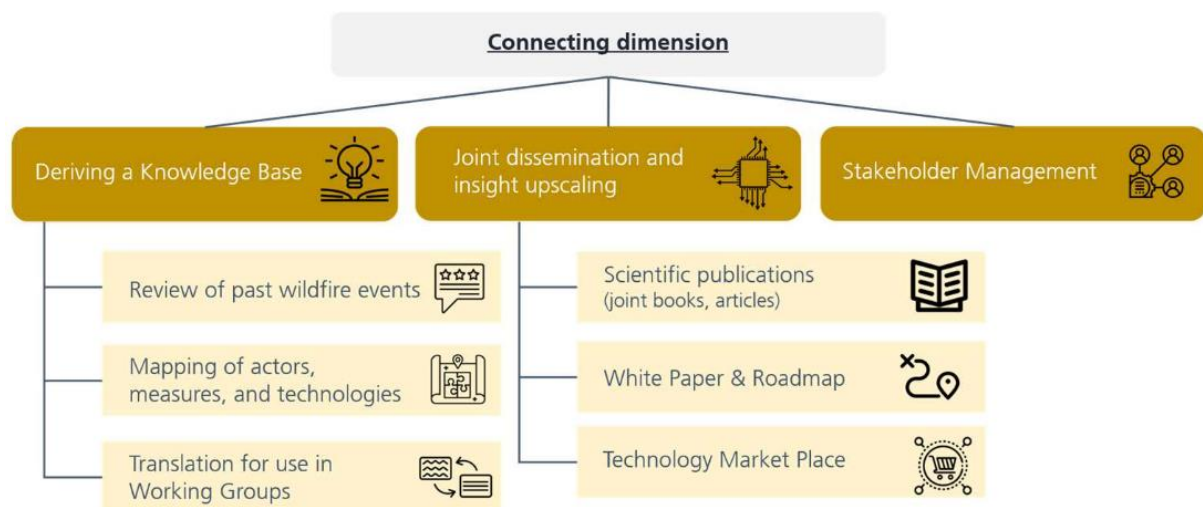


Figure 1: Activities under the Firelogue connecting dimensions

Firelogue activities will support the IA projects in disseminating their insights through joint dissemination activities, which will be codesigned during the early stage of the projects. This involves the support of joint scientific publications, the development of a common White Paper, a Roadmap towards 2030 and beyond, and a Technology Marketplace that will combine a maturity assessment with an online exhibition space supported by the Firelogue Wildfire Knowledge and Communication Platform.

The so-called Firelogue platform, a web-based platform for knowledge exchange and access, combines different support services allowing for the central communication of measures and solutions, publications, and policy papers. At the same times, it serves as a “single face to the customer” of the projects. It showcases relevant technical solutions while interconnecting stakeholders from these projects and external parties in the WFRM domain.

## B. Purpose of the document

Firelogue consolidates the WFRM Knowledge base by building on the insights derived by or linked with the IAs. To do this, we establish links with these IAs in order to recover, standardize and give to our Working Groups their different results to work on. This is the purpose of this document, which is intended to explain our operating methodology. These standardized results can then be structured on our platform. Considering the different case studies that will be part of the IAs, Firelogue has already run an initial scoping survey among the IAs and FirEURisk projects that aim to get a better understanding of their scope and identify relevant areas for knowledge sharing and joint activities. Building on this survey, this report explains the methodology that will enable these results to be collected and analyzed by our Working Groups, as they are developed. This report also integrates the additional knowledge already developed in other projects such as FIRE-IN and develops the methodology used to complement the knowledge base with additional relevant WFRM approaches and information. By means of the integration of research results by projects such as, FirEURisk and the approved IAs, this report adds to the initial survey of IAs’ existing knowledge on WFRM, measures and SOPs particularly relevant for the European level and applied in different WFRM phases (prevention, preparedness, response and recovery) by different actors (as collected under the deliverable D1.1).



Upon an initial draft consolidation to be completed by M12 and the development of the working methodology, this report will be updated based on discussions in the sectoral working groups dialogue formats and will be clustered according to WFRM phase and actors involved.

## 2 Rationale and objectives

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It is at the core of Firelogue to facilitate coordinated exchange among the wildfire-related projects and the broad WFRM community, and, more generally, to enable successful interaction between them. Currently, there are several EU-funded projects focused on wildfire management from different perspectives and providing different solutions. Whereas Firelogue has an ambitious objective to support all of these projects, it primarily focuses on the three Green Deal IAs TREEADS, FIRE-RES, and SILVANUS, as well as FirEURisk, as they are the current benchmark projects in integrated fire risk management in Europe.

To be able to provide this support it was essential to understand their targeted challenges, objectives and perspectives, and it is for this reason that a survey was prepared and distributed to these four projects: to better understand the scope of the IA projects and FirEURisk, and to identify relevant areas for knowledge sharing and joint activities over the next 4-5 years. It is a question here of capitalizing on this initial scoping questionnaire to develop a methodology making it possible to recover the knowledge developed by these projects throughout their lifetimes, to structure these results, to integrate the evaluations / discussions of the sectoral working groups' dialogue formats and to make their presentations homogeneous in order to be able to make them available via the Firelogue platform.

## 3 Integration of research results by projects - template design

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This chapter aims to explain the methodology for recovering the results of the different projects in a standardized and structured way, by presenting the different items that will be requested from IAs projects.

To do this, we have developed a template, in order to group together all the characteristics of the products and services developed by the different projects in a homogeneous manner. This template is the result of discussions with task 1.3 "Maturity assessment and mapping of WFRM related technologies", for which we decided to develop a common template in order not to overload the different projects with information and to facilitate their investment and understanding of the work carried out within the framework of Firelogue.

This template will be sent (in digital form) to the various IAs projects after the validation of this deliverable, so that they can throughout the conduct of their projects and each time they develop a product and/or a service, send us the relative information to these products and in that way we can promote them on our platform, in a standardized way, but also give them as work material, to the various Working Groups of multi-sectoral experts established within the framework of the project.

Below are detailed the different parts of the template.



## A. Identity of the solution

Table 1: Identification of the Solutions

<b>CODE</b>	<b>xxx</b>	<b>Solution Name</b>	<i>Please write a title</i>	<b>Project</b>	<i>Please write your project</i>
		<b>Solution provider</b>	<i>Please write your organization</i>	<b>Case study to be applied</b>	<i>Please write where will you implement your product/service</i>
<b>Description</b>		<i>Please write a brief description of your product</i>			

## B. Types of knowledge

Table 2: Types of Knowledge

<b>Type of product generated by your project</b>	<i>Please, indicate here what type of product will the solution produce</i>	<input type="checkbox"/> Analysis of past wildfire events (e.g. behavior of smoke, lessons learned) <input type="checkbox"/> Technology/Materials/Services (e.g. modelling fire risk, VR helmets, real time fire assessment) <input type="checkbox"/> WFRM policy recommendations (e.g. moving from the paradigm of suppression to that of prevention...) <input type="checkbox"/> Land Management approaches (e.g. socio-economic approaches; environmental impacts...) <input type="checkbox"/> End-user involvement strategies (e.g. newsletter creation; inclusive working groups...) <input type="checkbox"/> Citizen involvement strategies (e.g. cognitive mobilization studies; innovative communication support...) <input type="checkbox"/> Standard Operating Procedures (SOPs) (e.g work procedure; how to improve safety...) <input type="checkbox"/> Firefighting training concepts (e.g. fire training videos ; advanced training for seasoned) <input type="checkbox"/> Other: (explain in few words)
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## C. Phase during which it is relevant

