European Program for Wildfire-Prepared Communities

FIREPRIME

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Proceedings and conclusions of Workshop II

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Abstract	This document presents the proceedings of the second FIREPRIME Workshop, which brought together researchers, civil protection authorities, practitioners, and policy stakeholders to review project outcomes and discuss pathways for sustainability and exploitation. The workshop combined technical presentations, pilot evaluations, round-table discussions, and co-creation sessions. The proceedings cover an overview of the 2025 wildfire season under the EU Civil Protection Mechanism, the FIREPRIME project framework, and its three core streams: homeowner fire safety, community engagement and education, and resilient infrastructures. Experiences from pilot implementations in Spain, Austria, and Sweden are presented, together with DG ECHO perspectives on population preparedness and vulnerable groups. The document concludes with reflections from multi-stakeholder discussions on app sustainability, critical infrastructure uptake, regional deployment in Catalonia, and European-level exploitation, providing key inputs to support the long-term impact of FIREPRIME.

(1) Draft / Final
(2) Public / Restricted / Internal

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1. Introduction

The 2st International Workshop of Project FIREPRIME, entitled "Co-creating FIREPRIME - the European Program for Wildfire-Prepared Communities", took place in Barcelona, Catalonia (Spain), on November 26th and 27th 2025. The event was organized by the UPC team in the Barcelona East School of Engineering (EEBE) at the UPC Diagonal-Besòs Campus (Figure 1).

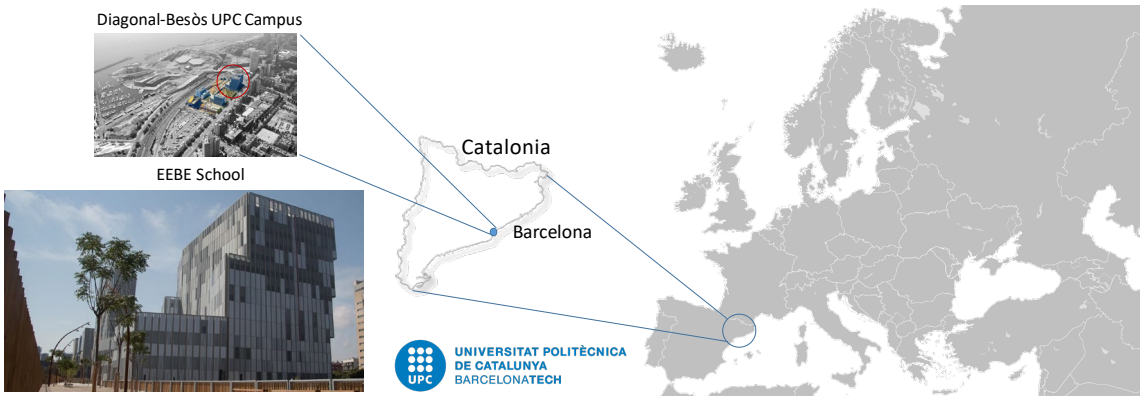


Figure 1. Venue of the 2nd FIREPRIME Workshop

The main objective of the workshop was to showcase the final FIREPRIME toolkit and to bring together key stakeholders to help shape the project's sustainability and exploitation plan. The insights gathered during the discussions will directly inform the final version of the plan, ensuring that it is grounded in real operational needs and stakeholder perspectives.

The event gathered risk management authorities from local, regional, national, and international agencies; practitioners from private companies; representatives of international NGOs and WUI communities; researchers; and master's and PhD students. This broad participation provided an excellent representation of both the present and the future of WUI fire risk management. Such diversity was essential to achieving a meaningful and impactful workshop. In total, 72 participants took part in the various workshop activities, representing different nationalities and a wide range of interests within wildfire risk management. Countries represented included Spain, Austria, Sweden, France, Greece, Portugal, and Italy (Figure 2 and Figure 3)

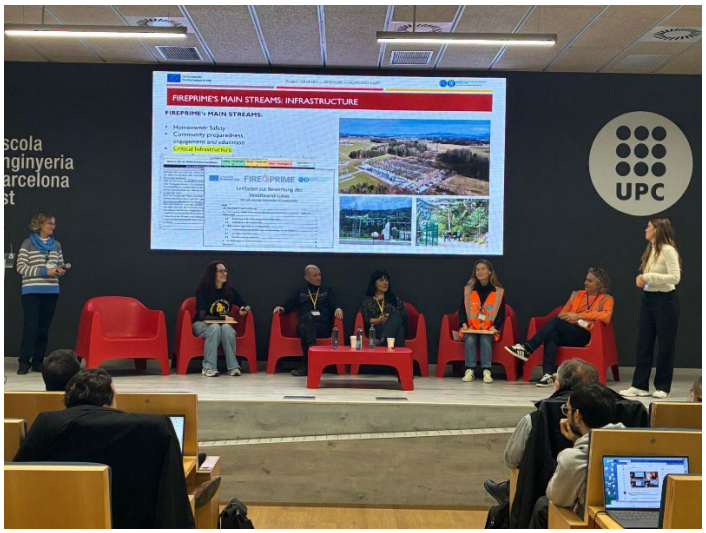


Figure 2. Session on experiences and evaluation at FIREPRIME pilot sites.

Figure 3. Reflection and wrap-up session on the 27th 2025.

The workshop was designed by the FIREPRIME consortium—particularly the UPC and PCF teams—and was organised and hosted by UPC. It was structured as a two-day event combining presentations and group dynamics.

The first day (Table 1) opened with a brief welcome and workshop overview delivered by the FIREPRIME coordinator, Elsa Pastor (UPC), followed by a review of the 2025 fire season presented by Héctor Alfaro from the Emergency Response Coordination Centre. This was followed by a short introduction to the FIREPRIME project (Elsa Pastor, UPC).

The afternoon continued with presentations of the products and services developed within FIREPRIME, organised according to the three main streams. We began with the Homeowner Fire Safety stream, where the FIREPRIME App was presented by Pascale Vacca and Marc Oriol (UPC). This was complemented by two tools developed for the Swedish pilot: the FIREPRIME Homeowner Wildfire Risk Assessment Flyer and the FIREPRIME Safe Burning Guideline (Johan Sjöström, RISE). After the coffee break, the workshop resumed with the Community Engagement and Education stream. Presentations included the Preparedness Days carried out in Sant Cugat (Israel Rodríguez, Maria Cifre and Alexandre Molina, UOC), the educational tools (Guillem Canaleta, PCF), and the Prevention and Responsibility Tool developed in Sweden (Johan Sjöström, RISE).

Following these presentations, a dedicated session allowed reflection on the implementation and evaluation of the pilot tests. Guillem Canaleta (PCF), Johan Sjöström (RISE), and Maria Papathoma-Köhle (BOKU) shared insights from the pilots in Spain, Sweden, and Austria, respectively. Importantly, residents from Sant Cugat—FIREPRIME's pioneering communities—also participated, offering valuable first-hand reflections on their experience.

The final session of Day 1 focused on the Resilient Infrastructure stream. Simona Dossi (UPC) and Maria Papathoma-Köhle (BOKU) presented the risk assessment methodologies developed for chemical industries and electrical substations, while Johan Sjöström shared RISE's ongoing efforts to support wildfire risk management within the Swedish railway company.

Table 1. Workshop program

AGENDA DAY 1 Wednesday 26 November 2025 (Auditorium)

ºTime	Agenda Item
14:00 – 14:30	**Registration**
14:30 – 15:15	**Introduction** - Welcome and review of the agenda (E. Pastor – UPC) - Review of the 2025 fire season. Stories of witnesses (H. Alfaro, Emergency Response Coordination Centre, ERCC-EU Civil Protection Mechanism) - FIREPRIME overview (E. Pastor – UPC)
15:15 – 16:00	**Homeowner safety stream** Presentation of the products (P. Vacca, M. Oriol – UPC, J. Sjöström - RISE)
16:00 – 16:30	*Coffee break (Hall Building A)*
16:30 – 17:15	**Community engagement and education stream** Presentation of the products (G. Canaleta – PCF, I. Rodríguez – UOC, J. Sjöström - RISE)
17:15 – 17:45	**Pilot tests: experiences and evaluation** (moderator: G. Canaleta) - Catalan pilot (FIREPRIME consortium, St Cugat municipality and residents) - Swedish pilot (FIREPRIME consortium) - Austrian pilot (FIREPRIME consortium)
17:45 – 18:15	**Resilient infrastructures stream** Products design and testing (S. Dossi – UPC, M. Papathoma-Köhle - BOKU)
18:15 – 18:30	**Closing remarks**

The second day (Table 2) began with a presentation from DG ECHO (Maria Martín de Almagro and Riccardo Grisanti) on population preparedness and vulnerable groups, followed by an introduction to the sustainability and exploitation challenges and opportunities of FIREPRIME, delivered by Guillem Canaleta (PCF), leader of WP7. This was followed by a round table discussion with key stakeholders to initiate a shared reflection on FIREPRIME's long-term sustainability. The panel included representatives from MITECO (Government of Spain), Civil Protection of Catalonia, DG ECHO, and European wildfire research experts.

After the coffee break, participants engaged in a co-creation session organised into four parallel breakout groups, each addressing a major aspect of sustainability and exploitation: the FIREPRIME App, the risk management methodologies for infrastructures, the exploitation opportunities in Catalonia, and the potential for broader European uptake.

The workshop concluded with a plenary session in which the results of all brainstorming activities were consolidated, discussed, and reflected upon, helping to outline the next steps for advancing the sustainability and exploitation of FIREPRIME.

Table 2. Workshop program

AGENDA DAY 2 Thursday 27 November 2025

Time	Agenda Item
9:00 – 9:30 *(Auditorium)*	DG-ECHO actions on population preparedness (M. Martin de Almagro and R. Grisanti - DGECHO)
9:30 – 9:50 *(Auditorium)*	FIREPRIME exploitation challenges and opportunities (G. Canaleta - PCF)
9:50-11:00 *(Auditorium)*	**Shaping FIREPRIME's future: sustainability and exploitation reflections – round table discussion (Moderator, G. Canaleta - PCF)** – M. Martin de Almagro – DGECHO – M. Mora - MITECO, Spain – N. Gasulla - Direcció General de Protecció Civil, Catalonia – G. Xanthopoulos - Institute of Mediterranean Forest Ecosystems, Greece
11:00 – 11:30	*Coffee break (Hall Building A)*
11:30 – 13:30	**Co-creation session (break-out groups)** Discussion on FIREPRIME sustainability and exploitation in 5 break-out groups (every participant will be assigned to two different groups): 1. App sustainability and business model *(room I.0.Poli)* 2. Critical infrastructure uptake and integration *(room I.1.12)* 3. Exploitation in Catalonia *(room I.0.3)* 4. Exploitation at EU level *(room I.3.X)*
13:30 – 14:45	*Lunch (Building I, floor S1)*
14:45 – 16:15 *(Room A.0.3)*	**Prioritization and action planning session** Results sharing by moderators. Structured discussion on exploitation strategy. Steps at short, medium and long term.
16:15 – 16:45 *(Room A.0.3)*	Reflection and wrap-up

2. Speakers

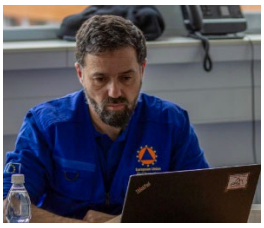
A short biographic note of each of the speakers is given here, in order of appearance.

Elsa Pastor

Elsa Pastor, PhD, is Full Professor at the Chemical Engineering Department of Universitat Politècnica de Catalunya - BarcelonaTech and research scientist at the Center for Technological Risk Studies at UPC. She develops teaching and research activities in diverse fields related to wildfire management and technological risk analysis. Over the last 25 years, she has studied several aspects of fire behaviour and dynamics by a multidisciplinary approach, combining both experimental and modeling techniques in a wide range of scenarios.

She has led several national and international projects dealing with wildland-urban interface fires, highlighting the European Project (DG-ECHO co-founded) *WUIVIEW,* aimed at designing, setting-up and operating a virtual workbench service for the analysis of fire risk in the surroundings of buildings at the wildland-urban interface; *WUICOM – BCN Fire resilient communities of Barcelona* aimed at developing and implementing a holistic approach to analyse risk at Barcelona metropolitan area due to WUI fires, accounting for infrastructural, societal and ecosystems vulnerabilities; and the European project (DG-ECHO co-founded) *WUITIPS - Wildland-Urban Interface Fire Touristic Infrastructure Protection Solutions*, aimed at advancing towards a harmonised understanding of the wildfire problem in touristic areas, providing knowledge on the impact of fire on buildings, installations, cultural heritage, infrastructures and the involved population.

Hector Alfaro



Héctor Alfaro Fernández is a Forestry Engineer and holds a Bachelor's in Forestry Engineering and Natural Resources (University of Castilla La-Mancha). His professional career began in 1999 in the field of wildfires, and he has specialized in this area ever since. He has primarily worked as Helitack Firefighting Team Leader in various regions of Spain, with much of his work based in the BRICA of Granada, Andalusia. He is currently a Seconded National Expert (SNE) at the Emergency Response Coordination Centre (ERCC) within DG ECHO (Directorate General for European Civil Protection and Humanitarian Aid Operations) based in Brussels, where he is the focal point for wildfires in Emergency Response Operations Unit.

Pascale Vacca

Pascale Vacca is a Fire Safety Engineer, assistant professor and postdoc at Universitat Politècnica de Catalunya. Her research includes the assessment of risks and vulnerabilities of buildings, properties and communities located at the Wildland-Urban Interface. She worked as technical coordinator of the UPC team of the European projects *WUIVIEW*, focusing on the development of a performance-based methodology for the analysis of WUI vulnerabilities with the use of CFD tools, and *WUITIPS*, focusing on the PBD analysis of vulnerabilities of WUI touristic infrastructures. She was also part of the research team of the *WUICOM-BCN* project, aimed at developing and implementing a holistic approach to analyze risk to WUI fires of the Barcelona metropolitan area that accounts for infrastructural, societal and ecosystems vulnerabilities.

Johan Sjöstrom

Johan (PhD physics, 2010) is a senior research scientist at RISE since 2011. His research is focused on wildfires, their ignition, behaviour and consequences to society. Other research areas include experimental techniques in heat transfer from flames, fires impact on timber structures and on thermal properties of materials at high temperatures.
New publications:
New grassfire danger warning model for Sweden,
https://rib.msb.se/filer/pdf/29530.pdf
Overview of wildfires in Sweden,
https://rib.msb.se/filer/pdf/29089.pdf
Garden structure is critical for building survival in Swedish wildfires, https://www.sciencedirect.com/science/article/pii/S0925753522002673

Marc Oriol

Marc Oriol, PhD in computing, is an associate professor at the Services and Information System Engineering (ESSI) department of Universitat Politècnica de Catalunya and researcher at the Group of Software and Service Engineering (GESSI) at the same university. He held PostDoc research positions at Universitá de Pisa (2015), Universitat Politècnica de Catalunya (2015 - 2021) and Universitat Oberta de Catalunya (2021 – 2022). He has participated in 7 EU FP7/H2020 projects and 1 EU FP7 Network. His research interests fit in the scope of Software Engineering and Information Systems. He has more than 50 peer-reviewed publications, including 7 JCR-Q1 journals and 5 GII-GRIN-SCIE (GGS) ranked A conferences.

Guillem Canaleta

Guillem Canaleta, BSc in Environmental Sciences (University of Girona, 2017). He spent one year in the forest management department of the Czech University of Life Sciences, where he participated in forest management cost-efficiency initiatives by using innovative tools such as terrestrial photogrammetry. During its MSc (Environmental Change, UdG 2018) he focused on the analysis of Ecosystem Services linked to land-use change. In 2018, he joined PCF and since then he has been focused on community engagement to raise risk awareness, rural development linked to landscape management and integrated fire management projects in different European bioregions.

Irra Rodríguez-Giralt

Irra Rodríguez-Giralt is a Senior Researcher at the Internet Interdisciplinary Institute (IN3) at the Open University of Catalonia (UOC), where he co-directs the CareNet Research Group. His work revolves around the forms of activism, social experimentation and political mobilisation of citizens and concerned groups in environmental crisis, disasters and public technoscientific controversies. His current research examines alternative conceptualisations of disasters and pandemics from an ethics of care. Within these fields, he has led the Spanish partner of the project CUIDAR (H2020, DRS-2014, 653753), and two R+D projects from the Spanish National Plan: CONDEPCIU (Plan Nacional, 2009-2011) & EXPDEM (Plan Nacional, 2012-2014). As researcher, he has also participated in many other competitive R&D projects at the national and international level (i.e., FIRPRIME, RESIST, WUICOM; EduFire; Pyrolife CANDID, BCONNECT@Home JPI). Among his publications are: Children and Young People's Participation in Disaster Risk Reduction (Policy Press, 2020), Reassembling Activism, Activating Assemblages (Routledge, 2019) and Disasters and Politics: Materials, Expertiments and Preparedness (Wiley/Blackwell, 2014).

Maria Cifre-Sabater

Maria Cifre-Sabater holds a PhD in Environmental Anthropology from the University of Kent (2020). She is currently a senior researcher in the CareNet research group of the Internet Interdisciplinary Institute (IN3) of the Open University of Catalonia.

Her main research interests revolve around the social, historical and environmental domains of fire and other climate change-related disasters in Mediterranean contexts, the social impacts of natural protected areas, and the transformations of cultural landscapes. She currently works on European projects contributing to the adaptation of regions to climate change, promoting prevention, preparation and response strategies that are inclusive, diverse and collaborative to extreme weather events such as wildfires, heat waves, and floods.

Alexandre Molina

Alexandre Molina Sourdat studied Geography and Sociology at Pontificia Universidad Católica de Chile in Santiago. He has served as a research assistant on several projects, fostering his interests in rural studies, education, critical geography, and interdisciplinary approaches. In 2023, he joined the MSCA-ITN Pyrolife as an Early Stage Researcher (ESR) at Universitat Oberta de Catalunya (UOC), were he is delving into community engagement methodologies.

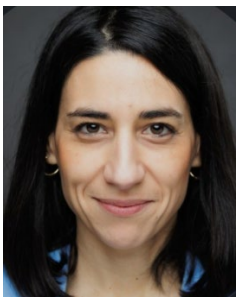
Simona Dossi

Simona Dossi is a post-doctoral researcher at the Universitat Politècnica de Catalunya, working on wildfire exposure and risk characterization to industrial installations and critical infrastructure. Simona holds a MEng in Chemical Engineering from the University of Edinburgh, and a PhD from Imperial College London. Her PhD research focused on residential building wildfire safety and vulnerability; the research involved statistical analysis of building damage data, and CFD simulations of wildfire firebrand exposure.

Maria Papathoma-Köle

Dr. Maria Papathoma-Köhle is a senior post-doctoral researcher at the Institute of Mountain Risk Engineering at BOKU University, Vienna, Austria. She is a geologist (University of Athens, Greece) with an MSc in Environmental Management (University of Durham, UK) and a PhD in Disaster Management (Coventry University, UK). For the last 25 years, she has been working on vulnerability issues related to various natural hazards including tsunamis, torrential hazards, and wildfires. She has been involved in several European and National (Austria) research projects and has numerous publications and conference participations on risk, vulnerability, and risk management topics.

Maria Martin de Almagro



Maria Martin de Almagro is Science Officer for DG ECHO B3 – Prevention and Preparedness Capacity Building, where she coordinates operational uptake of research and innovation on disaster prevention and preparedness. Her career spans both academic research, including positions at universities in the UK, Belgium and Canada, and policymaking in crisis management and peace and security in fragile contexts. She is Research Professor at Ghent University, currently detached to DG ECHO.

Riccardo Grisanti

Policy Officer at DG ECHO (European Civil Protection and Humanitarian Aid Operations) at the unit B.2 Civil Protection Policy. Currently working on Disaster Risk Management, in the team Disaster Risk and Resilience, focussing on Disaster Risk Management Reporting from UCPM countries and Risk Assessments. Operated in specific areas such as health-related risks, disaster loss data, wildfire prevention, risk awareness, critical infrastructure and marine pollution.

Núria Gasulla

Núria Gasulla is a Physicist. She has a long public career in the administration of the Generalitat de Catalunya (Catalan regional Government) in the field of civil protection and prevention. She is currently Responsible for Research in Risk Prevention and as such coordinator of participation in European projects and in the Directorate General of Civil Protection. For seventeen years she has held the position of Deputy Director of Civil Protection and Prevention Programs. She is also currently a professor of the Risk Analysis course in the Degree in Security (UB-ISPC). She has also been a speaker at conferences on risks, emergency planning and management, security and civil protection, and also a teacher at courses on the subject in many institutions.

Gavriil Xanthopoulos

Dr. Gavriil Xanthopoulos is a forester specialized in forest fire science. He holds a B.Sc. degree in Forestry from the Aristotelian University of Thessaloniki, Greece, and M.Sc. and Ph.D. degrees in Forestry with specialization in Forest Fire Science from the University of Montana, U.S.A. He has been active in European forest fire research for 35 years. He recently retired as Research Director at the Institute of Mediterranean Forest Ecosystems of the Hellenic Agricultural Organization "Dimitra". Throughout his career he focused on horizontal integration of scientific knowledge in the field of forest fires and transfer to the operational world.