Table 3: Different Phases of Relevance

<b>Relevant Phase</b>	<i>Please choose the phase of fire that the specific product is applied. (You can choose more than one item)</i>	<input type="checkbox"/> Prevention/Early Warning <input type="checkbox"/> Response <input type="checkbox"/> Recovery/Restoration
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## D. Target stakeholders

The analysis of the individual clustering made by IAs and FirEUrisk has led to the proposed clustering in Figure 2, which tries to be holistic and integrative, taking into consideration the clustering made by the projects individually. The stakeholders included in this proposed clustering have been grouped into 8 categories, each containing a number of stakeholder profiles involved – directly or indirectly – in fire management and wildfire risk reduction strategies.



Figure 2: Firelogue's proposed stakeholder clustering

**(1) Emergency management organizations** refer to operational practitioners involved in response operations at the forefront of wildfire incidents. **(2) Scientific community** encompasses research and academic institutions involved in diverse scientific areas related to wildfire risk management, such as fire ecology, landscape management, risk governance, forest economy, rural policy, or civil protection. **(3) Policy-making bodies** involved stakeholders who have a key role in influencing strategic choices for wildfire management and, therefore, become enshrined in territorial policies. **(4) Land Management groups** refer to those stakeholders who have the capacity to conduct management actions on the territory, either because they own it or because they hold the right to act on it. **(5) Environmental associations** are devoted to the study of the natural environment, the protection of the landscapes and ecosystems, and enforcing society's awareness of environmental issues via education. **(6) Media** refers to communicators with the capacity to reach many people and, therefore, influence people's opinions, beliefs, and attitudes toward wildfire management policies. **(7) Society** encompasses citizens and groups of citizens whose education on a fire risk culture is fundamental to improving society's resilience to wildfire. Finally, **(8) Industry, technology, and innovation** involve several industrial sectors with a key role in providing safety and adaptive capacity resulting from wildfire events. A more detailed description of the stakeholder groups can be found in "D7.2 Stakeholder clustering report" [10]



Table 4: Targeted Stakeholder(s)

<b>Targeted Stakeholder(s)</b>	<p><i>Please choose the targeted stakeholders of your solution. (You can choose more than one)</i></p>	<input type="checkbox"/> Emergency management organizations (firefighters; civil protection; Medical services; Police; Fire analysts...) <input type="checkbox"/> Scientific community (academia; Researchers; Fire safety engineers...) <input type="checkbox"/> Policy-making bodies (local / regional / national administrations; Politicians; EU commissioners...) <input type="checkbox"/> Land Management groups (landowner associations; land planners; farmers; foresters...) <input type="checkbox"/> Environmental associations (conservation organizations; environmental consultancies; environmental educators...) <input type="checkbox"/> Media (journalists; communicators in the environmental field; social media influencers...) <input type="checkbox"/> Society (volunteer associations; civil society organizations; vulnerable groups; tourists; public...) <input type="checkbox"/> Industry, technology, and innovation (energy; construction; infrastructure; banking; financial services; insurance; fire prevention and firefighting equipment suppliers...)
<b>Financing of the service</b>	<p><i>Please, if relevant, indicate who pays for the provision of the result/service</i></p>	<input type="checkbox"/> Individuals / households, homeowners <input type="checkbox"/> Businesses (farmers, foresters, other businesses in fire-prone areas) <input type="checkbox"/> Local, regional or national authorities <input type="checkbox"/> Others, _____ (please elaborate, exemplify)



<b>Implementation of the result</b>	Please, indicate who will use / implement the result / service.	
	<input type="checkbox"/> Individuals / households, homeowners <input type="checkbox"/> Businesses (farmers, foresters, other businesses in fire-prone areas) <input type="checkbox"/> Local, regional or national authorities <input type="checkbox"/> Others, _____ (please elaborate, exemplify)	
	Of this group, is everyone equally benefitting from this technology? If not, what limits certain actors from benefitting? (risk literacy, age, income, region specific attributes...)	[Open answer] :

## E. Benefits/Results

Table 5: Benefits and Results

<b>Benefits</b> (if relevant)	Please write any kind of benefit (economic, societal, scientific, technological etc...) that comes from this product
<b>Results</b> (if relevant)	Please write the results of this product and if they meet the expectations of the concept that were created

## F. Website and references

Table 6: Website and References

<b>Website</b> (if relevant)	Please enter the website of the specific product (alternatively enter the project's website)
<b>Further references and resources</b> (publications, policy briefs, handbooks etc.)	Please write any relevant references to your solution

## G. Working groups and discussions

After the first consolidation of the IA results, this task will further be updated based on discussions in the sectoral working groups' dialogue formats (WP4) and will be clustered according to WFRM phase



and actors involved. Once this template has been developed, and the results have been collected progressively, it will be a question throughout the project, for Task 1.2 "Knowledge Consolidation and Integration into Firelogue platform", of continuing to structure the results of these projects in order to integrate them into the Firelogue platform, which is under development when writing this deliverable, and structure the information to give it as material for the project's Working Groups in close collaboration with Task 1.3 and Task 1.4.

In addition, in order to prepare the "report of recommendations for multi-stakeholder WFRM at the European level", which we will have to carry out as part of Tasks 5.3 and 5.4, to discuss with the IAs, adapt and validate the recommendation and policy providing measures, strategies and solution developed, we must incorporate the comments and recommendations of the different Working Groups on these different products. In this sense, we have developed a first template for members of the Firelogue project, internally, to structure comments on products developed by IAs.

### a. Working groups

For the coordination dimension, Firelogue establishes five Sectoral Working Groups (WGs), namely an ecological/environmental, a societal, an infrastructure, an insurance and a civil protection WG. WGs members will be formed by members from the three IAs, FirEURisk, FIRELOGUE, other WFRM projects as well as other invited experts, and their mission will be to foster transdisciplinary dialogues to review and analyse existing WFRM approaches, and innovations suggested by the IAs and the WFRM community.

*Table 7: Relevant Thematic Working Group*

<b>Relevant Thematic Working Group</b>	<input type="checkbox"/> Environmental / Ecology WG <input type="checkbox"/> Societal WG <input type="checkbox"/> Infrastructure WG <input type="checkbox"/> Insurance WG <input type="checkbox"/> Civil Protection WG
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To ensure structured discussions and facilitate cross-working group exchange, WGs will work along four horizontal thematic strands, reflecting the main policy aspects (socioeconomic aspects, climate change mitigation and adaptation) and facilitators (technology, earth observation) in WFRM.