Montserrat Mora

Career civil servant as a Technical Forestry Engineer since 2025, currently assigned to the Forest Fire Defense Area within the General Subdirectorate of Forest Policy and Desertification. She has previously worked in several environmental consultancy firms, where she led projects in forest planning and management services, monitoring and evaluation of policies and rural development programs, and provided support for environmental education initiatives.

3. Presentations

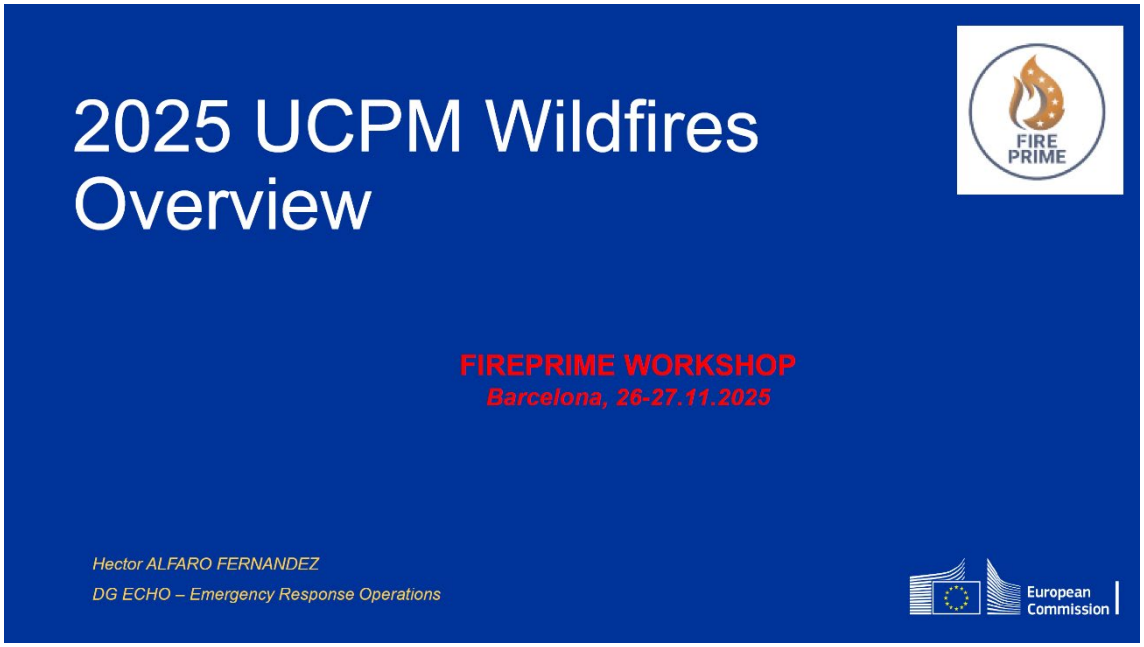
An abstract of each of the presentations, as well as the printout of the slides shown during the workshop are reproduced here.

3.1. 2025 UCPM wildfires overview

3.1.1. Abstract

The presentation delivered by H. Alfaro Fernández (DG ECHO – Emergency Response Coordination Centre) provided an overview of the record-breaking 2025 wildfire season in Europe and the role of the EU Civil Protection Mechanism (UCPM) in coordinating response actions. It highlighted the three-layer operational system (national capacities, the European Civil Protection Pool, and rescEU assets) and presented current ground and aerial firefighting capacities available for EU-wide deployment. Based on operational data, 2025 marked the highest cumulative burnt area on record, with fast-spreading fires and an extended season beyond traditional summer months. There were 19 wildfire-related activations of the UCPM, including 17 inside Europe, requiring multi-country assistance and repeated support to the Balkans and Eastern Mediterranean. Pre-positioning of firefighting teams proved highly valuable to enable rapid response. The presentation also underlined the growing importance of wildfire behaviour analysis in operational decision-making, with a specialized analyst integrated into the ERCC Wildfire Support Team. Key lessons emphasized the need to strengthen preparedness and host-nation support, refine interoperability tools, and ensure accurate and timely requests for assistance. Overall, the intense season confirmed the strategic importance of rescEU assets and the necessity of continued coordination across Member States to face increasingly severe wildfire emergencies

3.1.2. Presentation printout

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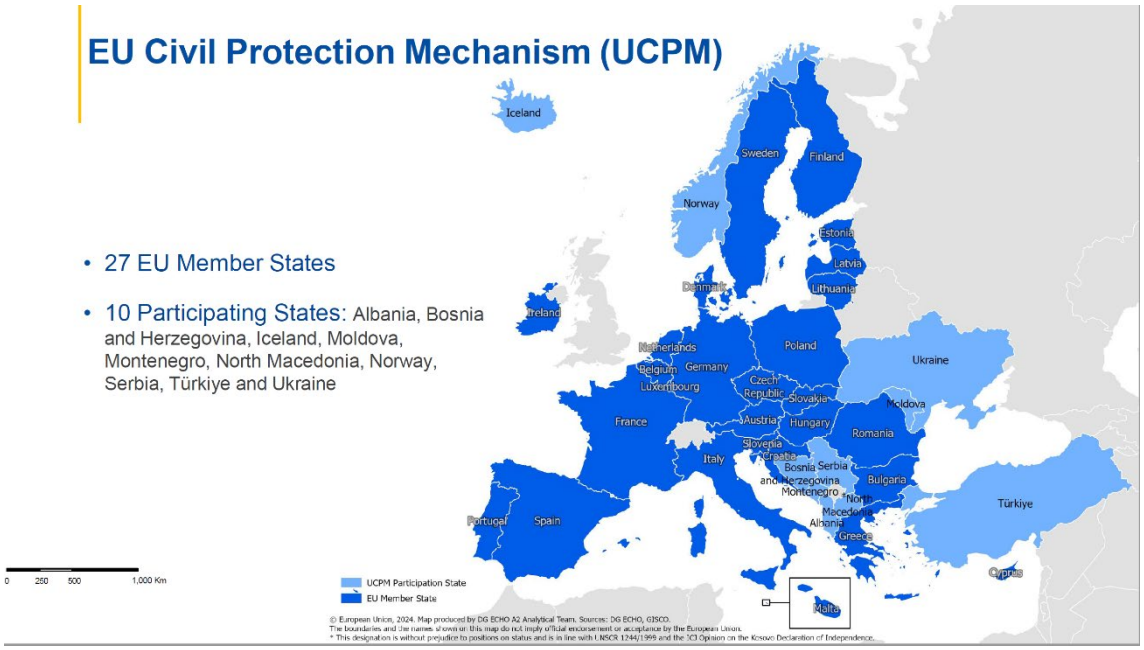
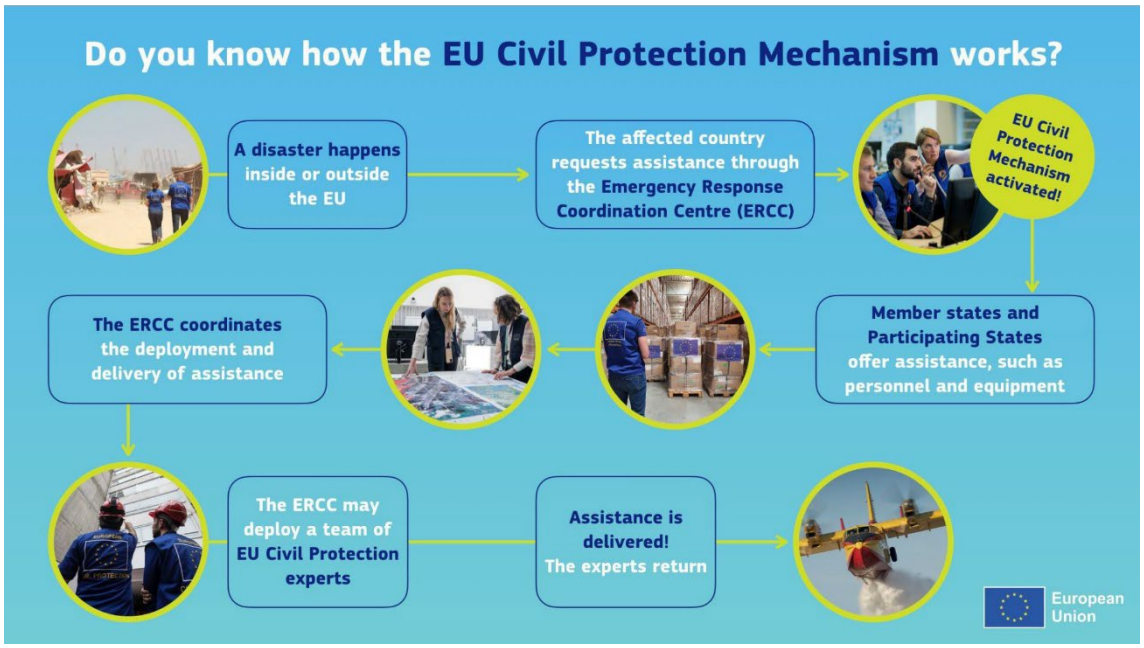
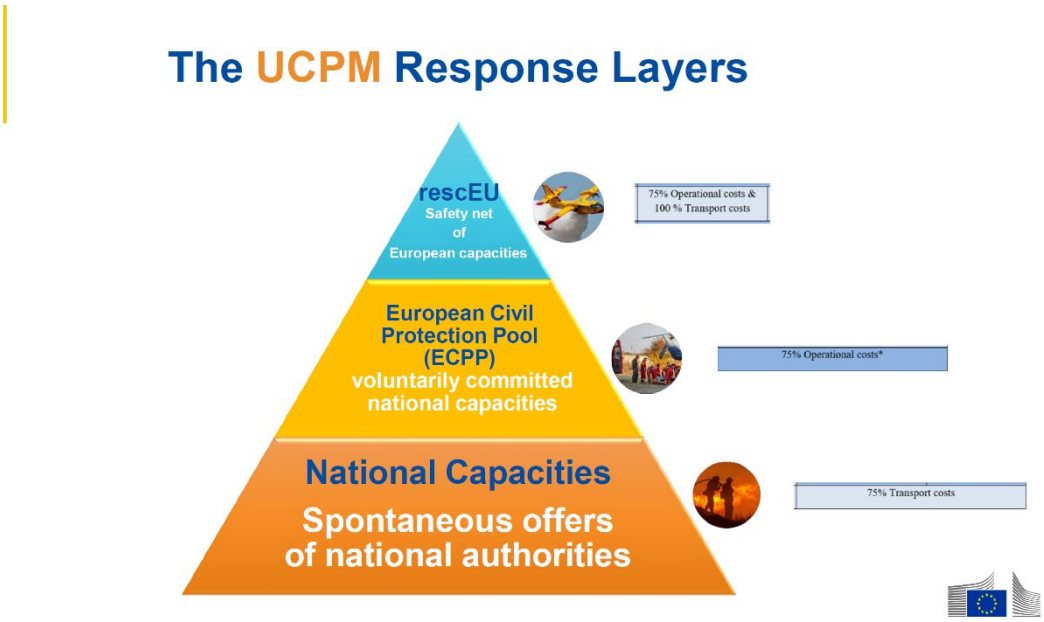
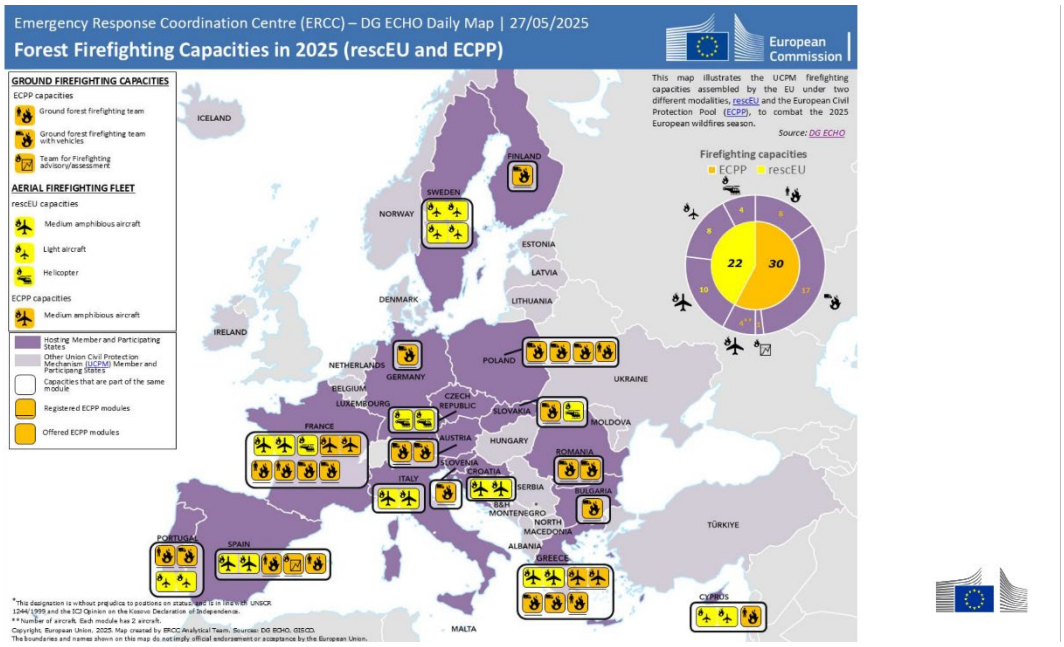
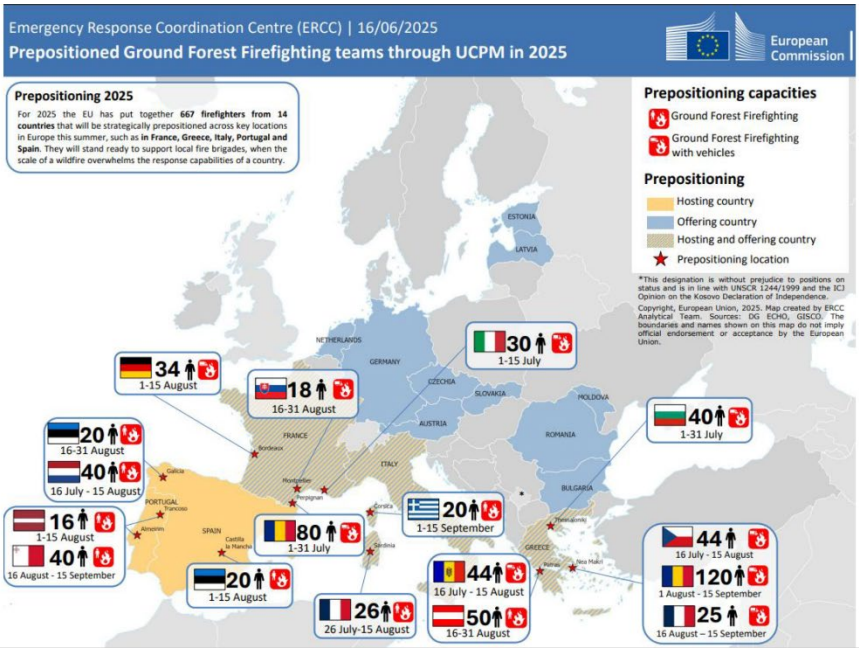

EU Civil Protection Mechanism (UCPM)
• 27 EU Member States
• 10 Participating States: Albania, Bosnia and Herzegovina, Iceland, Moldova, Montenegro, North Macedonia, Norway, Serbia, Türkiye and Ukraine
Iceland
Sweden
Finland
Norway
Estonia
Latvia
Lithuania
Denmark
Ireland
Netherlands
Belgium
Germany
Luxembourg
Poland
Czech Republic
Slovakia
Ukraine
Moldova
France
Austria
Hungary
Romania
Slovenia
Croatia
Italy
Bosnia and Herzegovina
Serbia
Montenegro
Bulgaria
North Macedonia
Albania
Greece
Türkiye
Portugal
Spain
Cyprus
Malta
0 250 500 1,000 Km
UCPM Participation State
EU Member State


Do you know how the EU Civil Protection Mechanism works?
A disaster happens inside or outside the EU
The affected country requests assistance through the Emergency Response Coordination Centre (ERCC)
EU Civil Protection Mechanism activated!
Member states and Participating States offer assistance, such as personnel and equipment
The ERCC coordinates the deployment and delivery of assistance
The ERCC may deploy a team of EU Civil Protection experts
Assistance is delivered! The experts return
European Union


The UCPM Response Layers
rescEU
Safety net of European capacities
75% Operational costs & 100 % Transport costs
European Civil Protection Pool (ECPP)
voluntarily committed national capacities
75% Operational costs*
National Capacities
Spontaneous offers of national authorities
75% Transport costs

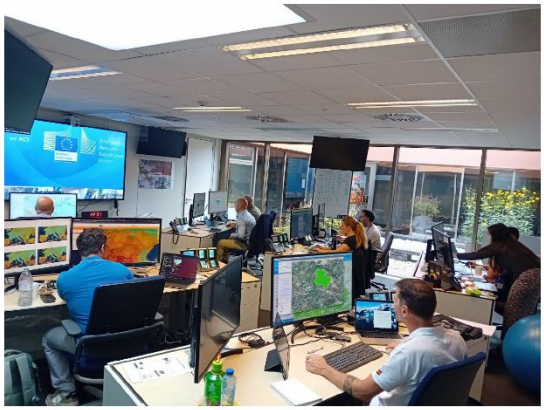

Emergency Response Coordination Centre (ERCC) – DG ECHO Daily Map | 27/05/2025
Forest Firefighting Capacities in 2025 (rescEU and ECPP)
European Commission
GROUND FIREFIGHTING CAPACITIES
ECPP capacities
Ground forest firefighting team
Ground forest firefighting team with vehicles
Team for Firefighting advisory/assessment
AERIAL FIREFIGHTING FLEET
rescEU capacities
Medium amphibious aircraft
Light aircraft
Helicopter
ECPP capacities
Medium amphibious aircraft
Hosting Member and Participating States
Other Union Civil Protection Mechanism (UCPM) Member and Participating States
Capacities that are part of the same module
Registered ECPP modules
Offered ECPP modules
This map illustrates the UCPM firefighting capacities assembled by the EU under two different modalities, rescEU and the European Civil Protection Pool (ECPP), to combat the 2025 European wildfires season.
Source: DG ECHO
Firefighting capacities
ECPP
rescEU
22
30
ICELAND
FINLAND
SWEDEN
NORWAY
ESTONIA
LATVIA
LITHUANIA
DENMARK
IRELAND
NETHERLANDS
GERMANY
POLAND
UKRAINE
BELGIUM
LUXEMBOURG
CZECH REPUBLIC
SLOVAKIA
MOLDOVA
FRANCE
AUSTRIA
HUNGARY
ROMANIA
SLOVENIA
CROATIA
ITALY
SERBIA
BULGARIA
B&H
MONTENEGRO
NORTH MACEDONIA
ALBANIA
GREECE
TÜRKIYE
PORTUGAL
SPAIN
CYPRUS
MALTA


Emergency Response Coordination Centre (ERCC) | 16/06/2025
Prepositioned Ground Forest Firefighting teams through UCPM in 2025
European Commission
Prepositioning 2025
For 2025 the EU has put together 667 firefighters from 14 countries that will be strategically prepositioned across key locations in Europe this summer, such as in France, Greece, Italy, Portugal and Spain. They will stand ready to support local fire brigades, when the scale of a wildfire overwhelms the response capabilities of a country.
Prepositioning capacities
Ground Forest Firefighting
Ground Forest Firefighting with vehicles
Prepositioning
Hosting country
Offering country
Hosting and offering country
Prepositioning location
34 1-15 August
18 16-31 August
30 1-15 July
20 16-31 August
40 16 July - 15 August
40 1-31 July
16 1-15 August
40 16 August - 15 September
80 1-31 July
20 1-15 September
20 1-15 August
26 26 July-15 August
44 16 July - 15 August
50 16-31 August
44 16 July - 15 August
120 1 August - 15 September
25 16 August – 15 September

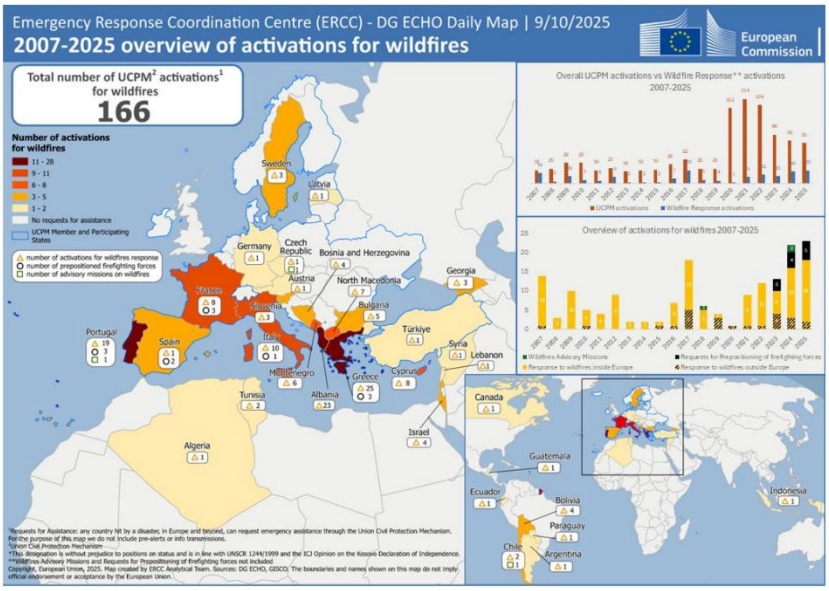
ERCC Wildfire Support Team (WFST)

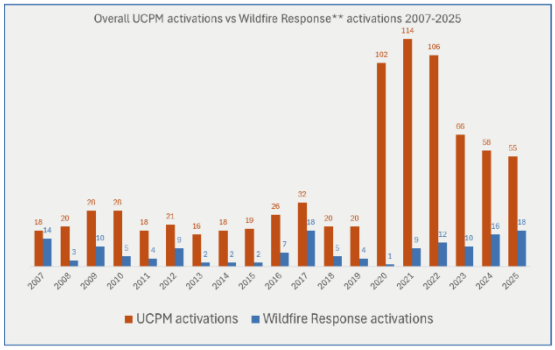
- The **ERCC WFST for 2025 season:**
  - 16 Civil protection experts from UCPM MS/PS
  - 6 Scientific experts from ARISTOTLE partnership
  - 3 fire analysts
  - ERCC staff

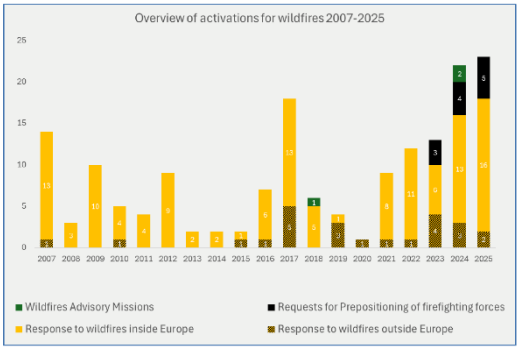
- Important role in the team: **Wildfire behaviour analyst (new!)**



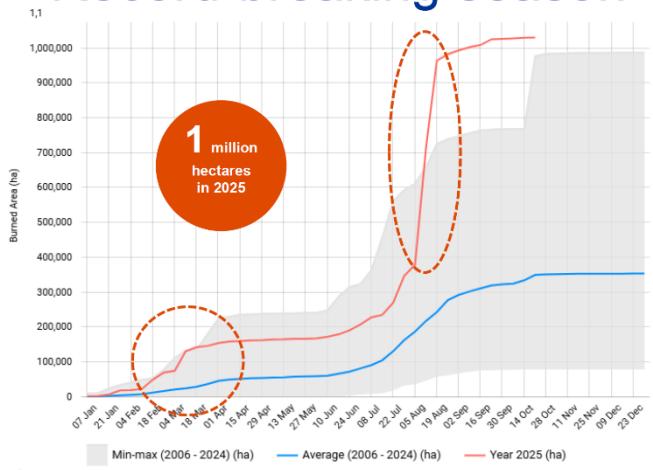
Facts and figures


Emergency Response Coordination Centre (ERCC) - DG ECHO Daily Map | 9/10/2025
2007-2025 overview of activations for wildfires
European Commission
Total number of UCPM[2] activations[1] for wildfires
166
Number of activations for wildfires
11 - 28
9 - 11
6 - 8
3 - 5
1 - 2
No requests for assistance
UCPM Member and Participating States
number of activations for wildfires response
number of prepositioned firefighting forces
number of advisory missions on wildfires
Sweden
Latvia
Germany
Czech Republic
Bosnia and Herzegovina
Austria
North Macedonia
Georgia
France
Slovenia
Bulgaria
Portugal
Spain
Italy
Türkiye
Syria
Lebanon
Montenegro
Greece
Cyprus
Tunisia
Albania
Israel
Algeria
Canada
Guatemala
Ecuador
Bolivia
Paraguay
Chile
Argentina
Indonesia
Overall UCPM activations vs Wildfire Response** activations 2007-2025
Overview of activations for wildfires 2007-2025


Overall UCPM activations vs Wildfire Response** activations 2007-2025
UCPM activations
Wildfire Response activations


Overview of activations for wildfires 2007-2025
Wildfires Advisory Missions
Requests for Prepositioning of firefighting forces
Response to wildfires inside Europe
Response to wildfires outside Europe

Record-breaking season

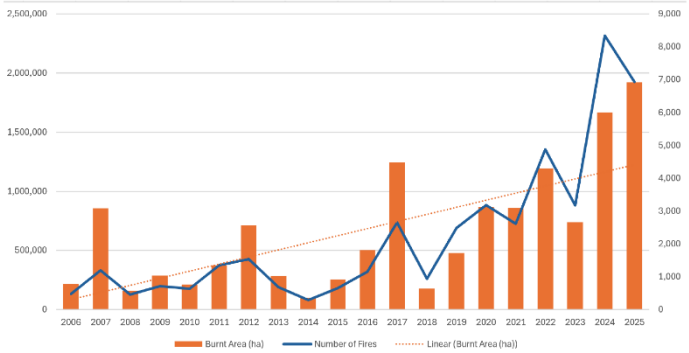


Key messages:

- Cumulative **burnt area is record-breaking**
- **Extreme gradient** (approx. 500.000 ha in 2 weeks)
- Wildfires are no longer confined to the summer months but can **extend both earlier and later**.

Weekly Cumulative Burnt Areas in the **European Union**

Burnt areas and number of fires in UCPM countries



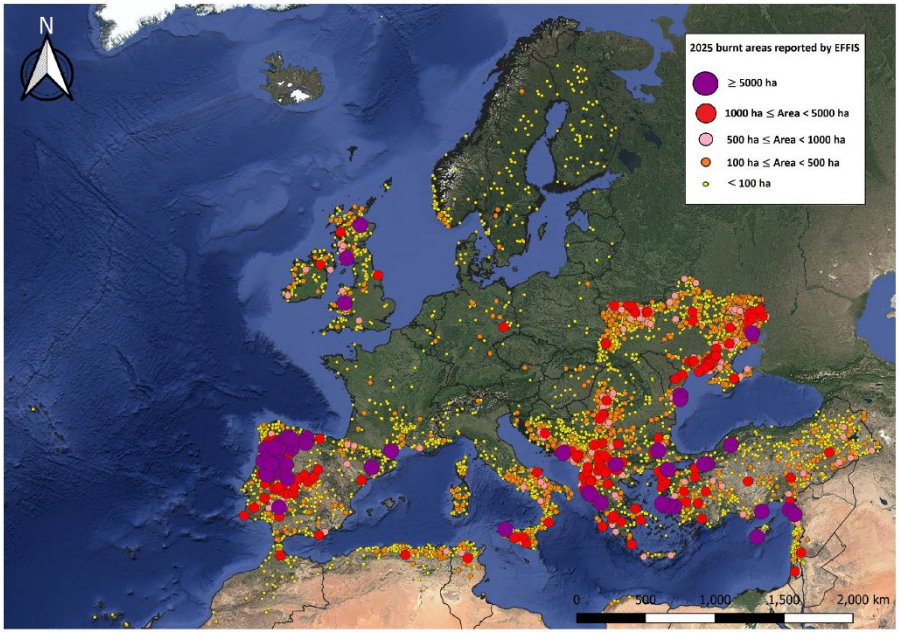
Increase in 2025, burnt area (larger than 30 ha)

- **15,1% more than 2024**
- **2,9 times more than average 2006-2024**

Increase in 2025, number of fires (larger than 30 ha):

- **17% less than 2024**
- **3,3 times more than average 2006-2024**

Source: EFFIS



UCPM response activations

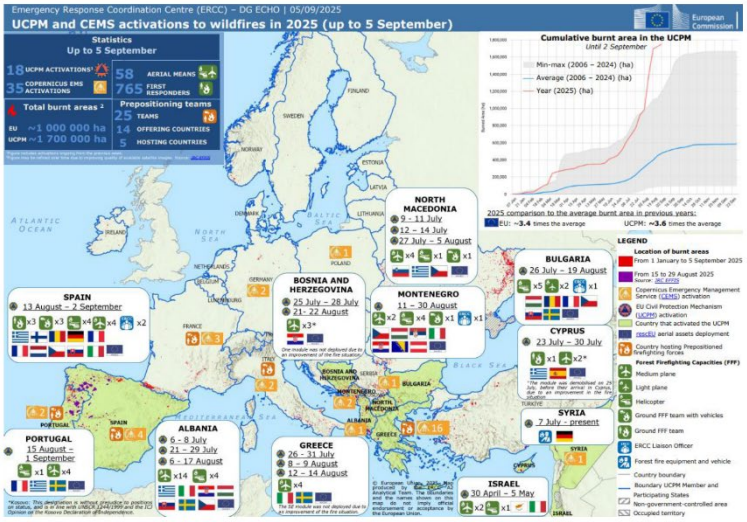
19 response activations
- 17 in Europe
- 2 in Israel and Syria

11 countries activated UCPM

14 Member States and 4 Participating States responded by deploying response teams

© GASC Securité Civile, 2024.

UCPM response 2025



19

Requests for assistance

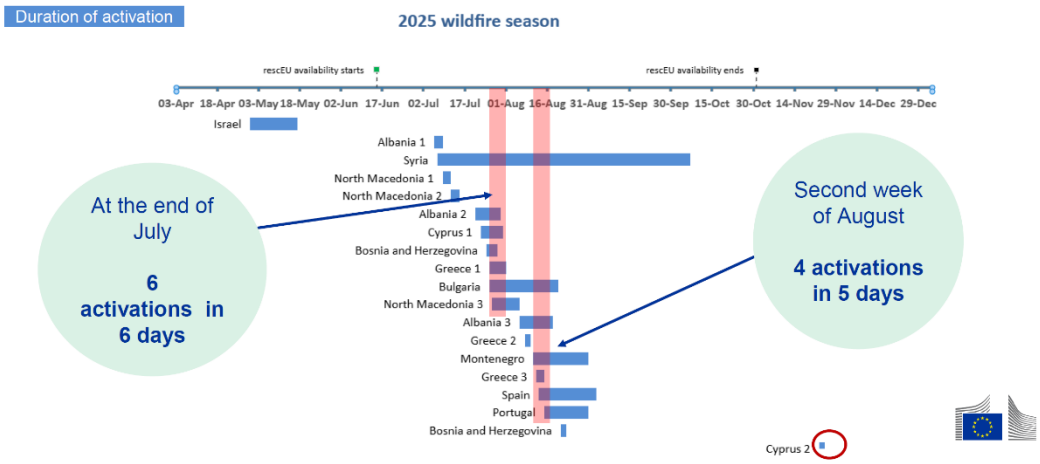
17

Requests for assistance from MS/PS

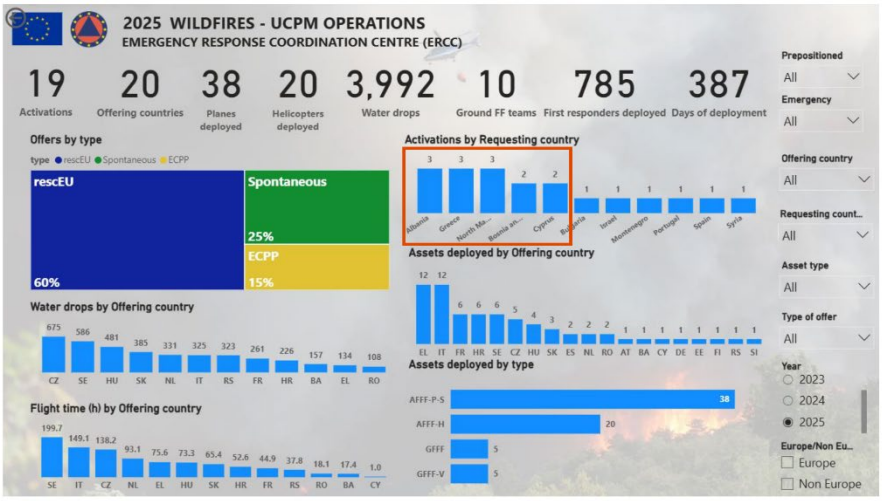
RECORD !

UCPM response

Timeline of UCPM activations in 2025

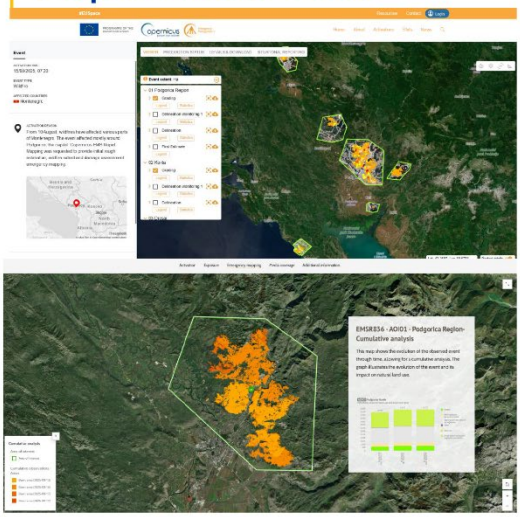


UCPM response



Albania, Greece, North Macedonia Cyprus and Bosnia and Herzegovina requested assistance more than one time

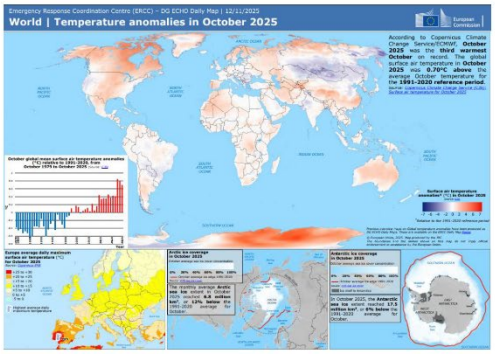
Copernicus EMS

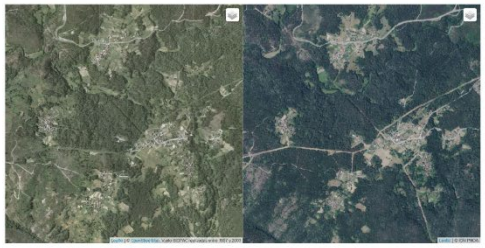


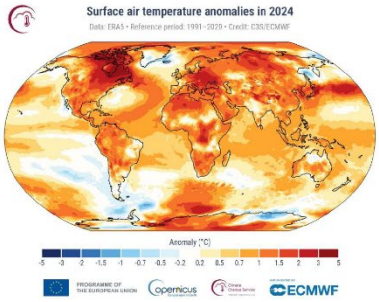
- 36 Activations
  - ✓ 33 Rapid mapping
  - ✓ 3 Risk and recovery
  - ✓ Over 200 products delivered
- Observations:
  - ✓ Rapid Mapping useful for larger, long-term fires to monitor fire fronts
  - ✓ Timeliness for short-term fires? Maps delivered after fire expansion
  - ✓ Risk and recovery vs Rapid Mapping

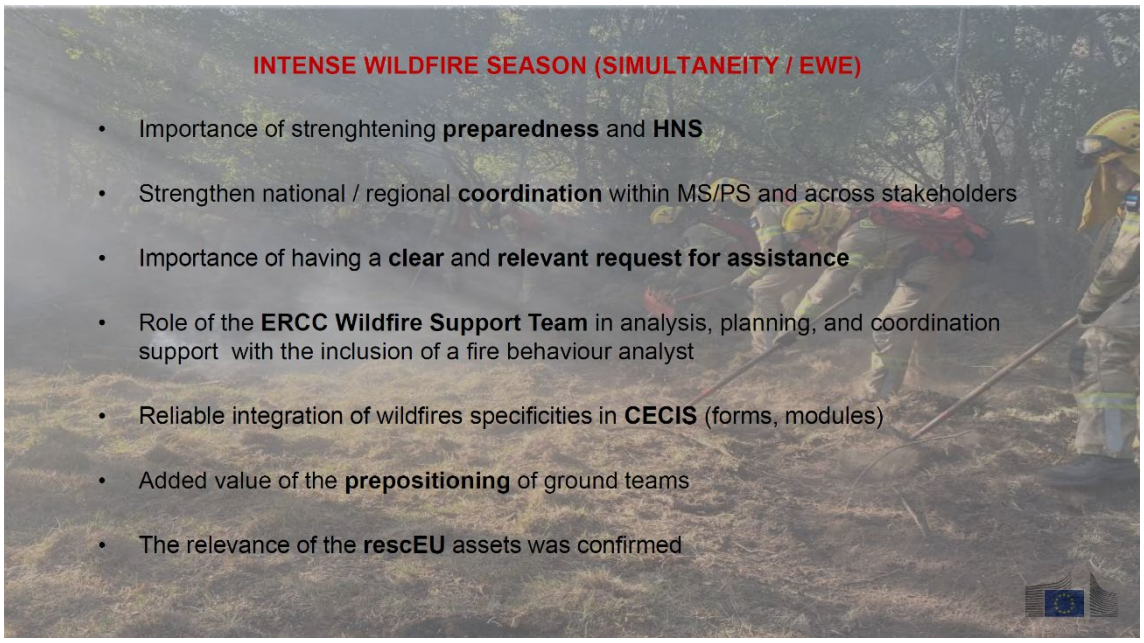
Observations from the ERCC perspective

Climate Change / Scenario (landscape)








INTENSE WILDFIRE SEASON (SIMULTANEITY / EWE)
• Importance of strenghtening **preparedness** and **HNS**
• Strengthen national / regional **coordination** within MS/PS and across stakeholders
• Importance of having a **clear** and **relevant request for assistance**
• Role of the **ERCC Wildfire Support Team** in analysis, planning, and coordination support with the inclusion of a fire behaviour analyst
• Reliable integration of wildfires specificities in **CECIS** (forms, modules)
• Added value of the **prepositioning** of ground teams
• The relevance of the **rescEU** assets was confirmed


Thank you
Check out and share:
2025 Wildfires Season story map

3.2. FIREPRIME project overview

3.2.1. Abstract

Wildfires are becoming an increasingly serious issue in Europe, with recent unprecedented events causing extensive damage to Wildland–Urban Interface settlements. These fires pose complex civil protection challenges and have revealed significant gaps in awareness and preparedness among communities with very different levels of experience, risk perception, and exposure to wildfires across Europe. Inspired by collaborative frameworks such as Firewise and FireSmart, FIREPRIME aims to establish the foundations of a European programme to strengthen fire resilience among WUI communities. To this end, FIREPRIME brings together a multidisciplinary consortium from Southern, Central, and Northern Europe—Universitat Politècnica de Catalunya (UPC), Pau Costa Foundation (PCF), Universitat Oberta de Catalunya (UOC), Research Institutes of Sweden (RISE), and the University of Natural Resources and Life Sciences Vienna (BOKU)—reflecting diverse wildfire contexts and governance traditions. The project has developed an integrated set of tools and services focused on civil protection, including a smartphone application, practical guidelines, and educational materials. These were tested in three contrasting pilot regions—Catalonia (Spain), Tyrol (Austria), and Gothenburg (Sweden)—across three complementary streams: homeowner fire safety, community engagement and education, and resilient infrastructures. This approach supports the transferability and scaling of FIREPRIME solutions to other fire-prone regions in Europe.

3.2.2. Presentation printout

FIREPRIME
European Programme for Wildfire-Prepared Communities

Co-funded by the European Union

FIREPRIME Main Aim

- Climate change is intensifying **WUI fires across Europe**, often overwhelming fire-fighting capacities and posing **major civil protection challenges**.
- Despite EU research efforts to boost wildfire resilience, implementation and impact remain limited.
- A **coordinated approach to wildfire resilience** in European WUI communities is needed, building on past R&D projects.

Colera (Spain, 2023) Source: Colera municipality

Pont de Vilomara (Spain, 2022) Source: Sergi Buixadé

FIREPRIME is developing the knowledge, tools and services needed to build and implement an integral program on risk prevention and preparedness across Europe, with the main focus on **civil protection**.