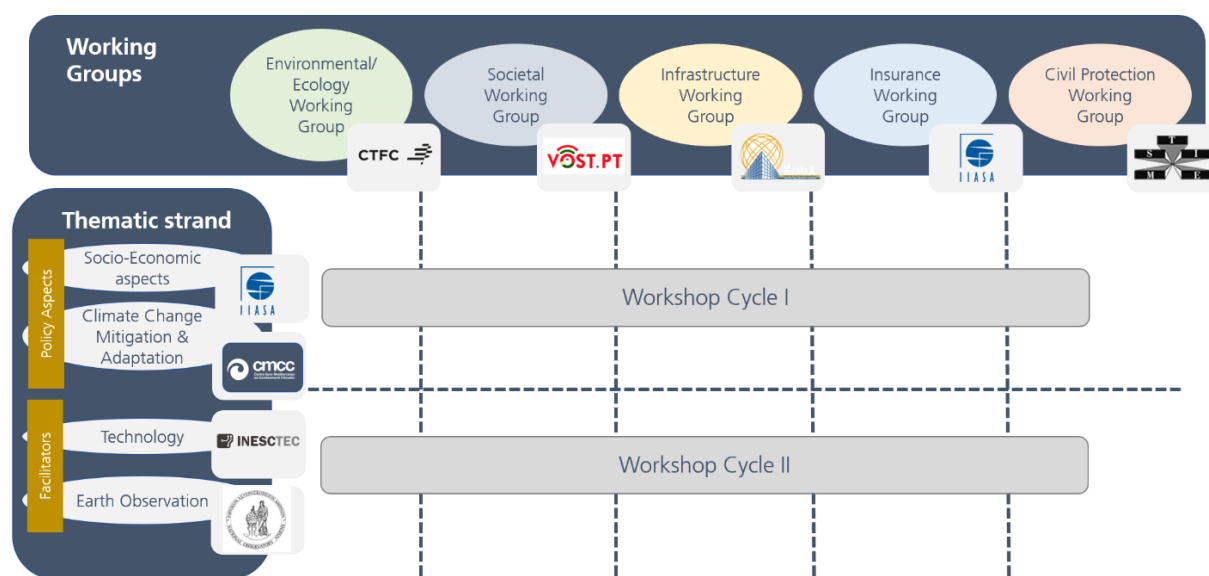


Figure 3: FIRELOGUE working groups (WGs)

Firelogue therefore suggest clustering this multitude of different WFRM actors and will bring together experts in five thematic working groups. In order to structure the working group discussions in a comparable way, each working group along the following four thematic strands under which WFRM innovations can be grouped.

Table 8: Comments from the Working Groups (Cycle I and II)

<b>Comments from the WG (Workshop Cycle I)</b>	<b>Environmental / Ecology WG</b> Socio-economic aspects: Climate change mitigation and adaptation aspects:
	<b>Societal WG</b> Socio-economic aspects: Climate change mitigation and adaptation aspects:
	<b>Infrastructure WG</b> Socio-economic aspects: Climate change mitigation and adaptation aspects:
	<b>Insurance WG</b> Socio-economic aspects: Climate change mitigation and adaptation aspects:
	<b>Civil Protection WG</b> Socio-economic aspects: Climate change mitigation and adaptation aspects:



<b>Comments from the WG (Workshop Cycle II)</b>	Environmental / Ecology WG Technology aspects : Earth observation aspects:
	Societal WG Technology aspects : Earth observation aspects:
	Infrastructure WG Technology aspects : Earth observation aspects:
	Insurance WG Technology aspects : Earth observation aspects:
	Civil Protection WG Technology aspects: Earth observation aspects:

### b. Inter-WG discussions

WGs will first discuss internally which goals they envision for WFRM, and which opportunities, strengths, weaknesses and threats are linked with the measures identified under the thematic strands by the IAs. In a second step, cross-WG exchange on relevant measures and solutions is facilitated.

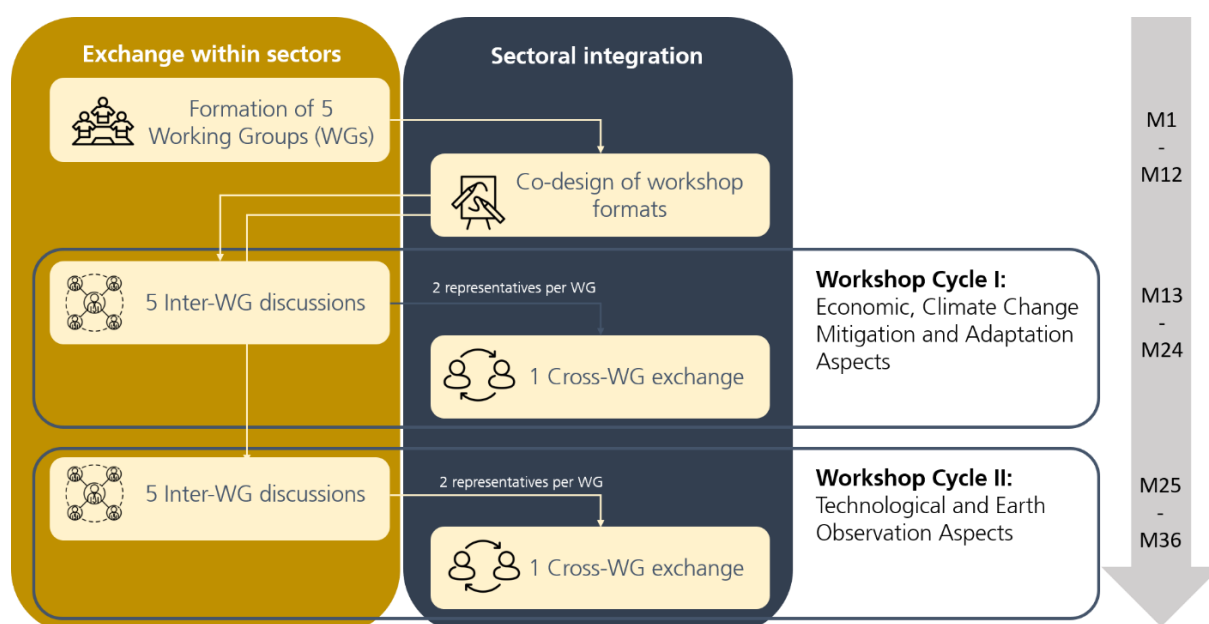


Figure 4: Firelogue Inter-WG discussions and Cross-WG exchange



*Table 9: Comments from cross-WG exchange (Cycle I and II)*

<b>Comments from cross-WG exchange (Cycle I)</b>	Socio-economic aspects: Climate change mitigation and adaptation aspects:
<b>Comments from cross-WG exchange (Cycle II)</b>	Technology: Earth Observation:





## 4 Template final for IAs

This final model is that of task 1.2 and will be merged with the model developed by task 1.3 in order to be given to the various AI projects, and that the latter indicate below the results of their projects. This in order to give these results as work material, to our various working groups, as well as to be able to structure their results on our platform.

Table 10: Final Template for IAs

<b>Photo</b> (please upload a relevant photo – if relevant)					
<b>CODE</b>	<b>xxx</b>	<b>Solution name</b>	<i>Please write a title</i>	<b>Project</b>	<i>Please write your project</i>
		<b>Solution provider</b>	<i>Please write your organization</i>	<b>Case Study to be applied</b>	<i>Please write where will you implement your product/service</i>
<b>Description</b>		<i>Please write a brief description of product</i>			
<b>Type of product generated by the solution</b>		<i>Please, indicate here what type of product will the solution produce</i>	<input type="checkbox"/> Analysis of past wildfire events (e.g. behavior of smoke, lessons learned) <input type="checkbox"/> Technology/Materials/Services (e.g. modelling fire risk, VR helmets, real time fire assessment) <input type="checkbox"/> WFRM policy recommendations (e.g. moving from the paradigm of suppression to that of prevention...) <input type="checkbox"/> Land Management approaches (e.g. socio-economic approaches; environmental impacts...) <input type="checkbox"/> End-user involvement strategies (e.g. newsletter creation; inclusive working groups...) <input type="checkbox"/> Citizen involvement strategies (e.g. cognitive mobilization studies; innovative communication support...) <input type="checkbox"/> Standard Operating Procedures (SOPs) (e.g work procedure; how to improve safety...) <input type="checkbox"/> Firefighting training concepts (e.g. fire training videos; advanced training for seasoned) <input type="checkbox"/> Other: (explain in few words)		
<b>Relevant Phase</b>		<i>Please choose the phase of fire that the specific product is applied. (You can choose more than one item)</i>		<input type="checkbox"/> Prevention/Early Warning <input type="checkbox"/> Response <input type="checkbox"/> Recovery/Restoration	



<b>Targeted Stakeholder(s)</b>	<p><i>Please choose the targeted stakeholders of your solution. (You can choose more than one)</i></p>	<input type="checkbox"/> Emergency management organizations (firefighters; civil protection; Medical services; Police; Fire analysts...) <input type="checkbox"/> Scientific community (academia; Researchers; Fire safety engineers...) <input type="checkbox"/> Policy-making bodies (local / regional / national administrations; Politicians; EU commissioners...) <input type="checkbox"/> Land Management groups (landowner associations; land planners; farmers; foresters...) <input type="checkbox"/> Environmental associations (conservation organizations; environmental consultancies; environmental educators...) <input type="checkbox"/> Media (journalists; communicators in the environmental field; social media influencers...) <input type="checkbox"/> Society (volunteer associations; civil society organizations; vulnerable groups; tourists; public...) <input type="checkbox"/> Industry, technology, and innovation (energy; construction; infrastructure; banking; financial services; insurance; fire prevention and firefighting equipment suppliers...)
<b>Financing of the service</b>	<p><i>Please, if relevant, indicate who pays for the provision of the result/service</i></p>	<input type="checkbox"/> Individuals / households, homeowners <input type="checkbox"/> Businesses (farmers, foresters, other businesses in fire-prone areas) <input type="checkbox"/> Local, regional or national authorities <input type="checkbox"/> Others, _____ (please elaborate, exemplify)



<b>Implementation of the result</b>	<p><i>Please, indicate who will use / implement the result / service.</i></p>	<input type="checkbox"/> Individuals / households, homeowners <input type="checkbox"/> Businesses (farmers, foresters, other businesses in fire-prone areas) <input type="checkbox"/> Local, regional or national authorities <input type="checkbox"/> Others, _____ (please elaborate, exemplify)
	<p><i>Of this group, is everyone equally benefitting from this technology? If not, what limits certain actors from benefitting? (risk literacy, age, income, region specific attributes...)</i></p>	<p>[Open answer]:</p>
<b>Benefits</b> (if relevant)	<p><i>Please write any kind of benefit (economic, societal, scientific, technological etc...) that comes from this product</i></p>	
<b>Results</b> (if relevant)	<p><i>Please write the results of this product and if they meet the expectations of the concept that were created</i></p>	
<b>Website</b> (if relevant)	<p><i>Please enter the website of the specific product (alternatively enter the project's website)</i></p>	



<b>Further references and resources</b> (publications, policy briefs, handbooks etc.) (if relevant)	<i>Please write any relevant references to your solution (if relevant)</i>
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## 5. Template for updates based on working group's dialogue format

Table 11: Final Template for Firelogue Team (Internal Use Only)

CODE	xxx	Solution name	Please write a title	Project	Please write your project
		Solution provider	Please write your organisation	Case Study to be applied	Please write where will you implement your product/service
Relevant Thematic Working Group		<input type="checkbox"/> Environmental / Ecology WG <input type="checkbox"/> Societal WG <input type="checkbox"/> Infrastructure WG <input type="checkbox"/> Insurance WG <input type="checkbox"/> Civil Protection WG			
Comments from the WG (Workshop Cycle I)		<p>Environmental / Ecology WG            Socio-economic aspects:            Climate change mitigation and adaptation aspects:</p> <p>Societal WG            Socio-economic aspects:            Climate change mitigation and adaptation aspects:</p> <p>Infrastructure WG            Socio-economic aspects:            Climate change mitigation and adaptation aspects:</p> <p>Insurance WG            Socio-economic aspects:            Climate change mitigation and adaptation aspects:</p> <p>Civil Protection WG            Socio-economic aspects:            Climate change mitigation and adaptation aspects:</p>			



<b>Comments from the WG (Workshop Cycle II)</b>	<p>Environmental / Ecology WG Technology aspects : Earth observation aspects:</p> <p>Societal WG Technology aspects: Earth observation aspects:</p> <p>Infrastructure WG Technology aspects: Earth observation aspects:</p> <p>Insurance WG Technology aspects: Earth observation aspects:</p> <p>Civil Protection WG Technology aspects: Earth observation aspects:</p>
<b>Comments from cross-WG exchange (Cycle I)</b>	<p>Socio-economic aspects: Climate change mitigation and adaptation aspects:</p>
<b>Comments from cross-WG exchange (Cycle II)</b>	<p>Technology: Earth Observation:</p>



## 6 Conclusion

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This Deliverable presented the first version of the work carried out during Task 1.2 « Knowledge Consolidation and Integration into Firelogue platform », allowing to recover the results developed by the IAs projects and the other relevant projects in the field of the WFRM, as well as to give these results as work material to our various Working Groups.

As next steps, Task 1.2 and Task 1.3 will work together to approach IAs projects from now until Month 36 and to consolidate all input needed into a single document with the same format so that IAs are not overburdened by filling in many forms. Firelogue's stakeholder manager will approach the IAs coordinators and they should then circulate the information inside the consortia and in particular towards the Thematic Working Groups. Once all input is gathered, the information will be consolidated and uploaded into the Firelogue platform till the end of the project.





## **Annex – First research results by projects**

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All the results developed by the IAs projects and FirEUrisk, will then be listed here in the final template, with the comments of the different Working Groups. Since the projects are relatively recent, it is still too early to have their results, however, we will integrate their results throughout the life of our project. In addition, we have already collected the results from the European FIRE-IN project, which is coming to an end, in order to capitalize on the work already done and to be able to continue what has been achieved. In this sense, you can find below the solutions highlighted by the FIRE-IN project, relating to the field of forest fires and which falls within our scope. That is to say all the approved solutions, measures, SOPs and scientific papers in this field.

Finally, as part of our Firelogue project, we will try to create as many synergies as possible between the three IAs and FirEUrisk, but we will work to include potential results from other European projects that could prove relevant for the work of the three IAs and FireEUrisk.