FireSmart Canada

FIREWISE USA® RESIDENTS REDUCING WILDFIRE RISKS

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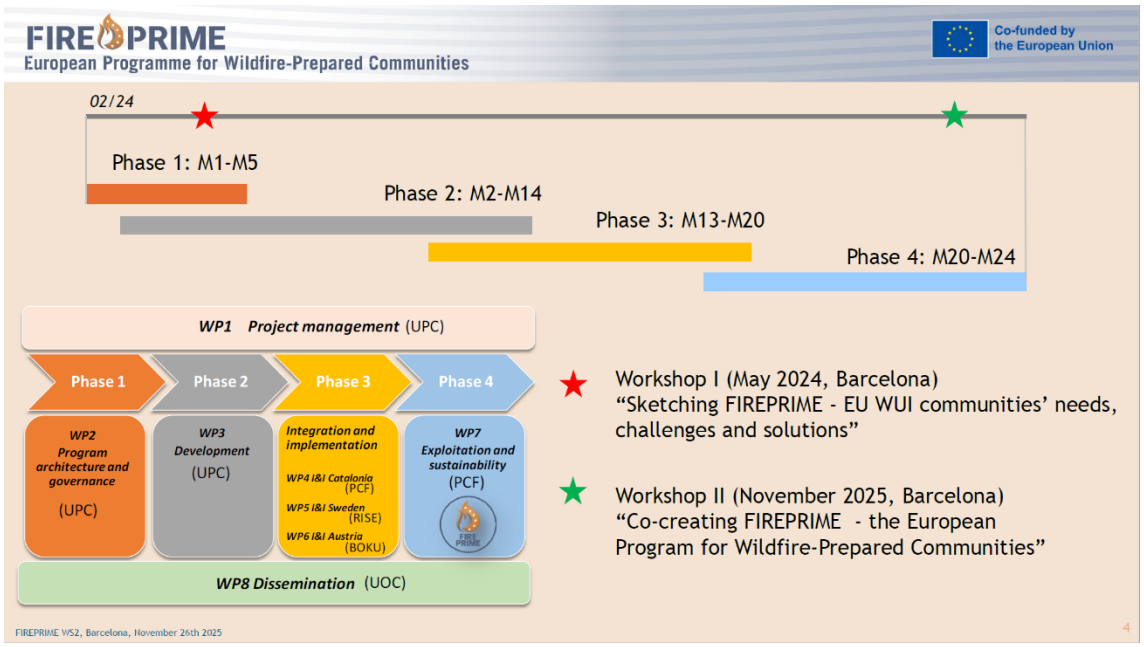
European Program for Wildfire-Prepared Communities

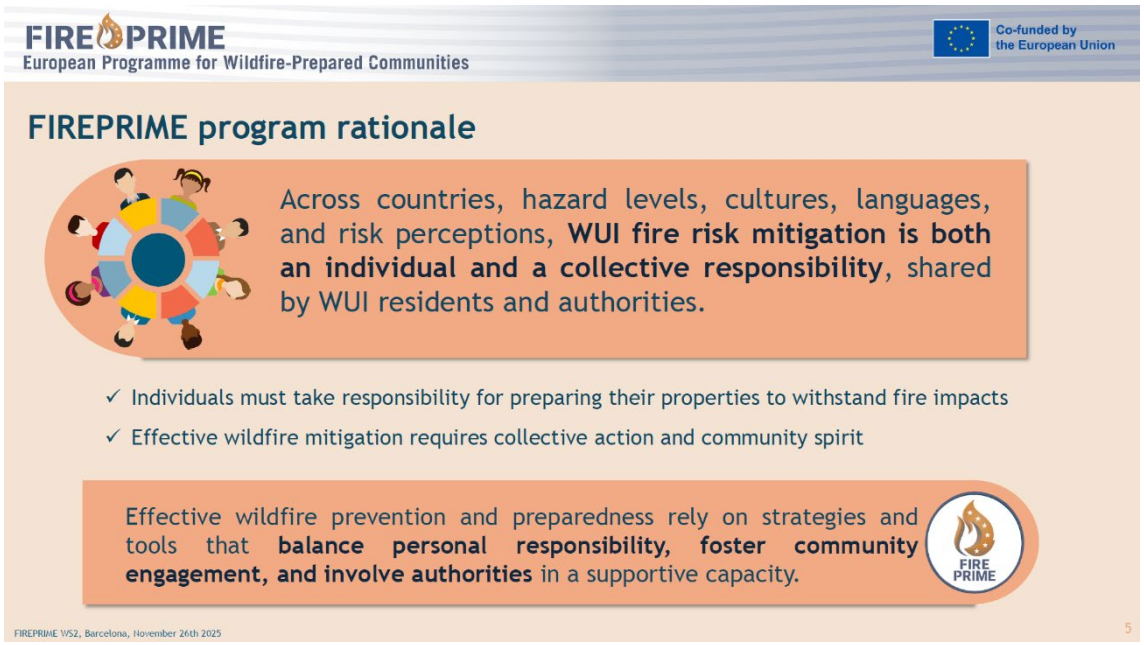
- Call: UCPM-2023-KAPP-PV "Knowledge for action in prevention" Priority 4, Wildfire Prevention
- Duration: 2 years (01/02/2024 - 31/01/2026)

Consortium

- **Universitat Politècnica de Catalunya (UPC, Coord)** - Spain
- **Pau Costa Foundation (PCF)** - Spain
- **Universitat Oberta de Catalunya (UOC)** - Spain
- **Research Institutes of Sweden (RISE)** - Sweden
- **University of Natural Resources and Life Sciences of Vienna (BOKU)** - Austria

WUIVIEW · WUICOM BCN · WUITIPS · EduFire Toolkit · PyroLife · PHLoX · RECIPE · WUI-LandMan · RESIST · AFAN


FIREPRIME
European Programme for Wildfire-Prepared Communities
Co-funded by the European Union
02/24
Phase 1: M1-M5
Phase 2: M2-M14
Phase 3: M13-M20
Phase 4: M20-M24
WP1 Project management (UPC)
Phase 1
Phase 2
Phase 3
Phase 4
WP2 Program architecture and governance (UPC)
WP3 Development (UPC)
Integration and implementation
WP4 I&I Catalonia (PCF)
WP5 I&I Sweden (RISE)
WP6 I&I Austria (BOKU)
WP7 Exploitation and sustainability (PCF)
WP8 Dissemination (UOC)
Workshop I (May 2024, Barcelona)
"Sketching FIREPRIME - EU WUI communities' needs, challenges and solutions"
Workshop II (November 2025, Barcelona)
"Co-creating FIREPRIME - the European Program for Wildfire-Prepared Communities"
FIREPRIME WS2, Barcelona, November 26th 2025
4


FIREPRIME
European Programme for Wildfire-Prepared Communities
Co-funded by the European Union
FIREPRIME program rationale
Across countries, hazard levels, cultures, languages, and risk perceptions, WUI fire risk mitigation is both an individual and a collective responsibility, shared by WUI residents and authorities.
✓ Individuals must take responsibility for preparing their properties to withstand fire impacts
✓ Effective wildfire mitigation requires collective action and community spirit
Effective wildfire prevention and preparedness rely on strategies and tools that balance personal responsibility, foster community engagement, and involve authorities in a supportive capacity.
FIRE PRIME
FIREPRIME WS2, Barcelona, November 26th 2025
5

FIREPRIME
European Programme for Wildfire-Prepared Communities

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FIREPRIME program development

The **FIREPRIME** program is divided in **three main streams**:

1) **homeowner safety** - to increase self-protection capabilities
2) **community engagement and education** - to increase risk awareness
3) **resilient infrastructures** - to anticipate and manage wildfire threats

To foster capacity-building and knowledge sharing among stakeholders

- **FIREPRIME** tools are being piloted in three different European regions, representing unique fire regimes, ecosystems, and population profiles.

FIREPRIME WS2, Barcelona, November 26th 2025 6

FIREPRIME
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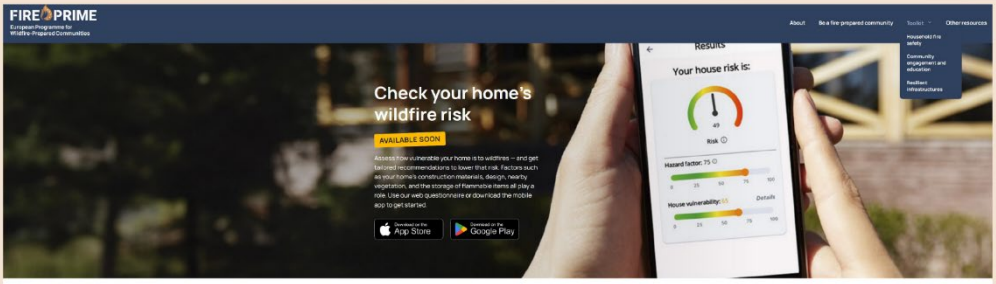

TOOLKIT

Household fire safety

Community engagement and education

Resilient infrastructures

FIREPRIME WS2, Barcelona, November 26th 2025 7

FIREPRIME
European Programme for Wildfire-Prepared Communities

Co-funded by the European Union

FIREPRIME's roadmap to create a wildfire-prepared community

FIREPRIME WS2, Barcelona, November 26th 2025

8

FIREPRIME
European Programme for Wildfire-Prepared Communities

Co-funded by the European Union

Thank you!

More information:

elsa.pastor@upc.edu

UNIVERSITAT POLITÈCNICA DE CATALUNYA BARCELONATECH · Universitat Oberta de Catalunya · PAU COSTA FOUNDATION · BOKU UNIVERSITY · RISE Research Institutes of Sweden

3.3. The home owner fire safety stream

3.3.1. Abstract

The FIREPRIME Homeowner Fire Safety stream focuses on empowering residents living in the Wildland–Urban Interface to better understand and mitigate wildfire risk at the property scale. To support this, the project has developed three practical tools: the FIREPRIME Smartphone App, the Homeowner Wildfire Risk Assessment Flyer, and the Safe Burning Guideline. The smartphone app provides both a rapid basic assessment and a detailed advanced evaluation of vulnerability and hazard, generating quantitative risk results and personalized mitigation recommendations. It incorporates European diversity in building practices and fire exposure levels, and includes country-specific guidance validated through multiple testing rounds with civil protection staff and residents. All user data remain private and stored locally on the device.

Complementary resources were tailored to regional needs: in Northern Europe, where wildfire risk is perceived as lower, a concise flyer promotes key protective measures for passive building survival, while the Safe Burning Guideline supports residents in managing vegetation responsibly. These solutions have undergone pilot testing in Sweden, demonstrating strong potential to raise preparedness and enable defensible space creation at household level. Together, these tools form a solid foundation for scalable wildfire resilience programs across Europe.

3.3.2. Presentation printout

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Homeowner Fire Safety

- Aim: empower WUI residents by providing tools and knowledge to help them in the creation of defensible spaces and fire resilient homes
- Tools
  - The FIREPRIME Smart Phone App
  - The FIREPRIME Homeowner Wildfire Risk Assessment Flyer
  - The FIREPRIME Safe Burning Guideline

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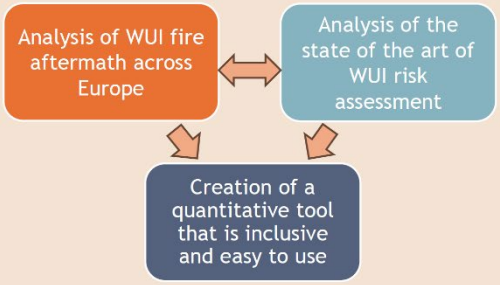
The FIREPRIME Smart Phone App

Roadmap



Different versions
Several testing rounds

WUIVIEW WUITIPS WUICOM BCN

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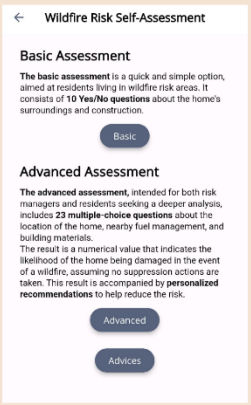
The FIREPRIME Smart Phone App

- Home-assessment tool
  - Can be used **autonomously** or with expert help
  - Gives **quantitative** information on **risk, hazard** and **vulnerability**
  - Gives **personalized suggestions** on how to reduce home vulnerability
  - Includes **all European realities**
    - Different building practices and hazard magnitude
- Two assessment levels
  - **Basic:** 10 yes/no questions
  - **Advanced:** 23 questions
  - Questions cover the characteristics of the home and those of its surroundings
- Preparedness and safety advice



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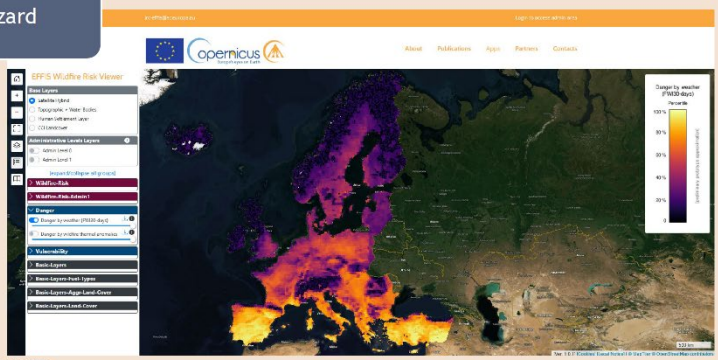
The FIREPRIME Smart Phone App

- Risk based

RISK = Vulnerability x Exposure x Hazard

Hazard



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The FIREPRIME Smart Phone App

Vulnerability x Exposure

Fire entrance inside the structure

AND

Fire reaches the building

The building is vulnerable

Fuel management and surroundings

- Fuels close to the structure
- Artificial fuels < 30 m
- Natural fuels < 30 m
- Fences
- Slope

Structural Characteristics

- Façade materials
- Roof
- Glazing systems and protections
- Vents
- Semiconfined spaces

FIREPRIME
European Programme for Wildfire-Prepared Communities

Co-funded by the European Union

The FIREPRIME Smart Phone App

Basic Assessment

10 Questions with yes/no answers

Adapted to the 3 pilot realities

Scoring: the more **yes** answers, the more vulnerable the home is to fire

High risk: 8-10/10
Moderate risk: 4-7/10
Low risk: 0-3/10

Q1

- My home is located less than 50 m from a forest or an area with abundant vegetation (SPAIN)
- My home is located right next to a forested area (AUSTRIA)
- My house is located near a coniferous forest area or an area with tall grass (SWEDEN)

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The FIREPRIME Smart Phone App

Basic Assessment

Preparedness and safety advice

Spain

Official recommendations of the Catalan Fire and Rescue Service

Sweden

Recommendations based on the advice of The Swedish Civil Contingencies Agency (MSB)

Austria

Adaptation of the recommendations of the Spanish version

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The FIREPRIME Smart Phone App

Advanced Assessment

Fault tree analysis

Probabilities based on expert judgment, intermediate events are weighed

10 questions about the building

13 questions about its surrounding

Scoring:

Extreme risk: 80-100/100
High risk: 50-79/100
Moderate risk: 20-49/100
Low risk: 0-19/100

Austria: no crossing with the hazard layer - the result only shows vulnerability

Ideal score for the area

Hazard x Lowest vulnerability value (10%)

Structural Characteristics

- Façade materials
- Roof
- Glazing systems and protections
- Vents
- Semiconfined spaces

Fuel management and surroundings

- Fuels close to the structure
- Artificial fuels < 30 m
- Natural fuels < 30 m
- Fences
- Slope

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The FIREPRIME Smart Phone App

Advanced Assessment

Preparedness and safety advice

- **Personalized advice** based on given answers
  - Suggestions, wording used: consider installing…, consider replacing…
    - Consider installing shutters in front of all glazing systems. Choose aluminium shutters or other fire-resistant materials
  - Requests, wording used: remove…, avoid…
    - Remove all combustible elements within a 2 m radius around hydrocarbon tanks (LPG tanks, gas cylinders)
- **Answers** can be **modified** to obtain a new score
- The score for each category can be seen, to identify which is the one with the worst or best score

FIREPRIME FINAL WORKSHOP - Barcelona, 26-27/11/2025 10

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The FIREPRIME Smart Phone App

Three testing rounds

1st round: Civil protection and ADF (Forest defence groups) volunteers of municipality of Sant Cugat del Vallès (April 2025)
2nd round: Neighbours of Sol i Aire (April 2025)
3rd round: Neighbours of Sol i Aire and Mas Fortuny (November 2025)

FIREPRIME FINAL WORKSHOP - Barcelona, 26-27/11/2025 11

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The FIREPRIME Smart Phone App

Data availability

Currently, **information** is stored on people's phones, it is **not shared**

- Individuals get a sense of the risk, without sharing information with neighbours, municipality, civil protection, etc.

Other possibilities:

- Information could be shared with emergency services/municipality, for preparedness and response strategies

Up for debate tomorrow!

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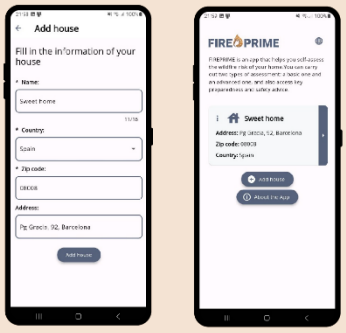
The FIREPRIME Smart Phone App



House set up

- Support for multiple homes
- Localizes your home to identify the Hazard of the area (neighbourhood level)
- Location is also used to identify the right safety tips, pictures, and basic questionnaire for you (country level)

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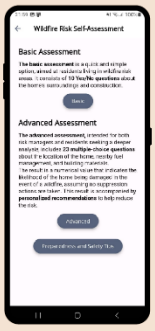
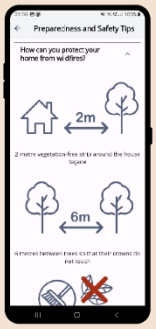
The FIREPRIME Smart Phone App





Assessment

- Includes basic and advanced assessment
- Preparedness and safety tips

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European Programme for Wildfire-Prepared Communities

Co-funded by the European Union

The FIREPRIME Smart Phone App

Basic Assessment

- 10 easy-to-answer questions
- Assess your risk level
- Responses automatically saved on your device

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European Programme for Wildfire-Prepared Communities

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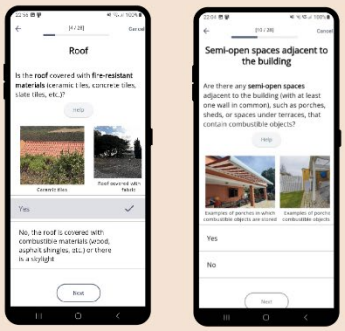
The FIREPRIME Smart Phone App



Advanced Assessment

- Questionnaire for more engaged users
- Country-specific photos and descriptions
- Dynamic questionnaire flow
- Responses automatically saved on your device

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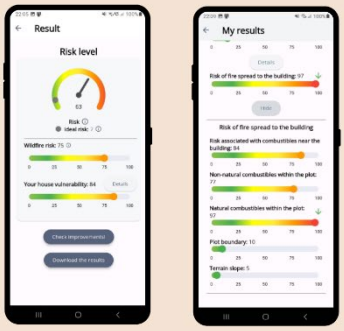
The FIREPRIME Smart Phone App



Advanced Assessment

- Results combines Hazard of the area with the vulnerability of the house
- Detailed results to identify its main vulnerabilities

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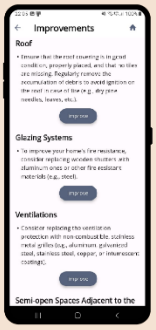
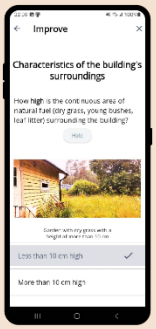
The FIREPRIME Smart Phone App





Suggested improvements

- See how you can improve the characteristics of the building and its surroundings
- And take action!

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Results history

- Visualize the evolution of your results
- For both basic and advanced assessment

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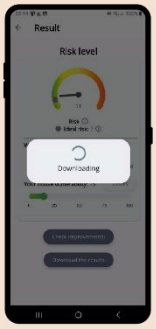

Export and share the results

- Export the results to PDF
- You can share it, print it,…

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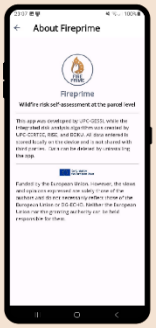
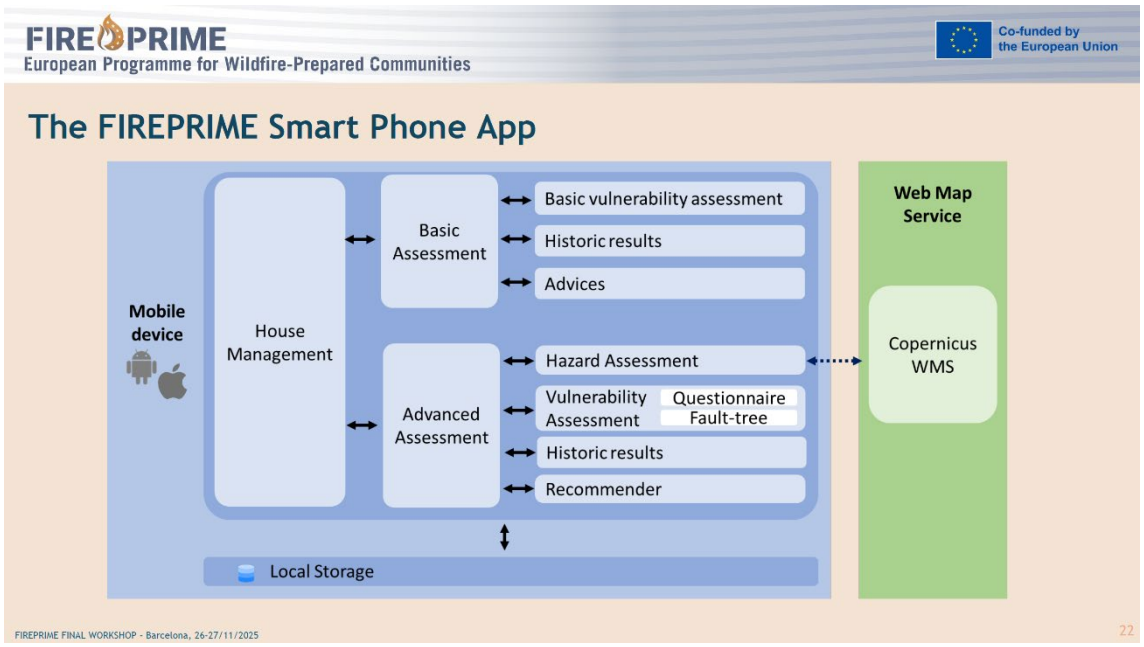


And some non-functional characteristics

- Multi-language support
- Support for Android and iPhone
- It can work without internet connection
- It includes notifications
- And Privacy! all your data in your device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The FIREPRIME Smart Phone App
Mobile device
House Management
Basic Assessment
Basic vulnerability assessment
Historic results
Advices
Advanced Assessment
Hazard Assessment
Vulnerability Assessment
Questionnaire
Fault-tree
Historic results
Recommender
Local Storage
Web Map Service
Copernicus WMS
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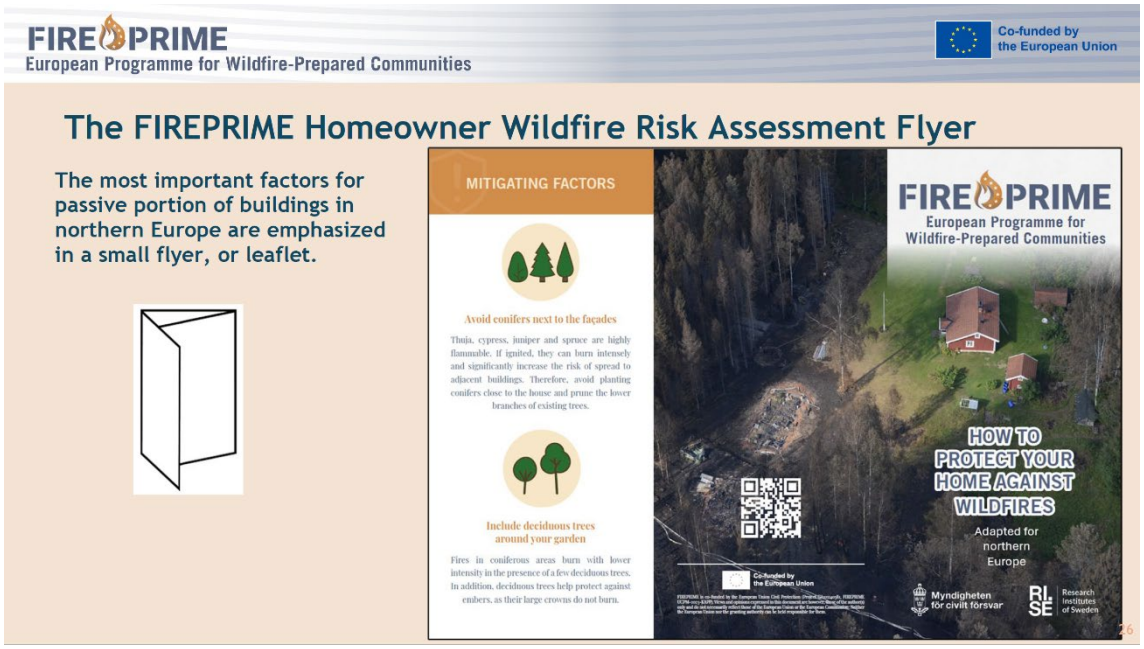
The FIREPRIME Homeowner Wildfire Risk Assessment Flyer
For the general public in Northern Europe (illustrated here with Sweden), the wildfire hazard is of less concern compared to flooding, water damage from poor drainage, storm risks etc.
Thus, a mobile application is widely considered as a too high threshold to raise engagement.
Still, about 30 buildings are ignited from wildfires every year.
The main factors for survival differs somewhat from those in Mediterranean fires.


The FIREPRIME Homeowner Wildfire Risk Assessment Flyer
The most important factors for passive portion of buildings in northern Europe are emphasized in a small flyer, or leaflet.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The FIREPRIME Homeowner Wildfire Risk Assessment Flyer
The most important factors for passive portion of buildings in northern Europe are emphasized in a small flyer, or leaflet.
MITIGATING FACTORS
Avoid conifers next to the façades
Thuja, cypress, juniper and spruce are highly flammable. If ignited, they can burn intensely and significantly increase the risk of spread to adjacent buildings. Therefore, avoid planting conifers close to the house and prune the lower branches of existing trees.
Include deciduous trees around your garden
Fires in coniferous areas burn with lower intensity in the presence of a few deciduous trees. In addition, deciduous trees help protect against embers, as their large crowns do not burn.
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HOW TO PROTECT YOUR HOME AGAINST WILDFIRES
Adapted for northern Europe
Co-funded by the European Union
Myndigheten för civilt försvar
RISE Research Institutes of Sweden

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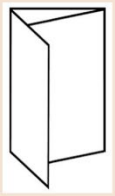
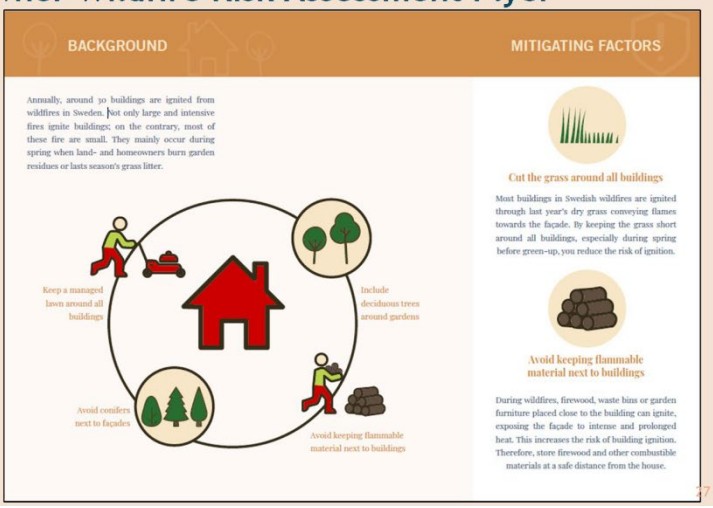
The FIREPRIME Homeowner Wildfire Risk Assessment Flyer

The most important factors for passive portion of buildings in northern Europe are emphasized in a small flyer, or leaflet.





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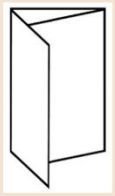
The FIREPRIME Safe Burning Guideline



WHEN BURNING

Never leave a fire unattended

Always keep a close watch on ongoing fires. Remember to not leave the area unattended after you finish the burning. Unexpected gusts of wind can easily reignite hidden embers.

Never burn alone

More people present reduce the risk of undetected fire spread and ensures additional help during unforeseen events.

Start burning activities only after the daily risk peak

Wait to ignite until after the highest expected fire risk of the day has passed. This is usually in the afternoon.

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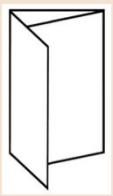
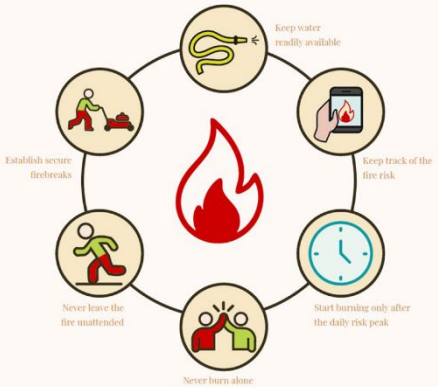
The FIREPRIME Safe Burning Guideline



BACKGROUND

On average, one person dies, and 30 buildings are annually ignited in Swedish wildfires. Most of these accident occur from unexpected events during burning of garden residues or last season's dry grass.

Through safe burning practices and simple precautions, you can reduce the risk of fire spread and serious consequences.



PRECAUTIONS

Do you need to burn?

It is sometimes easier to bring your garden residue to a recycling centre.

Check the local regulations

Your municipality can inform you on the rules applicable to your area.

Keep track of fire risk and local fire ban

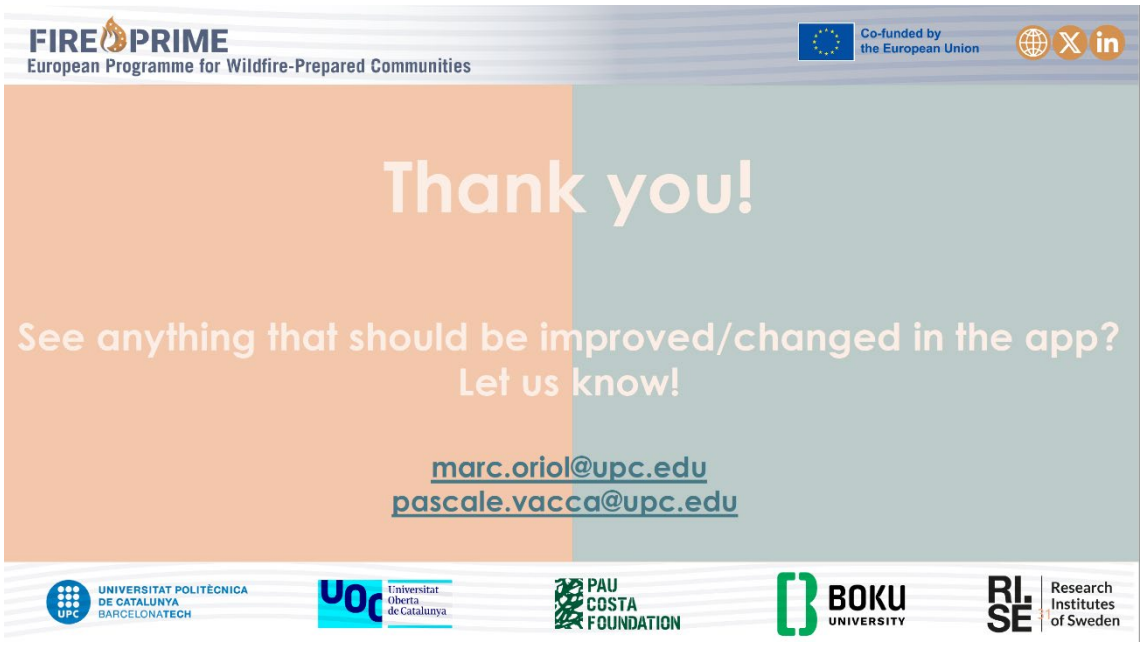
Before burning, check the current fire risk and any fire ban in your area. The app *Brandrisk Ute* always provides up-to-date information. Never burn in strong winds.

Establish firebreaks around the burn area

Ensure a safe boundary around the entire burn area to prevent further spread, even when burning in a steel barrel. Safe boundaries include roads, gravel, short grass or other non-combustible areas. Pay extra attention to ditches, where tall grass can convey the flames.

Keep water readily available from a hose

Before burning, ensure water availability from a hose, not just buckets and watering cans. Additional suitable equipment includes rakes and rose watering cans. The hose should be positioned outside the burn area, able to reach the entire perimeter, and turned on from the start.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Thank you!
See anything that should be improved/changed in the app?
Let us know!
marc.oriol@upc.edu
pascale.vacca@upc.edu
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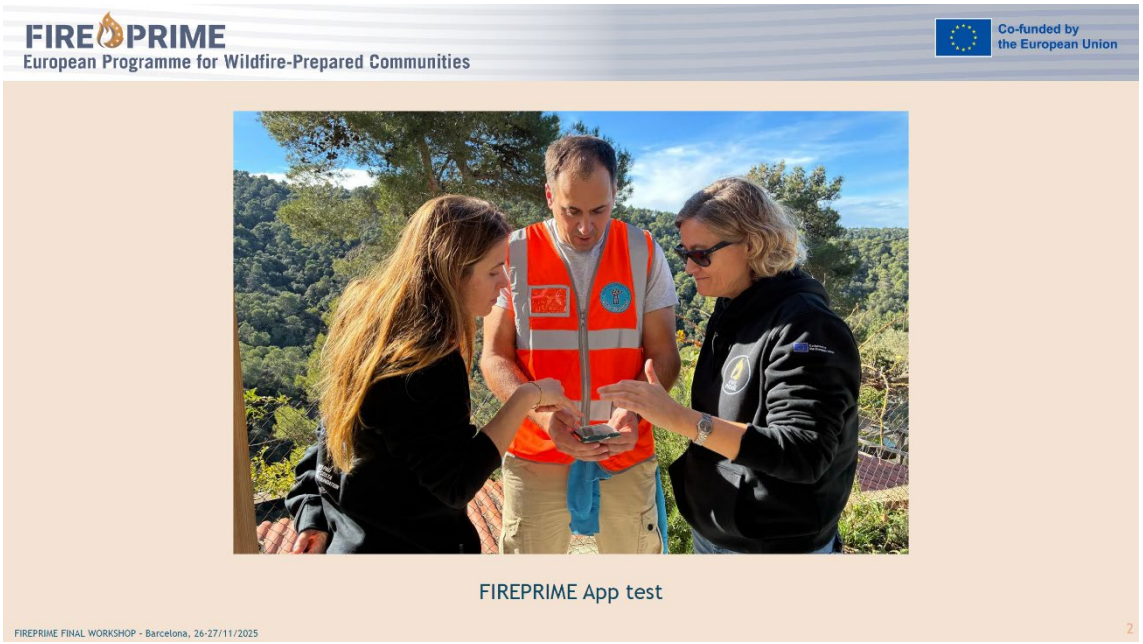
3.4. Community engagement and education stream

3.4.1. Abstract

The FIREPRIME Community Engagement and Education Stream focuses on empowering WUI residents through participatory preparedness activities, social learning, and youth involvement. Two Preparedness Days ("Preparem-nos!") were held in Sant Cugat, combining public presentations, simulations, collective mapping, and informal exchanges with emergency services. These activities fostered trust between residents and first responders, and helped identify vulnerabilities and capacities at the neighbourhood scale. A co-creation approach was applied, acknowledging that communities are not only recipients of risk information, but also active co-producers of resilience. Educational tools targeting children and youth were also deployed, including three wildfire learning games (Fire Behaviour Game, Landscape Products Game, and Wildfire Readiness Game). These tools were implemented through a gamified "Challenge Race," which successfully leveraged non-formal education settings to promote motivation, understanding, and long-term engagement. The games were adapted and translated to reflect the local context of the Austrian pilot, ensuring their relevance and accessibility for participants.

In Sweden, a Prevention and Responsibility Tool was developed to facilitate stakeholder dialogue around responsibility-sharing in wildfire mitigation. Overall, the stream showed that preparedness is relational, requiring trust, facilitation, and a balance between standardised methods and local adaptation. The outcomes demonstrate the critical value of hands-on learning and collaboration in strengthening community preparedness across Europe.

3.4.2. Presentation printout



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FireSmart™ Canada

FIREWISE USA®
RESIDENTS REDUCING WILDFIRE RISKS

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First *Preparem-nos!* (Spring)

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First *Preparem-nos!* (Sol i Aire presentation)

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First *Preparem-nos!* (Q&A session)

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First *Preparem-nos!* (informal meal)

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Second *Preparem-nos!* (Autumn)

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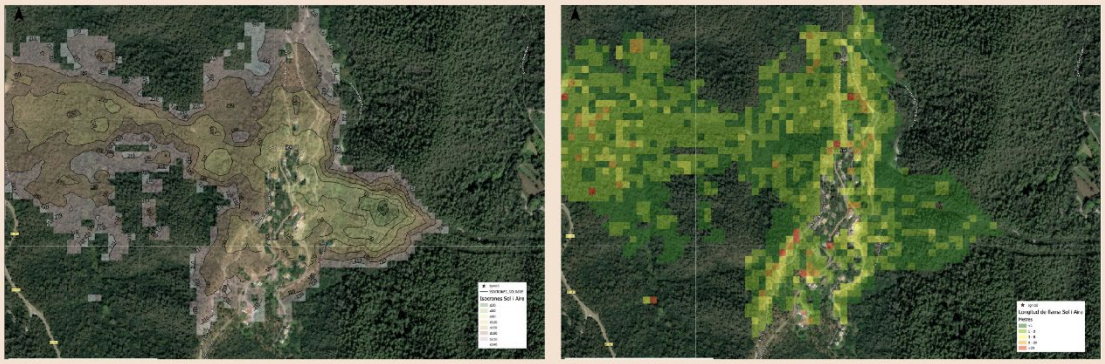

Second *Preparem-nos!* (Simulations)

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Second *Preparem-nos!* (Collective mapping, Sol i Aire)

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Second *Preparem-nos!* (Workshop Materials displayed)

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La Floresta	Sol i Aire	Mas Fortuny
Awareness of Collserola's complex terrain: steep slopes, winds and forest density		
Dense urban fabric Risk perception	Fire behaviour Evacuation and confinement	Poor road conditions Difficult emergency access
Ecological preservation versus wildfire prevention		

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Second *Preparem-nos!* (La Floresta)

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Second *Preparem-nos!* (Mas Fortuny)

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Key Challenges Moving Forward:

- **Standardisation vs. Flexibility**: a method that balances scalability and local sensitivity.
- **Integration in a Wider Strategy:** integrate workshops, tools and the app to support overall preparedness.
- **Conditions for Dialogue**: Effective dialogue requires facilitation, design and an atmosphere of trust.

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Concluding remarks:

- **Preparedness is relational:** trust, cooperation and facilitation matter.
- **Communities are co-producers:** when expertise and lived experience meet, preparedness becomes shared.
- **The way forward:** an interdisciplinary, adaptive approach that strengthens both technology and social bonds.

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Community engagement and education stream

Education Tools

Guillem Canaleta (Pau Costa Foundation)

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YOUTH AS A TARGET GROUP

OBJECTIVES

- To promote wildfire risk culture
- Understand the role of fire as a disturbance
- Learn how-to-act before and during a fire
- Understand self-protection measures at home

FIRE BEHAVIOUR GAME

LANDSCAPE PRODUCTS GAME

WILDFIRE READINESS GAME

SELF-PROTECTION GUIDE

La Floresta Scouts

- 12 - 16
- Interest in nature conservation
- Sensitive to wildfire risk
- Activities every Saturday

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FIRE BEHAVIOUR GAME

- Different scenarios to see how fire propagates and behave
- To understand the importance of forest management around urbanizations and residential areas as a key protective measure

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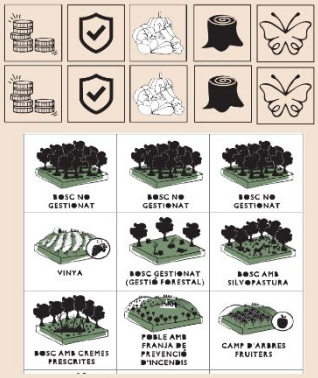
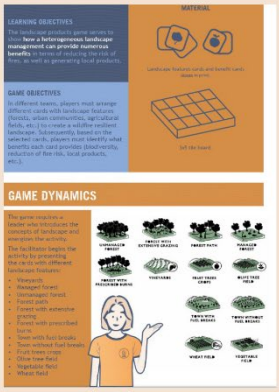
LANDSCAPE PRODUCTS GAME

- To show how a heterogeneous landscape management can provide numerous benefits in terms of reducing the risk of fires





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WILDFIRE READINESS GAME

- Learn the basic actions to take if a wildfire approaches or reaches your home.
- Different cards are displayed, some correct and some incorrect, about what to do if a wildfire approaches your home.