## A. The Eight Step Training Model: Improving Disaster Management Leadership

<b>Photo</b> (please upload a relevant photo – if relevant)					
<b>CODE</b>	<b>xxx</b>	<b>Solution name</b>	<i>The Eight Step Training Model : Improving Disaster Management Leadership</i>	<b>Project</b>	<i>FIRE-IN</i>
		<b>Solution provider</b>	<i>Researchers : Cole SLATTERY ; Robert SYVERTSON and Stephen KRILL</i>	<b>Case Study to be applied</b>	<i>Please write where will you implement your product/service</i>
<b>Description</b>		<p>In the aftermath of public tragedies such as the terrorist attacks of 9/11 and Hurricane Katrina, intense scrutiny was placed upon the emergency management community throughout all levels of government. Clearly, it is imperative that emergency managers understand the scope and scale of these events and subsequently the depth of planning required to execute coordinated preparedness, response and relief efforts. However, plans are merely a step in the overarching requirement of coordinating disaster response and delivering relief. One method for emergency managers to achieve success may be through the implementation of a disciplined training methodology, developed in the United States Army, known as the "Eight Step Training Model." At its essence, the eight-step training model provides a logical, structured and repeatable framework for developing and executing training that is designed to build confident and competent emergency managers and improve the individual and collective training proficiency of primary and secondary responders (training participants). A time investment in this planning and training methodology will increase preparedness, response and recovery efforts and desired outcomes immeasurably. The model can focus upon local, State or Federal levels, incorporating Private Volunteer Organizations (PVOs), Non-Government Organizations (NGOs) or commercial industry whether local, regional or national. The steps are as follows: 1. Study/Teach the Literature / Doctrine (Certify Leaders); 2. Survey the Training Site; 3. Develop the Training Plan; 4. Issue the Plan; 5. Rehearse the Plan (Tabletop Exercise); 6. Execute the Training; 7. Evaluate the Training; and 8. Retrain as Needed to Meet Goals. At a minimum, the model acquaints participants with divergent organizational roles and missions and at its best instills confidence in participating organizations' ability to work together in a simulated setting before they are forced to collaborate during emergency response. The article seeks to describe the steps in detail and provide the reader with a fundamental understanding of the model as it may relate to their future training needs.</p>			



<b>Type of product generated by the solution</b>	<i>Please, indicate here what type of product will the solution produce</i>	<input type="checkbox"/> Analysis of past wildfire events (e.g. behavior of smoke, lessons learned) <input type="checkbox"/> Technology/Materials/Services (e.g. modelling fire risk, VR helmets, real time fire assessment) <input type="checkbox"/> WFRM policy recommendations (e.g. moving from the paradigm of suppression to that of prevention...) <input type="checkbox"/> Land Management approaches (e.g. socio-economic approaches; environmental impacts...) <input type="checkbox"/> End-user involvement strategies (e.g. newsletter creation; inclusive working groups...) <input type="checkbox"/> Citizen involvement strategies (e.g. cognitive mobilization studies; innovative communication support...) <input type="checkbox"/> Standard Operating Procedures (SOPs) (e.g work procedure; how to improve safety...) <input checked="" type="checkbox"/> Firefighting training concepts (e.g. fire training videos ; advanced training for seasoned) <input type="checkbox"/> Other: (explain in few words)
<b>Relevant Phase</b>	<i>Please choose the phase of fire that the specific product is applied. (You can choose more than one item)</i>	<input checked="" type="checkbox"/> Prevention/Early Warning <input type="checkbox"/> Response <input type="checkbox"/> Recovery/Restoration



<b>Targeted Stakeholder(s)</b>	<p><i>Please choose the targeted stakeholders of your solution. (You can choose more than one)</i></p>	<input checked="" type="checkbox"/> Emergency management organizations (firefighters; civil protection; Medical services; Police; Fire analysts...) <input type="checkbox"/> Scientific community (academia; Researchers; Fire safety engineers...) <input type="checkbox"/> Policy-making bodies (local / regional / national administrations; Politicians; EU commissioners...) <input type="checkbox"/> Land Management groups (landowner associations; land planners; farmers; foresters...) <input type="checkbox"/> Environmental associations (conservation organizations; environmental consultancies; environmental educators...) <input type="checkbox"/> Media (journalists; communicators in the environmental field; social media influencers...) <input type="checkbox"/> Society (volunteer associations; civil society organizations; vulnerable groups; tourists; public...) <input type="checkbox"/> Industry, technology, and innovation (energy; construction; infrastructure; banking; financial services; insurance; fire prevention and firefighting equipment suppliers...)
<b>Benefits</b> (if relevant)	<p><i>Please write any kind of benefit (economic, societal, scientific, technological etc...) that comes from this product</i></p>	
<b>Results</b> (if relevant)	<p><i>Please write the results of this product and if they meet the expectations of the concept that were created</i></p>	
<b>Website</b> (if relevant)	<p><a href="https://www.degruyter.com">The Eight Step Training Model: Improving Disaster Management Leadership (degruyter.com)</a></p>	
<b>Further references and resources</b> (publications, policy briefs, handbooks etc.) (if relevant)	<p>Slattery, Cole; Syvertson, Robert; Krill, Stephen, JR. (2009): The Eight Step Training Model. Improving Disaster Management Leadership. In: Journal of Homeland Security and Emergency Management 6 (1).</p>	



**B. Building local level engagement in disaster risk reduction. A Portuguese case study**

<b>CODE</b>	<b>xxx</b>	<b>Solution name</b>	Building local level engagement in disaster risk reduction. A Portuguese case study	<b>Project</b>	FIRE-IN
		<b>Solution provider</b>	Researchers : Judy BURNSIDE-LAWRY and Luis CARVALHO	<b>Case Study to be applied</b>	Please write where will you implement your product/service
<b>Description</b>		Contributing to the global dialogue on disaster risk reduction (DRR), the purpose of this paper is to address a key priority for the Post-2015 Framework for DRR (HFA2) by analysing initiatives used by one local government to increase local-level engagement in DRR. Design/methodology/approach			
<b>Type of product generated by the solution</b>		<div> Please, indicate here what type of product will the solution produce </div> <div> <input type="checkbox"/> Analysis of past wildfire events (e.g. behavior of smoke, lessons learned)  <input type="checkbox"/> Technology/Materials/Services (e.g. modelling fire risk, VR helmets, real time fire assessment)  <input type="checkbox"/> WFRM policy recommendations (e.g. moving from the paradigm of suppression to that of prevention...)  <input type="checkbox"/> Land Management approaches (e.g. socio-economic approaches; environmental impacts...)  <input type="checkbox"/> End-user involvement strategies (e.g. newsletter creation; inclusive working groups...)  <input checked="" type="checkbox"/> Citizen involvement strategies (e.g. cognitive mobilization studies; innovative communication support...)  <input type="checkbox"/> Standard Operating Procedures (SOPs) (e.g work procedure; how to improve safety...)  <input type="checkbox"/> Firefighting training concepts (e.g. fire training videos ; advanced training for seasoned)  <input type="checkbox"/> Other: (explain in few words) </div>			
<b>Relevant Phase</b>		Please choose the phase of fire that the specific product is applied. (You can choose more than one item)		<input checked="" type="checkbox"/> Prevention/Early Warning <input type="checkbox"/> Response <input type="checkbox"/> Recovery/Restoration	