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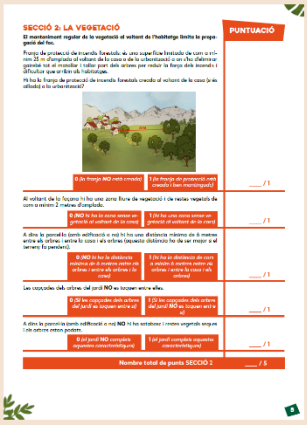
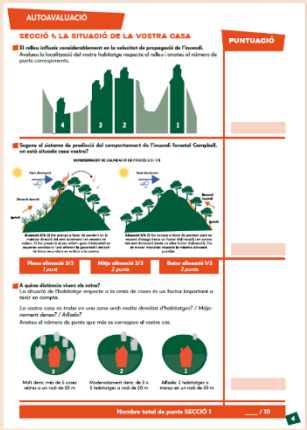
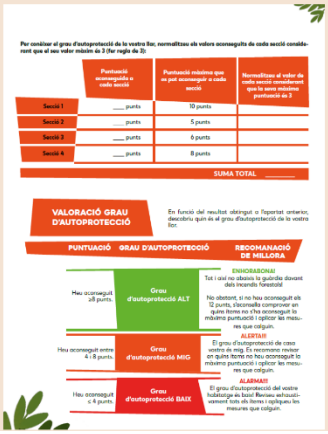
SELF-PROTECTION GUIDE

- Home Vulnerability Assessment Test







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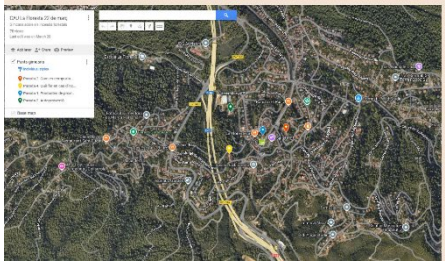
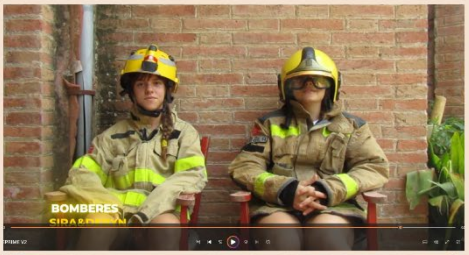
IMPLEMENTATION APPROACH

CHALLENGE RACE

- 4 groups
- 20 minutes rotations across La Floresta to play the 4 different games





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CONCLUSIONS

- Use of non-formal education
  - Positive learning environment that fosters motivation.
  - Formal education, through the integration of civil protection curricula, shouldn't be discarded.
- Learning by doing works best
  - Hands-on and gamified activities make complex wildfire concepts easier to understand.
  - Makes children and youth keep the attention for longer periods.
- Empower participants
  - Youth take the lead creating their own awareness materials, builds ownership and long-term commitment.
- Facilitator support is key
  - Providing clear guidance, adaptable materials, and basic training to education leaders
  - Direct contact with scouts bosses (whatsapp group) was key to foster swift communications

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Community engagement and education stream

Prevention and Responsability Tool

Johan Sjöström (RISE)

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FIREPRIME PREVENTION AND RESPONSIBILITY TOOL

- **Prevention** is most effective if performed on the local scale
  - Behaviour of individual people
  - Mitigating actions for home and garden hardening
  - Landscape, forest and agricultural management
  - Education, experience and knowledge transfer
- Knowing the most efficient mitigating actions for is difficult
- Who is **responsible** to take these mitigating actions?
  - Legal responsibility
  - Voluntary responsibility
  - Felt responsibility
  - Perceived responsibility of others
  - Collective responsibility
  - Moral responsibility

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FIREPRIME PREVENTION AND RESPONSIBILITY TOOL

- Gather different types of stakeholders
  - Homeowners and residents
  - Private landowners and farmers
  - Fire and rescue service representatives
  - Forestry companies
  - Municipal or regional planners
  - Environmental officers or NGOs
  - Insurance representatives
- Six scenarios taken from real situations in Sweden, described with photos and maps
- Ask the following questions
  - 1. What preventive action do you think could have safeguarded that this fire (a) spread uncontrollably and (b) ignited the structure?
  - Who, in your opinion, is responsible to take such mitigating actions?
  - What do you think is needed for these actions to be implemented?

- Vermina Plathner, F., Sjöström, J., & Granström, A. (2025). Early season wildfires pose the highest threat to buildings and people in Sweden. Fire Safety Journal, 104457.
- Vermina Plathner, F., Sjöström, J., & Granström, A. (2023). Garden structure is critical for building survival in northern forest fires -An analysis using large Swedish wildfires. Safety science, 157, 105928.

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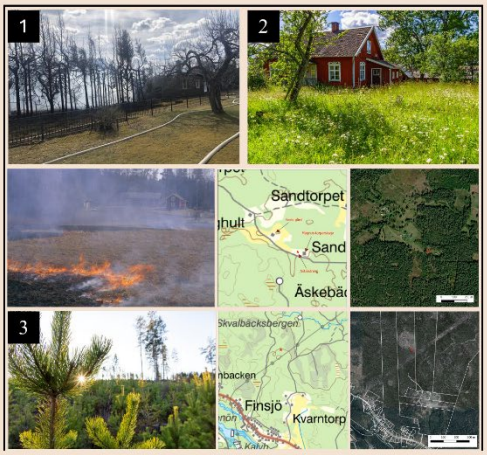
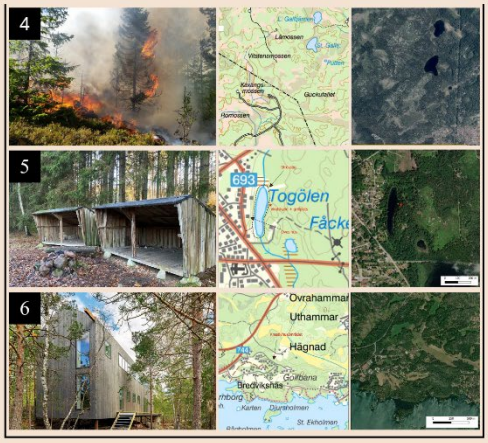
FIREPRIME PREVENTION AND RESPONSIBILITY TOOL





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Thank you!

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Fireprime project

https://civil-protection-knowledge-network.europa.eu/projects/fireprime

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3.5. Pilot tests: experiences and evaluation

3.5.1. Abstract

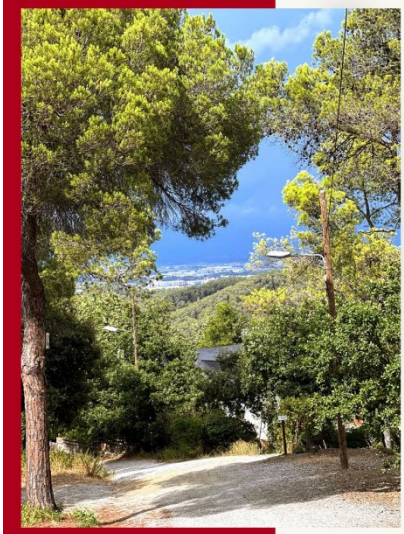
FIREPRIME pilot sites include three areas located in Spain, Austria, and Sweden.

The Spanish pilot was conducted in the Wildland–Urban Interface communities of Sant Cugat. “Sol i Aire” is a Wildland-Urban Interface neighbourhood located in Sant Cugat, within Collserola Park (Barcelona), characterised by strong social cohesion and active community involvement. As one of the FIREPRIME pilot sites, the community collaborated closely with project experts to test and validate preparedness tools, and provide real territorial information for risk assessment. Through the pilot, residents enhanced their wildfire prevention capacity, improved self-protection planning, and reinforced emergency coordination within the neighbourhood. The use of innovative tools—such as the FIREPRIME app—supported better awareness of vulnerabilities and enabled more informed decision-making. Participation also strengthened community identity and empowered residents to become proactive contributors in building resilience. Looking ahead, “Sol i Aire” aims to continue integrating FIREPRIME strategies into everyday practices, maintain training efforts, and act as a reference model for other WUI communities. The experience demonstrates how local engagement, supported by scientific and institutional collaboration, can significantly improve wildfire preparedness and territorial protection.

The Austrian FIREPRIME pilot focuses on the municipality of Haiming (Tyrol), a WUI area exposed to a growing wildfire threat due to changing climatic conditions. Although Austria experiences an average of around 220 wildfire events per year—mostly human-caused—future projections indicate a significant increase in the number of days with high fire danger in Tyrol. The pilot explores the applicability of FIREPRIME tools in a context where wildfire hazard is generally low, shifting the focus toward understanding local vulnerability and risk awareness. During field work conducted in April 2025, the three FIREPRIME streams were evaluated: Homeowner Safety, Community Preparedness, and Critical Infrastructure. The pilot enabled testing of the app-based household risk assessment, raised questions on how to best communicate risk where hazard is not perceived as urgent, and engaged with local governance and emergency structures. Work on critical infrastructure included risk considerations around vulnerable sites such as the electrical substation area. The pilot illustrates that FIREPRIME is adaptable to Alpine WUI settings, and that even regions with relatively low exposure can benefit from proactive preparedness strategies.

The Swedish FIREPRIME pilot activities address wildfire preparedness in boreal environments, where flammable fuels coexist with generally less fire-prone weather compared to southern Europe. In Sweden, most wildfires occur in rural areas, yet residential structures and infrastructure remain vulnerable—particularly due to the critical importance of response time. Past events show that most building losses occur during relatively small fires, underscoring the need for effective passive protection and community-level mitigation. The pilot examined three distinct regional contexts: Berga, a rural community in Sweden’s driest zone with a long history of wildfire events but low perceived risk; Sundsvall, a proactive municipality surrounded by forest and exposed to high-summer fire weather; and the outskirts of Göteborg, an area with strong cultural burning traditions and long dry springs. These diverse settings enabled testing of the community-focused tools developed in FIREPRIME, including the Prevention and Responsibility Tool, to facilitate local discussions on mitigation responsibilities and preparedness actions. Overall, the Swedish pilot demonstrates the adaptability of FIREPRIME to contexts where wildfire perception is low but vulnerability persists, highlighting that engagement and risk awareness remain essential even in regions with fewer extreme fire events.

3.5.2. Presentation printout – Catalan pilot – « Sol i Aire »



SOL I AIRE

FIRE PRIME

Alba Ayuso Ulecia

Fire Prime: 26 of November 2025

ASSOCIACIÓ DE VEÏNS I PROPIETARIS
SOL-AIRE
Avda. del Llac, 34 · 08198 Sant Cugat

CONTENT

1. SOL I AIRE
2. SOL I AIRE & FIREPRIME
3. HOW FIRE PRIME HAS HELPED SOL I AIRE
4. FUTURE OF FIREPRIME IN SOL I AIRE
5. REFLECTION

1. SOL I AIRE

- A neighborhood in the municipality of Sant Cugat del Vallès, in the province of Barcelona.
- Located within the Collserola Park, which covers an area of 11,100 hectares.
- The first building in the neighborhood dates back to the 1950s.
- In 1967, the land was subdivided and the development began.
- Currently, about 80 families live here with a sense of community identity and active involvement in social and prevention initiatives (GAP).

2. SOL I AIRE & FIREPRIME

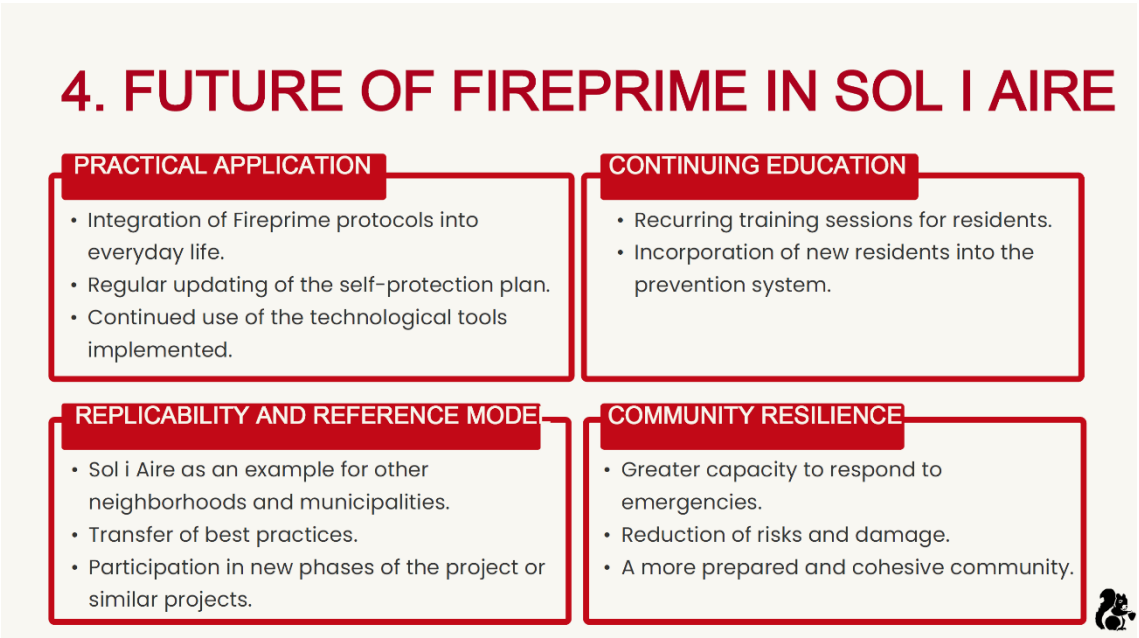
DECEMBER 14, 2024 FIREPRIME PRESENTATION IN SOL I AIRE

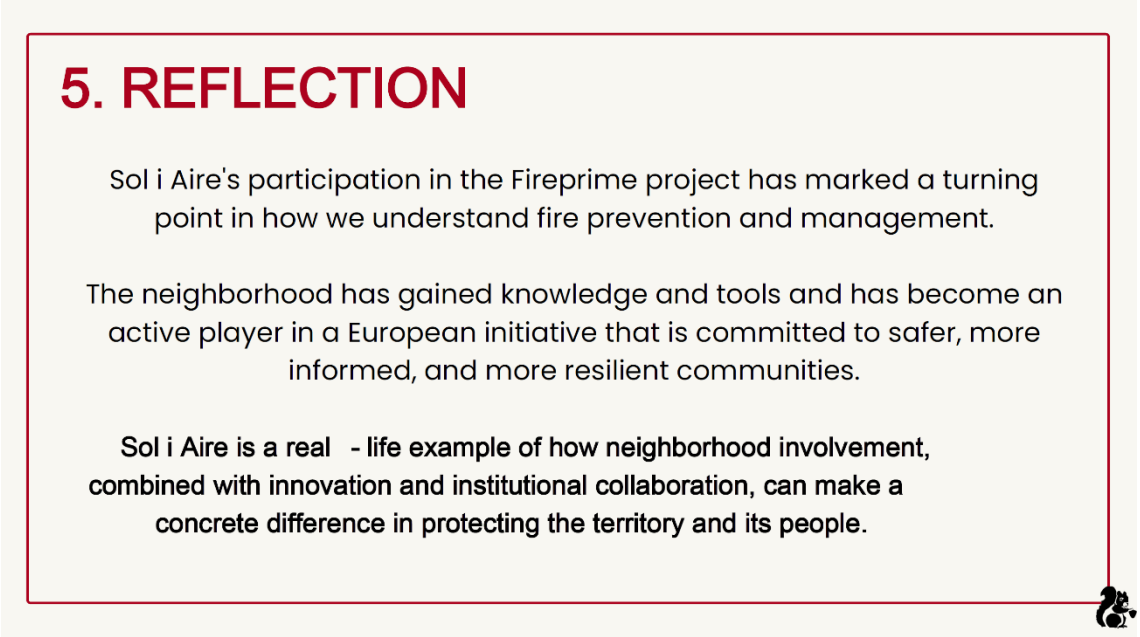
- Direct collaboration with project technicians and experts.
- Participation in drills and pilot tests.
- Provision of real information about the territory.
- Involvement of neighbors in training activities.
- Testing of prevention tools and systems.





3. HOW FIRE PRIME HAS HELPED SOL I AIR
IMPROVING PREVENTION
• More accurate identification of risk areas.
• Optimization of self-protection plans.
• Reinforcement of emergency response protocols.
NEIGHBORHOOD AWARENESS
• Greater awareness of fire risk.
• Increased culture of self-protection.
• Training on how to act before, during, and after a fire.
INTERNAL STRENGTHENING
• Improved coordination between neighbors.
• Technological support
TECHNICAL SUPPORT
• Access to innovative tools.
• Monitoring and early warning systems.
• Real-time information for decision-making.


4. FUTURE OF FIREPRIME IN SOL I AIRE
PRACTICAL APPLICATION
• Integration of Fireprime protocols into everyday life.
• Regular updating of the self-protection plan.
• Continued use of the technological tools implemented.
CONTINUING EDUCATION
• Recurring training sessions for residents.
• Incorporation of new residents into the prevention system.
REPLICABILITY AND REFERENCE MODE
• Sol i Aire as an example for other neighborhoods and municipalities.
• Transfer of best practices.
• Participation in new phases of the project or similar projects.
COMMUNITY RESILIENCE
• Greater capacity to respond to emergencies.
• Reduction of risks and damage.
• A more prepared and cohesive community.



3.5.3. Presentation printout – Austrian pilot

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FIREPRIME

WP6 – INTEGRATION AND IMPLEMENTATION IN AT

Presentation of the Austrian case study

Maria Papathoma-Köhle BOKU

UNIVERSITAT POLITÈCNICA DE CATALUNYA BARCELONATECH Centre for Technological Risk Studies

PAU COSTA FOUNDATION

Universitat Oberta de Catalunya

RISE

BOKU

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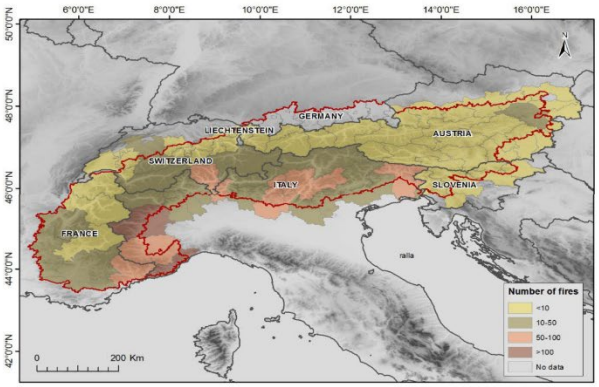
WILDFIRES IN AUSTRIA

- Average number of fires per year: 220
- Areas with many wildfires: South NÖ, Inntal in Tyrol
- Fire causes: 85% human related
- Fire periods: Mar-Apr and Jul-Aug
- Largest fire in Austria:

Allentsteig, Lower Austria, in March 2022: ~400 ha of forest burned, ~830 ha total



Average number of fires per year by region. No data available for Germany and Liechtenstein. Source: National/Regional databases

2

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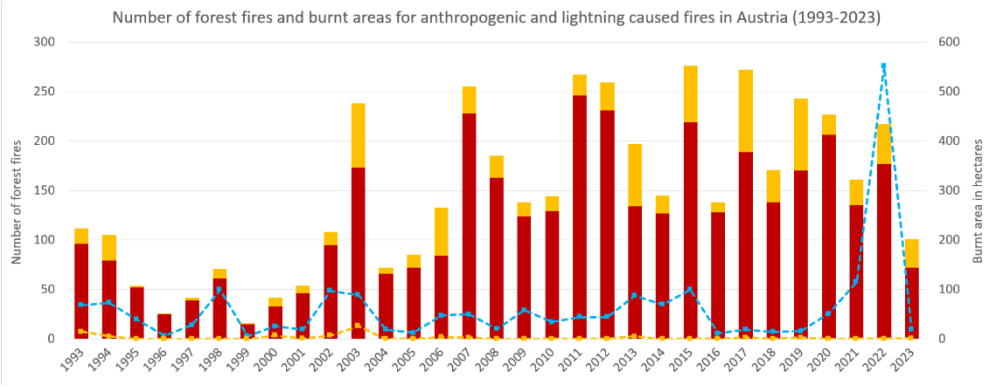
FOREST FIRES IN AUSTRIA 1993-2023



Red bar: anthropogenic fires | Yellow bar: lightning caused fires | Blue line: burnt areas of anthropogenic fires | Yellow line: lightning fires

FIREPRIME WORKSHOP II– Barcelona – November 26th-27th, 2025 3

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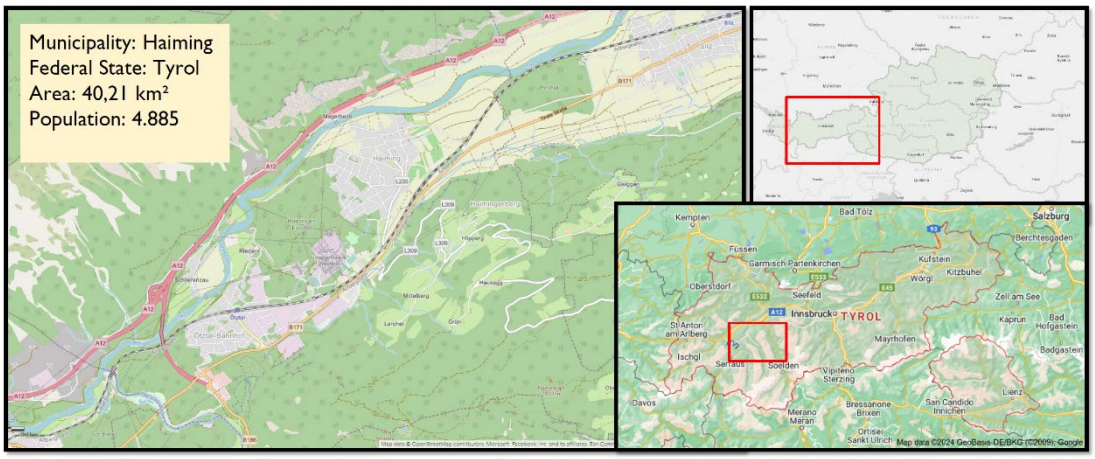
AT PILOT: LOCATION



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FIRE REGIME

Silz 29 June 2025

"the number of days with high forest fire danger might increase regionally (Tyrol) by more than 40 days until 2100"

Muller M.M., Vila-Vilardell L., Vacik H. (2020): Forest fires in the Alps – State of knowledge, future challenges and options for an integrated fire management. EUSALP Action Group 8.

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FIREPRIME'S MAIN STREAMS: HOMEOWNER SAFETY

FIREPRIME's MAIN STREAMS:

- Homeowner Safety
- Community preparedness, engagement and education
- Critical Infrastructure

FIELD WORK: 24-26 APRIL 2025

Source: Municipality of Haiming

FIREPRIME WORKSHOP II– Barcelona – November 26th-27th, 2025

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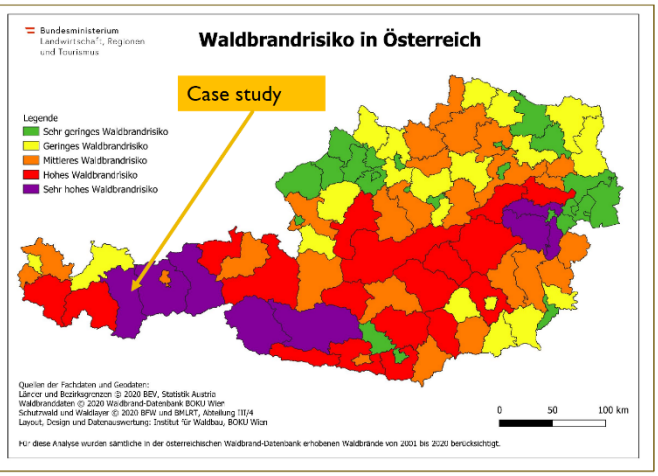
HOMEOWNER SAFETY: THE ISSUE OF LOW HAZARD

RISK
OR
VULNERABILITY?



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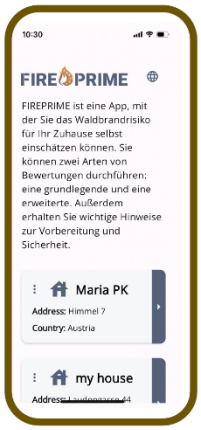
HOMEOWNER SAFETY: RISK OR VULNERABILITY?



House ID	Risk
House 1	4
House 3	4
House 5	6
House 7	5
House 9	5
House 11	7

House ID	Vulnerability
House 1	48
House 3	47
House 5	69
House 7	58
House 9	58
House 11	71

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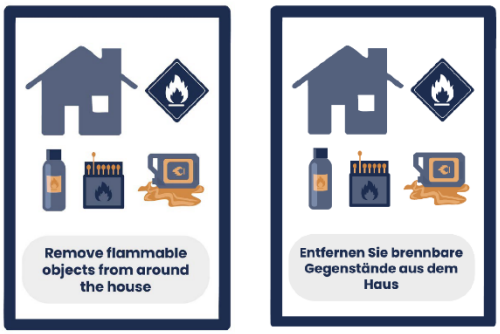
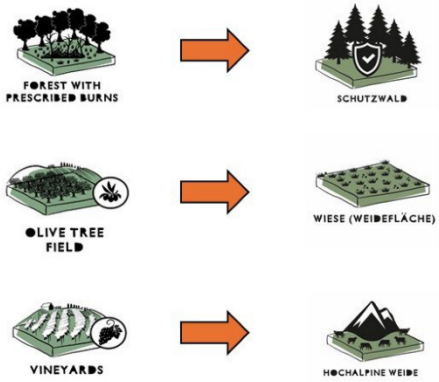
FIREPRIME'S MAIN STREAMS: COMMUNITY PREPAREDNESS

FIREPRIME's MAIN STREAMS:

- Homeowner Safety
- Community preparedness, engagement and education
- Critical Infrastructure





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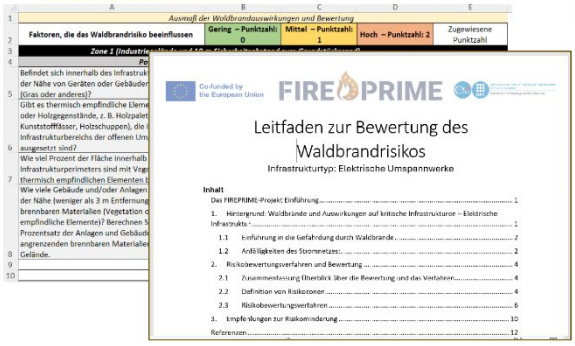
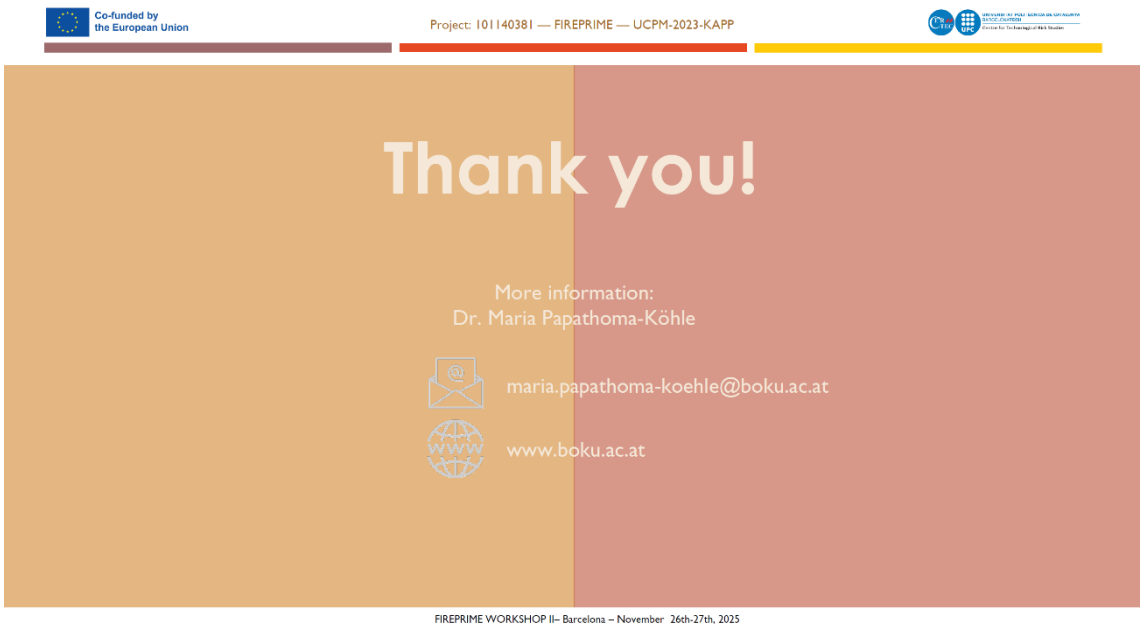
FIREPRIME'S MAIN STREAMS: INFRASTRUCTURE

FIREPRIME's MAIN STREAMS:

- Homeowner Safety
- Community preparedness, engagement and education
- Critical Infrastructure





3.5.4. Presentation printout – Swedish pilot


FIREPRIME
European Programme for Wildfire-Prepared Communities
Co-funded by the European Union
The Swedish FIREPRIME Pilot site(s)
• The boreal has very flammable fuels
• But less fire prone weather compared to the Mediterranean
FIREPRIME FINAL WORKSHOP - Barcelona, 26-27/11/2025
2


FIREPRIME
European Programme for Wildfire-Prepared Communities
Co-funded by the European Union
The Swedish FIREPRIME Pilot site(s)
• Most fires occur in the rural areas
• … but these are not completely without buildings and infrastructure
FIREPRIME FINAL WORKSHOP - Barcelona, 26-27/11/2025
3


FIREPRIME
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The Swedish FIREPRIME Pilot site(s)
• Key factor is response time
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4


FIREPRIME
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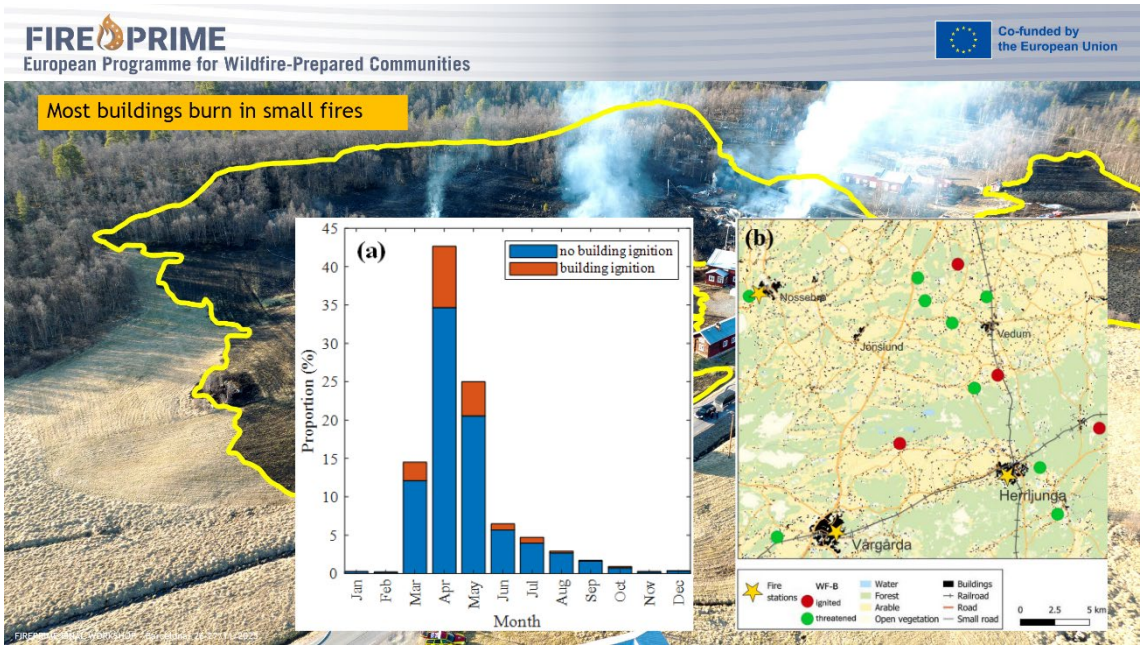
Passive protection is not arbitrary
FIREPRIME FINAL WORKSHOP - Barcelona, 26-27/11/2025
5


FIRE PRIME
European Programme for Wildfire-Prepared Communities
Co-funded by the European Union
Most buildings burn in small fires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Co-funded by the European Union
Most buildings burn in small fires
(a)
no building ignition
building ignition
Proportion (%)
Month
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
(b)
Nossebro
Jönslund
Vedum
Herrljunga
Vargarda
Fire stations
WF-B
ignited
threatened
Water
Forest
Arable
Open vegetation
Buildings
Railroad
Road
Small road
0 2.5 5 km

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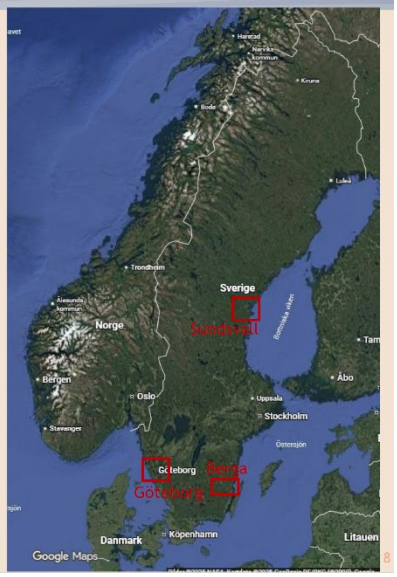
The Swedish FIREPRIME Pilot site(s)

Three different regions

- Sundsvall
  - City with sharp boarders to surrounding forest
  - Fireprone during high summer
  - One of the few municipalities that have been proactive in mitigation through landscape management
- Berga
  - Small rural community in the driest part of Sweden
  - Most forests are relatively accessible
- Outskirts of Göteborg
  - Around Sweden's 2nd largest city
  - Many springtime fires
  - Strong burning traditions
  - Archipelago



FIREPRIME FINAL WORKSHOP - Barcelona, 26-27/11/2025

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The Swedish FIREPRIME Pilot site(s)

Berga - southeast rural area

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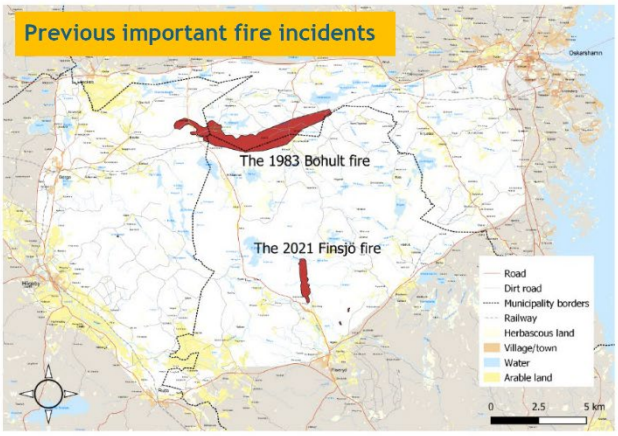
The Swedish FIREPRIME Pilot site(s)

Berga - southeast rural area

- Many previous fires - few severe consequences
- Little concerns due to few high-impact fires

- Previous incidents
  - 1983 Bohult - 650 ha
  - 2021 Finsjö - 100 ha



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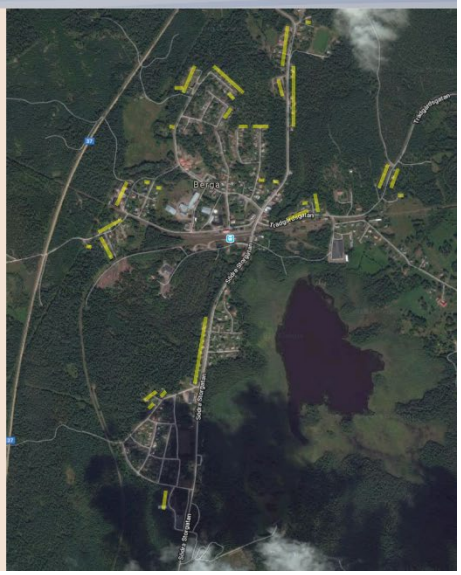
The Swedish FIREPRIME Pilot site(s)

Berga - southeast rural area

- Many previous fires - few severe consequences
- Little concerns due to few high-impact fires



FIREPRIME FINAL WORKSHOP - Barcelona, 26-27/11/2025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The Swedish FIREPRIME Pilot site(s)
Sundsvall - Central Swedish city
FIREPRIME FINAL WORKSHOP - Barcelona, 26-27/11/2025
13


FIREPRIME
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The Swedish FIREPRIME Pilot site(s)
Sundsvall - city surrounded by forest
• Very fire prone during high summer
• Proactive municipality
FIREPRIME FINAL WORKSHOP - Barcelona, 26-27/11/2025
14

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European Programme for Wildfire-Prepared Communities

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The Swedish FIREPRIME Pilot site(s)

Sundsvall - city surrounded by forest

- Very fire prone during high summer
- Proactive municipality
- FIREPRIME prevention and responsibility tool

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The Swedish FIREPRIME Pilot site(s)

Outskirts of Göteborg - Densely populated area with archipelago

- Not as fire prone forests
- Long dry spring
- Strong burning tradition
- Many inhabited islands

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Thank you!

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Universitat Oberta de Catalunya
PAU COSTA FOUNDATION
BOKU UNIVERSITY
RI.SE Research Institutes of Sweden

3.6. Resilient infrastructures steam

3.6.1. Abstract

The Resilient Infrastructure stream of FIREPRIME aims to enhance wildfire resilience in critical infrastructure by developing practical risk assessment tools and recommendations tailored to different infrastructure typologies. Three pilot cases were examined: a Seveso-classified chemical storage facility in Catalonia (Spain), an electrical substation in Tyrol (Austria), and a rail network in West Sweden. Engagement activities included site visits, co-evaluation workshops, and collaboration with operators, revealing varied risk awareness levels and operational constraints. A structured risk assessment tool was developed for point infrastructures, organised into hazard and vulnerability zones, enabling the calculation of a global risk score and generation of tailored mitigation recommendations. Pilot testing confirmed the tool's technical value and its potential to raise awareness and inform decision-making but also highlighted challenges related to resource availability, usability, and incentivisation for industrial uptake. The results demonstrate that combining participatory stakeholder engagement with accessible, technically robust tools can support wider implementation of wildfire-resilient infrastructure management across Europe.

3.6.2. Presentation printout

FIRE PRIME
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Outline

1. Introduction
   - Infrastructure and wildfires
   - FIREPIME Pilots
2. Stakeholder Engagement Activities
   - Spain - Chemical Industry
   - Austria - Electrical Substation
   - Sweden - Rail Network
3. FIREPRIME Tools
   - FIREPRIME Risk Assessments (Spain & Austria)

2

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Resilient Infrastructure Stream

1) Homeowner Fire Safety
2) Community Preparedness, Engagement and Education
3) **Resilient Infrastructures**

Objective: **Craft recommendations for critical entities** exposed to wildfires

Critical Infrastructure: Physical structures and networks that provide essential services for the social and economic wellbeing of society (The United Nations, 2015).

3

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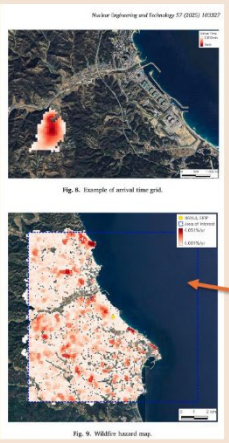
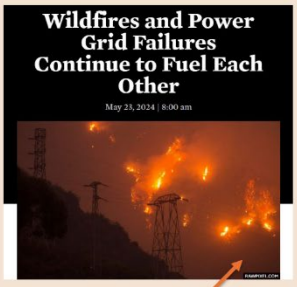
Infrastructures as wildfire vulnerability





- Chemical Infrastructure
- Power Infrastructure
- Transport Networks
- Water supply

4

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Overview of FIREPRIME Pilots

Infrastructure Diversity
- Point vs Network infrastructures
- For general public daily use & interactions vs only technical professionals
- Hazardous substances and/or processes vs regular processes

Chemical Plant

(1) Spanish pilot - Cataluña
- Point
- Technical
- Seveso Tier I - Hazardous

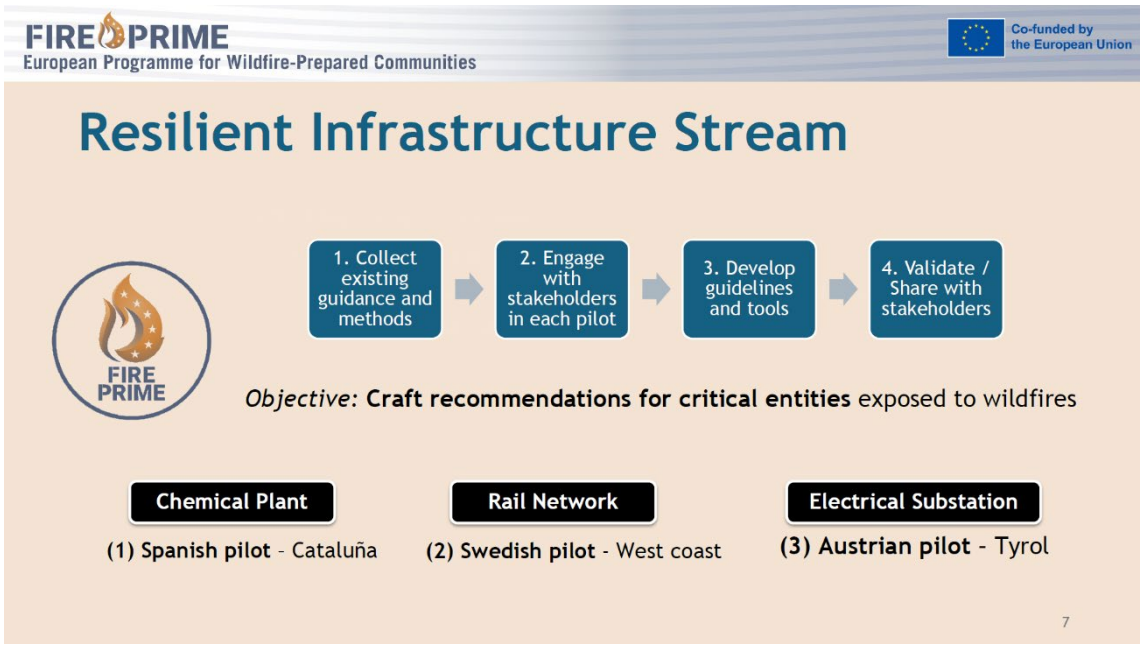
Rail Network

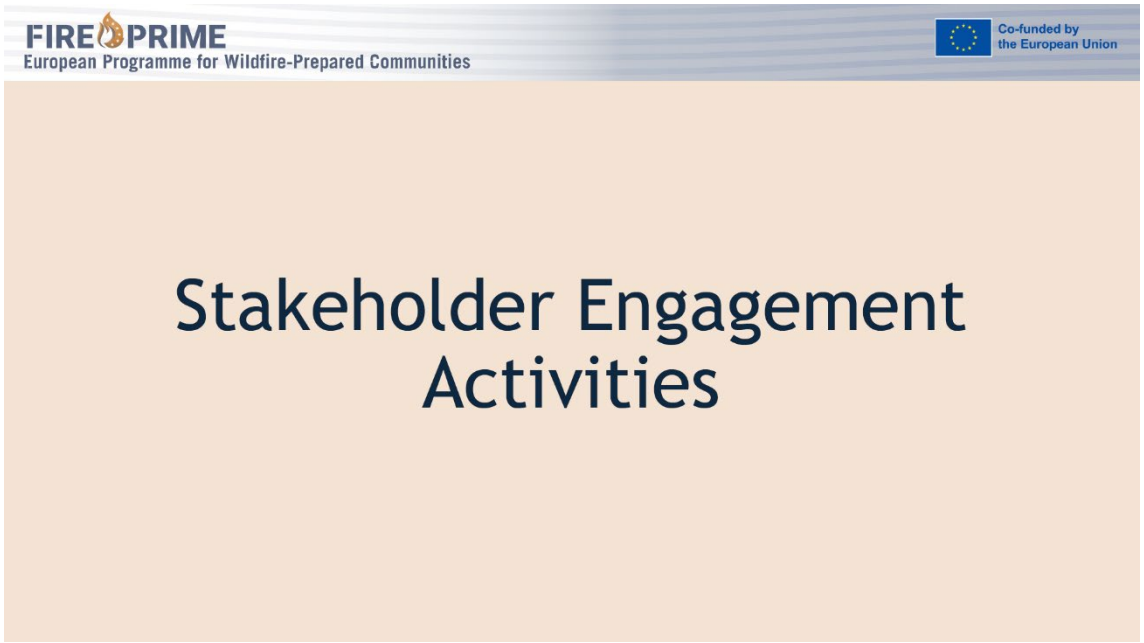
(2) Swedish pilot - West coast
- Network
- Public
- Historically a lot of ignitions