<b>Targeted Stakeholder(s)</b>	<p><i>Please choose the targeted stakeholders of your solution. (You can choose more than one)</i></p>	<p><input type="checkbox"/> Emergency management organizations (firefighters; civil protection; Medical services; Police; Fire analysts...)</p> <p><input checked="" type="checkbox"/> Scientific community (academia; Researchers; Fire safety engineers...)</p> <p><input checked="" type="checkbox"/> Policy-making bodies (local / regional / national administrations; Politicians; EU commissioners...)</p> <p><input type="checkbox"/> Land Management groups (landowner associations; land planners; farmers; foresters...)</p> <p><input type="checkbox"/> Environmental associations (conservation organizations; environmental consultancies; environmental educators...)</p> <p><input type="checkbox"/> Media (journalists; communicators in the environmental field; social media influencers...)</p> <p><input checked="" type="checkbox"/> Society (volunteer associations; civil society organizations; vulnerable groups; tourists; public...)</p> <p><input type="checkbox"/> Industry, technology, and innovation (energy; construction; infrastructure; banking; financial services; insurance; fire prevention and firefighting equipment suppliers...)</p>
<b>Benefits</b> (if relevant)	<p>Develop public self-protection to minimize responders' exposures ; Train/educate/inform general population starting from scratch and in a basic and easy way, about knowledge of risk and appropriate behaviours, specially targeting those more exposed and vulnerable. Address all phases of emergency and the different levels of risk. Provide tools to facilitate adequate decision-making: checklists, emergency kits;</p>	
<b>Results</b> (if relevant)	<p>A review of literature from the multidisciplinary areas of communication, social and political theory examines the role that communication theory and practice can play in facilitating public participation to build community resilience.</p>	
<b>Website</b> (if relevant)	<p><a href="https://www.emerald.com/insight/content/doi/10.1108/DPM-07-2014-0129/full/html">https://www.emerald.com/insight/content/doi/10.1108/DPM-07-2014-0129/full/html</a></p>	
<b>Further references and resources</b> (publications, policy briefs, handbooks etc.) (if relevant)	<p>Burnside-Lawry, Judy; Carvalho, Luis (2015): Building local level engagement in disaster risk reduction. A Portuguese case study. In: Disaster Prevention and Management 24 (1), S. 80–99. DOI: 10.1108/DPM-07- 2014- 0129.</p>	



### C. Data Fusion and AI processes from hyperspectral Satellites

CODE	xxx	Solution name	Data Fusion and AI processes from Hyperspectral Satellites	Project	FIRE-IN
		Solution provider	GEOSYSTEMS HELLAS S.A	Case Study to be applied	N / A
Description		Hyperspectral remote sensing leverages information in many (often more than 100) narrow (smaller than 20 nm) spectrally contiguous bands, in contrast to multispectral remote sensing of few (up to 15) non-contiguous wider (greater than 20 nm) bands. To date, hyperspectral fire applications have primarily used airborne data in the visible to short-wave infrared region (VSWIR, 0.4 to 2.5 μm).			
		This has resulted in detailed and accurate discrimination and quantification of fuel types and condition, fire temperatures and emissions, fire severity and vegetation recovery. Many of these applications use processing techniques that take advantage of the high spectral resolution and dimensionality such as advanced spectral mixture analysis.			
		TRUTHS is a new satellite mission that will be added to the list of missions to be financed in the Earth Observation Earth Watch program. The TRUTHS mission aims to establish an SI-traceable space-based climate and calibration observing system to improve confidence in climate-change forecasts – a kind of ‘standards laboratory in space’. It would carry a hyperspectral imager to provide benchmark measurements of both incoming solar radiation and outgoing reflected radiation with an unprecedented accuracy.			
		These benchmark measurements would improve our ability to estimate radiative imbalance underlying climate change and, importantly, in a shorter time than is currently possible. Reference datasets from TRUTHS would also serve to calibrate other satellite sensors, such as those carried on the Copernicus missions.			



<b>Type of product generated by the solution</b>	<i>Please, indicate here what type of product will the solution produce</i>	<input type="checkbox"/> Analysis of past wildfire events (e.g. behavior of smoke, lessons learned) <input checked="" type="checkbox"/> Technology/Materials/Services (e.g. modelling fire risk, VR helmets, real time fire assessment) <input type="checkbox"/> WFRM policy recommendations (e.g. moving from the paradigm of suppression to that of prevention...) <input type="checkbox"/> Land Management approaches (e.g. socio-economic approaches; environmental impacts...) <input type="checkbox"/> End-user involvement strategies (e.g. newsletter creation; inclusive working groups...) <input type="checkbox"/> Citizen involvement strategies (e.g. cognitive mobilization studies; innovative communication support...) <input type="checkbox"/> Standard Operating Procedures (SOPs) (e.g work procedure; how to improve safety...) <input type="checkbox"/> Firefighting training concepts (e.g. fire training videos ; advanced training for seasoned) <input type="checkbox"/> Other: (explain in few words)
<b>Relevant Phase</b>	<i>Please choose the phase of fire that the specific product is applied. (You can choose more than one item)</i>	<input checked="" type="checkbox"/> Prevention/Early Warning <input checked="" type="checkbox"/> Response <input checked="" type="checkbox"/> Recovery/Restoration
<b>Targeted Stakeholder(s)</b>	<i>Please choose the targeted stakeholders of your solution. (You can choose more than one)</i>	<input checked="" type="checkbox"/> Emergency management organizations (firefighters; civil protection; Medical services; Police; Fire analysts...) <input checked="" type="checkbox"/> Scientific community (academia; Researchers; Fire safety engineers...) <input type="checkbox"/> Policy-making bodies (local / regional / national administrations; Politicians; EU commissioners...) <input type="checkbox"/> Land Management groups (landowner associations; land planners; farmers; foresters...) <input checked="" type="checkbox"/> Environmental associations (conservation organizations; environmental consultancies; environmental educators...) <input type="checkbox"/> Media (journalists; communicators in the environmental field; social media influencers...) <input type="checkbox"/> Society (volunteer associations; civil society organizations; vulnerable groups; tourists; public...) <input type="checkbox"/> Industry, technology, and innovation (energy; construction; infrastructure; banking; financial services; insurance; fire prevention and firefighting equipment suppliers...)



<b>Benefits</b> (if relevant)	Focus on sustainability of safe operations ; Anticipate vulnerability, and communicate to the public ; Pre-plan interoperability and enhance synergies ; Negotiate solutions with stakeholders for anticipated scenarios ; Prioritise response and resources allocation to avoid the collapse of the emergency response system: triage, build alternative scenario, identify trigger points... ; Base the prediction of scenarios on historical events and on statistics (baseline), including the modelling of the actual conditions (at local level) and human factors ; Maintain situation awareness. Avoid the loss of information with shifts' changes ;
<b>Results</b> (if relevant)	A proposed solution for the monitoring of landscape fires through satellite data in the framework of TRUTHS satellite program. Too early to be characterized as a product. Still in research.
<b>Website</b> (if relevant)	<i>Please enter the website of the specific product (alternatively enter the project's website)</i>
<b>Further references and resources</b> (publications, policy briefs, handbooks etc.) (if relevant)	<i>Please write any relevant references to your solution (if relevant)</i>

#### D. CBFIM - Village Defense

<b>CODE</b>	<b>xxx</b>	<b>Solution name</b>	CBFIM – Village Defense	<b>Project</b>	FIRE-IN
		<b>Solution provider</b>	Global Fire Monitoring Center	<b>Case Study to be applied</b>	N / A
<b>Description</b>	In many regions globally rural settlements (villages, towns, scattered farmsteads) and other rural assets (agricultural fields / crops, infrastructures and other values at risk) are increasingly endangered by wildfires. This trend is driven by the consequences of land-use change, regional climate change and particularly by the rural exodus, which has resulted in the weakening of rural workforce and selfprotection ability and increasing wildfire hazard on abandoned lands. In order to enhance the capabilities of local rural communities to defend themselves against wildfires a set of guidelines was developed for the Balkans as a pilot region, designed to be adapted to the conditions of other regions and countries as deemed appropriate.				



<b>Type of product generated by the solution</b>	<i>Please, indicate here what type of product will the solution produce</i>	<input type="checkbox"/> Analysis of past wildfire events (e.g. behavior of smoke, lessons learned) <input type="checkbox"/> Technology/Materials/Services (e.g. modelling fire risk, VR helmets, real time fire assessment) <input type="checkbox"/> WFRM policy recommendations (e.g. moving from the paradigm of suppression to that of prevention...) <input type="checkbox"/> Land Management approaches (e.g. socio-economic approaches; environmental impacts...) <input type="checkbox"/> End-user involvement strategies (e.g. newsletter creation; inclusive working groups...) <input type="checkbox"/> Citizen involvement strategies (e.g. cognitive mobilization studies; innovative communication support...) <input checked="" type="checkbox"/> Standard Operating Procedures (SOPs) (e.g work procedure; how to improve safety...) <input type="checkbox"/> Firefighting training concepts (e.g. fire training videos ; advanced training for seasoned) <input type="checkbox"/> Other: (explain in few words)
<b>Relevant Phase</b>	<i>Please choose the phase of fire that the specific product is applied. (You can choose more than one item)</i>	<input checked="" type="checkbox"/> Prevention/Early Warning <input type="checkbox"/> Response <input type="checkbox"/> Recovery/Restoration
<b>Targeted Stakeholder(s)</b>	<i>Please choose the targeted stakeholders of your solution. (You can choose more than one)</i>	<input type="checkbox"/> Emergency management organizations (firefighters; civil protection; Medical services; Police; Fire analysts...) <input type="checkbox"/> Scientific community (academia; Researchers; Fire safety engineers...) <input checked="" type="checkbox"/> Policy-making bodies (local / regional / national administrations; Politicians; EU commissioners...) <input type="checkbox"/> Land Management groups (landowner associations; land planners; farmers; foresters...) <input type="checkbox"/> Environmental associations (conservation organizations; environmental consultancies; environmental educators...) <input type="checkbox"/> Media (journalists; communicators in the environmental field; social media influencers...) <input checked="" type="checkbox"/> Society (volunteer associations; civil society organizations; vulnerable groups; tourists; public...)



		<input type="checkbox"/> Industry, technology, and innovation (energy; construction; infrastructure; banking; financial services; insurance; fire prevention and firefighting equipment suppliers...)
<b>Benefits</b> <i>(if relevant)</i>	<ul style="list-style-type: none"> <li>• Develop public self-protection to minimize responders exposures ;</li> <li>• Train/educate/inform general population starting from scratch and in a basic and easy way, about knowledge of risk and appropriate behaviours, specially targeting those more exposed and vulnerable. Address all phases of emergency and the different levels of risk. Provide tools to facilitate adequate decision-making: checklists, emergency kits</li> </ul>	
<b>Results</b> <i>(if relevant)</i>	Guidelines provided for the training, understanding and response in case of wildfires especially for rural settlements and other rural assets. Provided from Council of Europe / UNECE / OSCE member states to continuously expand capacities in rural fire management, especially designed for the general public. Wide acceptance from Eastern Europe, Western Balkans and Central Asia. In terms of traffic light system is characterized as "Green".	
<b>Website</b> <i>(if relevant)</i>	<a href="https://qfmc.online/Manaq/CBFiM_11.html">https://qfmc.online/Manaq/CBFiM_11.html</a>	
<b>Further references and resources</b> (publications, policy briefs, handbooks etc.) <i>(if relevant)</i>	N / A	



### E. Guidelines to increase the benefit of social media in emergencies

<b>CODE</b>	<b>xxx</b>	<b>Solution name</b>	Guidelines to increase the benefit of social media in emergencies	<b>Project</b>	<i>FIRE-IN</i>
		<b>Solution provider</b>	EmerGent project	<b>Case Study to be applied</b>	<i>N / A</i>
<b>Description</b>		The EmerGent project summarized its findings and conclusions in the form of guidelines and provides a list of recommendations for emergency services and citizens on how to make the most of social media. Emergent project consortium.			
<b>Type of product generated by the solution</b>		<i>Please, indicate here what type of product will the solution produce</i>	<input type="checkbox"/> Analysis of past wildfire events (e.g. behavior of smoke, lessons learned) <input type="checkbox"/> Technology/Materials/Services (e.g. modelling fire risk, VR helmets, real time fire assessment) <input type="checkbox"/> WFRM policy recommendations (e.g. moving from the paradigm of suppression to that of prevention...) <input type="checkbox"/> Land Management approaches (e.g. socio-economic approaches; environmental impacts...) <input type="checkbox"/> End-user involvement strategies (e.g. newsletter creation; inclusive working groups...) <input type="checkbox"/> Citizen involvement strategies (e.g. cognitive mobilization studies; innovative communication support...) <input checked="" type="checkbox"/> Standard Operating Procedures (SOPs) (e.g work procedure; how to improve safety...) <input type="checkbox"/> Firefighting training concepts (e.g. fire training videos ; advanced training for seasoned) <input type="checkbox"/> Other: (explain in few words)		
<b>Relevant Phase</b>		<i>Please choose the phase of fire that the specific product is applied. (You can choose more than one item)</i>		<input checked="" type="checkbox"/> Prevention/Early Warning <input checked="" type="checkbox"/> Response <input type="checkbox"/> Recovery/Restoration	



<b>Targeted Stakeholder(s)</b>	<p><i>Please choose the targeted stakeholders of your solution. (You can choose more than one)</i></p>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Emergency management organizations (firefighters; civil protection; Medical services; Police; Fire analysts...)</li> <li><input type="checkbox"/> Scientific community (academia; Researchers; Fire safety engineers...)</li> <li><input type="checkbox"/> Policy-making bodies (local / regional / national administrations; Politicians; EU commissioners...)</li> <li><input type="checkbox"/> Land Management groups (landowner associations; land planners; farmers; foresters...)</li> <li><input type="checkbox"/> Environmental associations (conservation organizations; environmental consultancies; environmental educators...)</li> <li><input type="checkbox"/> Media (journalists; communicators in the environmental field; social media influencers...)</li> <li><input checked="" type="checkbox"/> Society (volunteer associations; civil society organizations; vulnerable groups; tourists; public...)</li> <li><input type="checkbox"/> Industry, technology, and innovation (energy; construction; infrastructure; banking; financial services; insurance; fire prevention and firefighting equipment suppliers...)</li> </ul>
<b>Benefits</b> (if relevant)	<p>Address all phases of emergency and the different levels of risk. Provide tools to facilitate adequate decision-making: checklists, emergency kits ; Train/educate/inform general population starting from scratch and in a basic and easy way, about knowledge of risk and appropriate behaviors, specially targeting those more exposed and vulnerable ; Develop public self-protection to minimize responders exposures ;</p>	
<b>Results</b> (if relevant)	<p>The results of the EmerGent project. Guidelines already published and provided for emergency services and citizens. European countries participated in the consortium. The element of “internationality” is missing despite the fact that some of the partners may provide this element. Based on the fact that guidelines are issued and the existence of broader European organizations/associations in the consortium, in terms of traffic light system is characterized marginally “Green”.</p>	
<b>Website</b> (if relevant)	<p><a href="https://www.fp7-emergent.eu/guidelines/">https://www.fp7-emergent.eu/guidelines/</a></p>	



<b>Further references and resources</b> (publications, policy briefs, handbooks etc.) (if relevant)	Please write any relevant references to your solution (if relevant)
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## F. Firefighters Plus

<b>CODE</b>	<b>xxx</b>	<b>Solution name</b>	Firefighters Plus	<b>Project</b>	<i>FIRE-IN</i>
		<b>Solution provider</b>	<i>Firefighters Plus</i>	<b>Case Study to be applied</b>	<i>N / A</i>
<b>Description</b>	<p>Firefighters are ranked as one of the most trustworthy professions across all global regions (GFK Verein, 2015). Therefore, firefighters have the potential to do something more for their communities than firefighting. Being aware of this, some firefighters have already used, with very successful results, their trustworthy position to promote fire safety among the most vulnerable groups. As an example, the following video is provided: "The story of Zouhair", (<a href="https://www.en.firefightersplus.eu/#h.p_fKLHPivMIMmM">https://www.en.firefightersplus.eu/#h.p_fKLHPivMIMmM</a>). This proves that something is changing in the Fire and Rescue Services. Firefighters are becoming aware of their potential to do something more for their communities than firefighting. However, a lot more can be done if firefighters can access high quality training on how to use their position as role models to promote fire safety among the most vulnerable groups. In this context, the first online platform (<a href="http://www.firefightersplus.eu">www.firefightersplus.eu</a>) for firefighters on how to use their position as role models to promote fire safety among the most vulnerable groups has been developed. The platform includes the following sections: GET INSPIRED with videos of the actions to promote fire safety among the most vulnerable groups carried out during the project by firefighters from several EU countries. ONLINE COURSE on how firefighters can make the most of their position as Role Models to promote fire safety among the most vulnerable groups. TOOLS to plan, implement, evaluate and disseminate the results of actions to promote fire safety among the most vulnerable groups. The Firefighters Plus project is an initiative of Frederiksborg Fire &amp; Rescue Service (Denmark) in collaboration with Northumberland Fire &amp; Rescue Service (UK), Provincial Headquarters of State Fire Service in Poznan (Poland), Instituut Fysieke Veiligheid (The Netherlands), Alcala de Guadaira Fire &amp; Rescue Service (Spain), Centrul de Resurse pentru Diversitate Etnoculturală (Romania) and Stowarzyszenie WIOSNA (Poland). The Firefighters Plus project has been co-funded by the Erasmus+ Programme of the European Union.</p>				



<b>Type of product generated by the solution</b>	<i>Please, indicate here what type of product will the solution produce</i>	<input type="checkbox"/> Analysis of past wildfire events (e.g. behavior of smoke, lessons learned) <input checked="" type="checkbox"/> Technology/Materials/Services (e.g. modelling fire risk, VR helmets, real time fire assessment) <input type="checkbox"/> WFRM policy recommendations (e.g. moving from the paradigm of suppression to that of prevention...) <input type="checkbox"/> Land Management approaches (e.g. socio-economic approaches; environmental impacts...) <input type="checkbox"/> End-user involvement strategies (e.g. newsletter creation; inclusive working groups...) <input checked="" type="checkbox"/> Citizen involvement strategies (e.g. cognitive mobilization studies; innovative communication support...) <input type="checkbox"/> Standard Operating Procedures (SOPs) (e.g. work procedure; how to improve safety...) <input type="checkbox"/> Firefighting training concepts (e.g. fire training videos ; advanced training for seasoned) <input type="checkbox"/> Other: (explain in few words)
<b>Relevant Phase</b>	<i>Please choose the phase of fire that the specific product is applied. (You can choose more than one item)</i>	<input checked="" type="checkbox"/> Prevention/Early Warning <input type="checkbox"/> Response <input type="checkbox"/> Recovery/Restoration
<b>Targeted Stakeholder(s)</b>	<i>Please choose the targeted stakeholders of your solution. (You can choose more than one)</i>	<input checked="" type="checkbox"/> Emergency management organizations (firefighters; civil protection; Medical services; Police; Fire analysts...) <input type="checkbox"/> Scientific community (academia; Researchers; Fire safety engineers...) <input checked="" type="checkbox"/> Policy-making bodies (local / regional / national administrations; Politicians; EU commissioners...) <input type="checkbox"/> Land Management groups (landowner associations; land planners; farmers; foresters...) <input type="checkbox"/> Environmental associations (conservation organizations; environmental consultancies; environmental educators...) <input checked="" type="checkbox"/> Media (journalists; communicators in the environmental field; social media influencers...) <input checked="" type="checkbox"/> Society (volunteer associations; civil society organizations; vulnerable groups; tourists; public...)



		<input type="checkbox"/> Industry, technology, and innovation (energy; construction; infrastructure; banking; financial services; insurance; fire prevention and firefighting equipment suppliers...)
<b>Benefits</b> <i>(if relevant)</i>	<ul style="list-style-type: none"> <li>• Cultural changes in risk tolerance and resilience ;</li> <li>• Train/educate/inform general population starting from scratch and in a basic and easy way, about knowledge of risk and appropriate behaviors, specially targeting those more exposed and vulnerable. Address all phases of emergency and the different levels of risk. Provide tools to facilitate adequate decision-making: checklists, emergency kits;</li> <li>• Build trust involving communities and key stakeholders in risk management permanently: from risk awareness to the preparation of scenarios, to the decisions and behavior during the emergency, to verifications, to drills and exercises.</li> </ul>	
<b>Results</b> <i>(if relevant)</i>	An effective strategy not only for top training of fire fighters, but also for interaction with the society and the vulnerable communities.	
<b>Website</b> <i>(if relevant)</i>	<a href="https://www.firefightersplus.eu/">https://www.firefightersplus.eu/</a>	



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