Electrical Substation

(3) Austrian pilot - Tyrol
- Point
- Technical
- Low risk awareness

6


FIRE PRIME
European Programme for Wildfire-Prepared Communities
Co-funded by the European Union
Resilient Infrastructure Stream
1. Collect existing guidance and methods
2. Engage with stakeholders in each pilot
3. Develop guidelines and tools
4. Validate / Share with stakeholders
FIRE PRIME
Objective: Craft recommendations for critical entities exposed to wildfires
Chemical Plant
(1) Spanish pilot - Cataluña
Rail Network
(2) Swedish pilot - West coast
Electrical Substation
(3) Austrian pilot - Tyrol
7


FIRE PRIME
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Stakeholder Engagement Activities

FIREPRIME
European Programme for Wildfire-Prepared Communities

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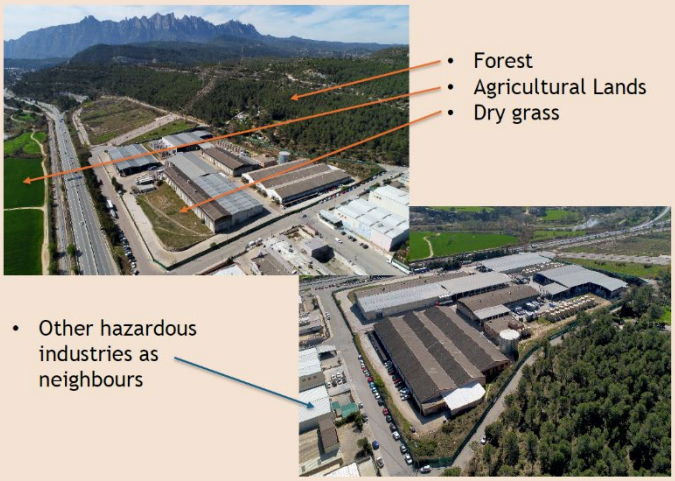
Chemical Storage and Packaging - Spain



- Forest
- Agricultural Lands
- Dry grass

- Other hazardous industries as neighbours

- **Main activity**: Storage of chemical substances in fixed and mobile containers.
- Seveso Upper tier establishment.
- **Industrial Buildings and Components**
  - Closed and open warehouses for chemical storage
  - Two basins for fixed storage tanks
  - Flammable substances stored

FIREPRIME
European Programme for Wildfire-Prepared Communities

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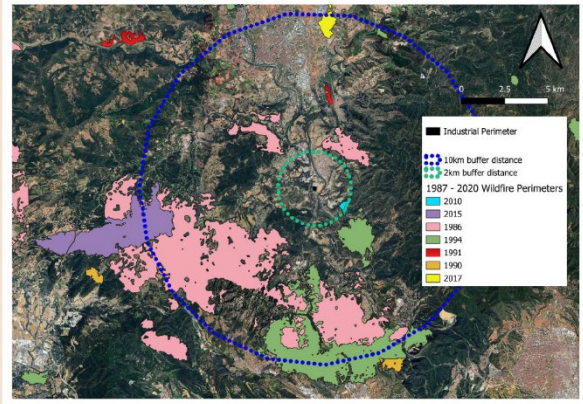
Chemical Storage and Packaging - Spain



- Historically wildfire prone area
- Reviewed local wildfire conditions
  - Topography
  - Land cover
  - Wind patterns

FIREPRIME
European Programme for Wildfire-Prepared Communities

Co-funded by the European Union

Chemical Storage and Packaging - Spain

Stakeholder Activities

Activity 1: Site Visit for Hazard Identification
Date: 30 Jan 2025

Objectives:
- Identify wildfire hazards and site vulnerabilities.
- Engage stakeholders and understand their operational context and risk awareness.

Method:
- Guided tour by the Plant Manager.
- Joint discussion and on-site observation of potential wildfire hazards.

Strengths
- Hazards identified collaboratively with stakeholders.
- Enhanced awareness of all parties regarding interests, needs, and specific plant vulnerabilities.
- High engagement and open discussion.

FIREPRIME
European Programme for Wildfire-Prepared Communities

Co-funded by the European Union

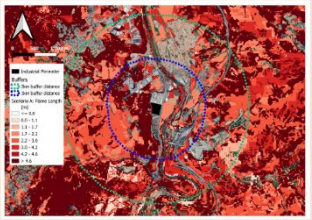
Chemical Storage and Packaging - Spain

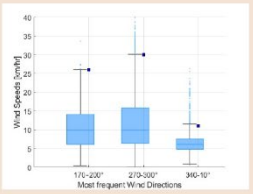
Stakeholder Activities

Activity 2: Testing of Wildfire Risk Assessment Tool
Date: 22 Jul 2025

Objective:
- Test usability, clarity, and validity of the wildfire risk assessment tool.

Method:
- Presented more detailed report on local wildfire historical activity and predicted wildfire behaviour.
- Participants completed the tool independently.
- Results compared with UPC assessments.
- Discussion on usability, clarity, and potential improvements.
- Strengths: Direct testing with real users. Constructive feedback and engagement.





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Electrical Substation - Austria

Activity 1: Zoom with APG (Austrian Power Grid)
Date: 4 Apr 2025

Objectives:
- present FIREPRIME and our objectives
- Engage stakeholders and understand their operational context and risk awareness.

Method:
- Discussion in Zoom
- Forwarding of the draft wildfire risk matrix and guideline

Strengths
- Stakeholders could assess the necessity of our tools
- Enhanced awareness regarding the possibility of a wildfire (an emerging risk for Austria)
- High engagement and open discussion.

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- Enhanced awareness regarding the possibility of a wildfire (an emerging risk for Austria)
- High engagement and open discussion.

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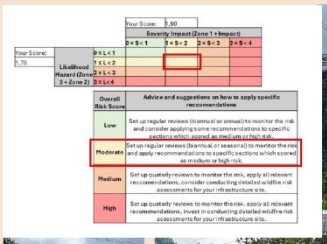
Electrical Substation - Austria

Activity 3: Substation field visit and risk assessment
Date: 24 Apr 2025

Objectives:
- to complete the wildfire risk matrix
- to have a better understanding of the conditions within and surrounding the substation

Method:
- field visit

Strengths
- better understanding of the conditions around and within the substation



Overall Risk Score	Advice and suggestions on how to apply specific recommendations
Low	Set up regular reviews (biannual or annual) to monitor the risk and consider applying some recommendations to specific sections which scored as medium or high risk.
Moderate	Set up regular reviews (biannual or seasonal) to monitor the risk and apply recommendations to specific sections which scored as medium or high risk.
Medium	Set up quarterly reviews to monitor the risk, apply all relevant recommendations, consider conducting detailed wildfire risk assessments for your infrastructure site.
High	Set up quarterly reviews to monitor the risk, apply all relevant recommendations, invest in conducting detailed wildfire risk assessments for your infrastructure site.

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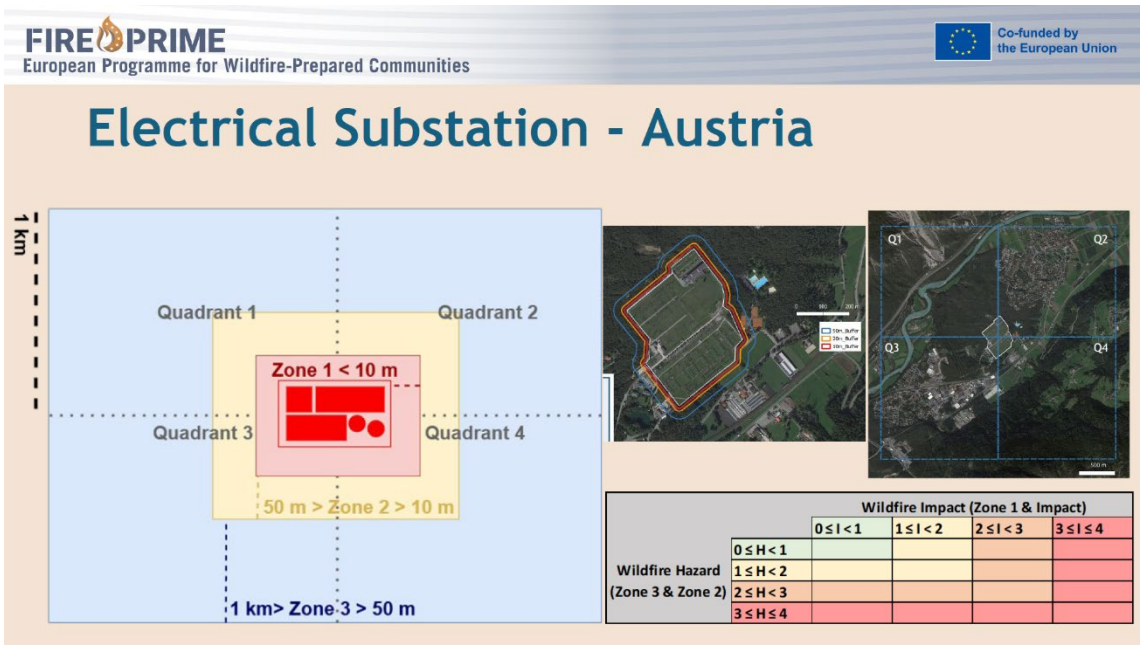
Electrical Substation - Austria

Activity 2: Feedback from APG (Austrian Power Grid)
Date: 4 Jun 2025

Objectives:
- to collect feedback from APG regarding our tools
- To get some information that would help us complete the wildfire risk assessment matrix

Method:
- feedback on the matrix and the guideline was given per email

Strengths
- The stakeholders had a hands-on experience with the wildfire risk matrix


FIRE PRIME
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Electrical Substation - Austria
1 km
Quadrant 1
Quadrant 2
Quadrant 3
Quadrant 4
Zone 1 < 10 m
50 m > Zone 2 > 10 m
1 km> Zone 3 > 50 m
Q1
Q2
Q3
Q4
Wildfire Impact (Zone 1 & Impact)
0≤I<1
1≤I<2
2≤I<3
3≤I≤4
Wildfire Hazard (Zone 3 & Zone 2)
0≤H<1
1≤H<2
2≤H<3
3≤H≤4


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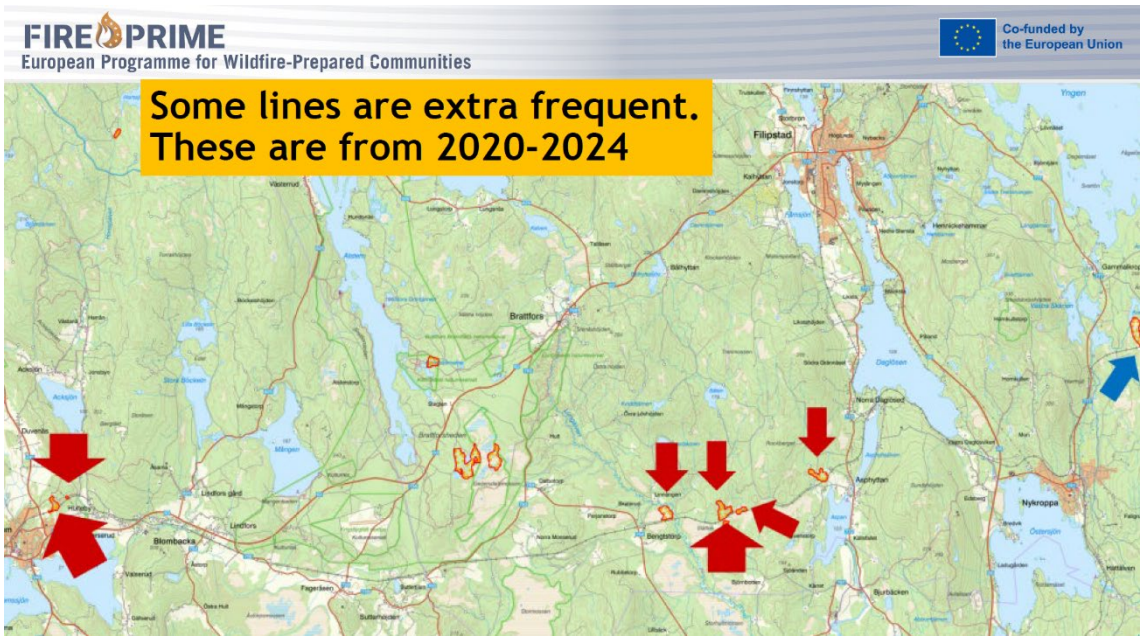
Rail Network- Sweden


FIRE PRIME
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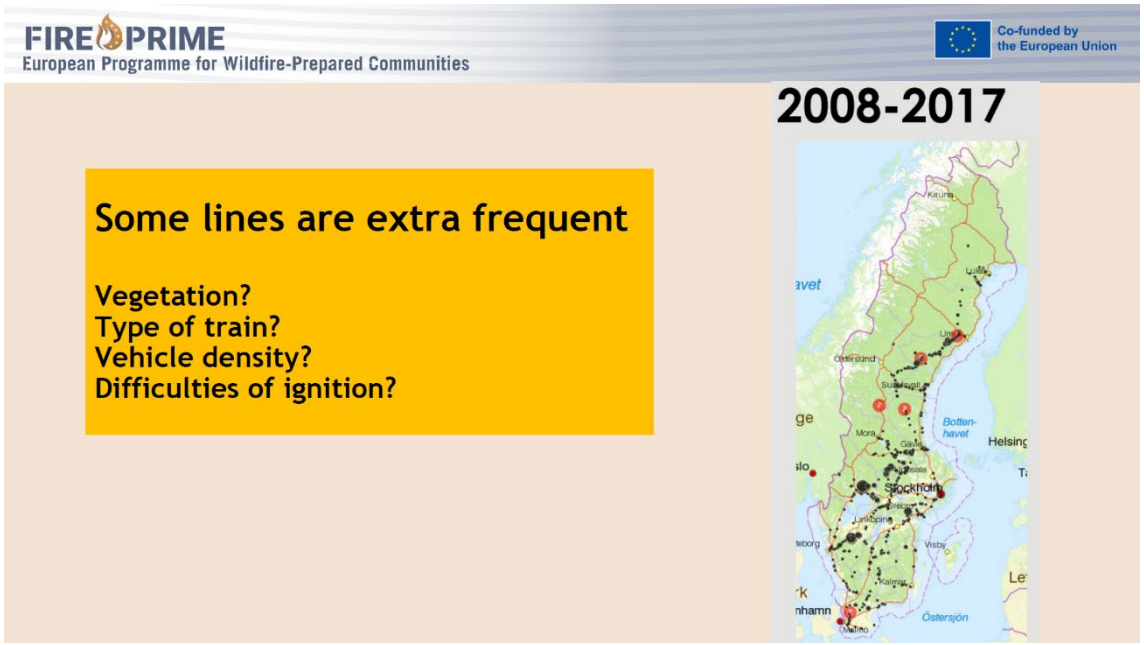
Co-funded by the European Union
Some lines are extra frequent.
These are from 2020-2024
Filipstad
Brattfors
Nykroppa


FIRE PRIME
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Some lines are extra frequent
Vegetation?
Type of train?
Vehicle density?
Difficulties of ignition?
2008-2017
Stockholm
Östersjön


FIREPRIME
European Programme for Wildfire-Prepared Communities
Co-funded by the European Union
Fires STARTING from the railroad are extra difficult
10th of May, 2024
Alarm: "Fire, 2 x 3 m, slowly spreading"
Kramfors
Västernorrlands län
Indalsälven
Härnösand
Ånge
Ljungan
Timrå
Söråker
Sundsvall
Vi
Alnön
E14
Matfors
Stockvik
Kvissleby


FIREPRIME
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Fires STARTING from the railroad are extra difficult
10 May, 2024
Alarm: "Fire, 2 x 3 m, slowly spreading"
Indalsälven
Ånge
Ljungan


FIRE PRIME
European Programme for Wildfire-Prepared Communities
Co-funded by the European Union
Fires STARTING from the railroad are extra difficult
Finaly multiple ignitions over +30 km
Ljungaverk
Fränsta
Rombäck
Viken
Torpshammar
Viskan
Munkbyn
Stöde
Fanbyn
30.65 km


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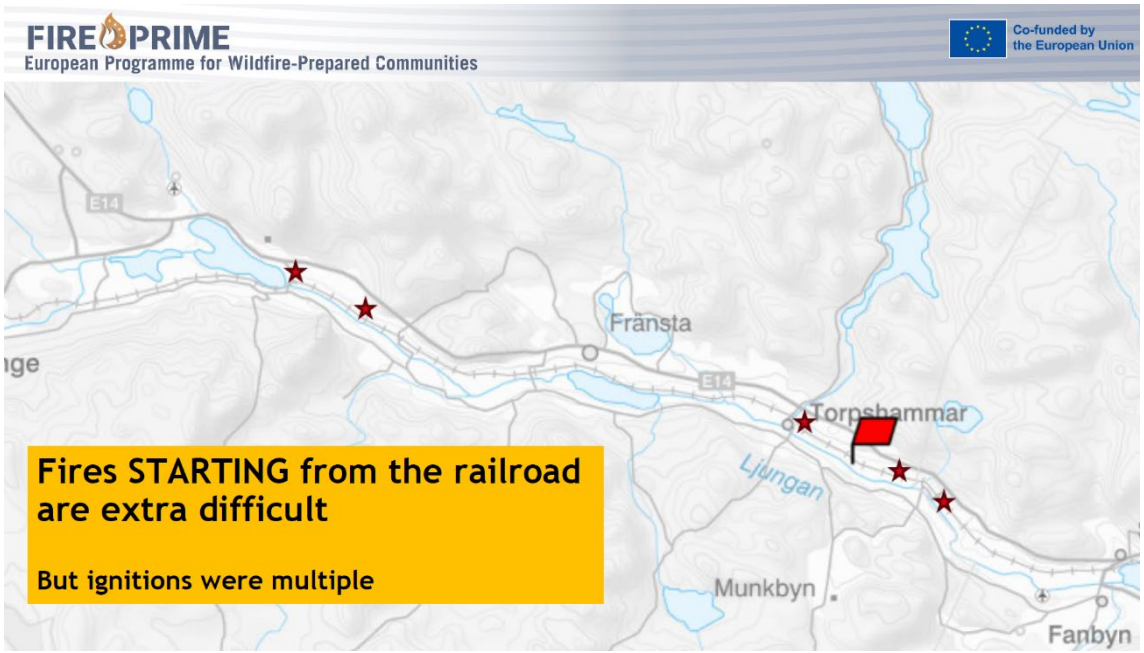
Fires STARTING from the railroad are extra difficult
Had to prioritize saving homes


FIREPRIME
European Programme for Wildfire-Prepared Communities
Co-funded by the European Union
Fires STARTING from the railroad are extra difficult
But ignitions were multiple


FIREPRIME
European Programme for Wildfire-Prepared Communities
Co-funded by the European Union
E14
Fränsta
E14
Torpshammar
Ljungan
Munkbyn
Fanbyn
Fires STARTING from the railroad are extra difficult
But ignitions were multiple


FIRE PRIME
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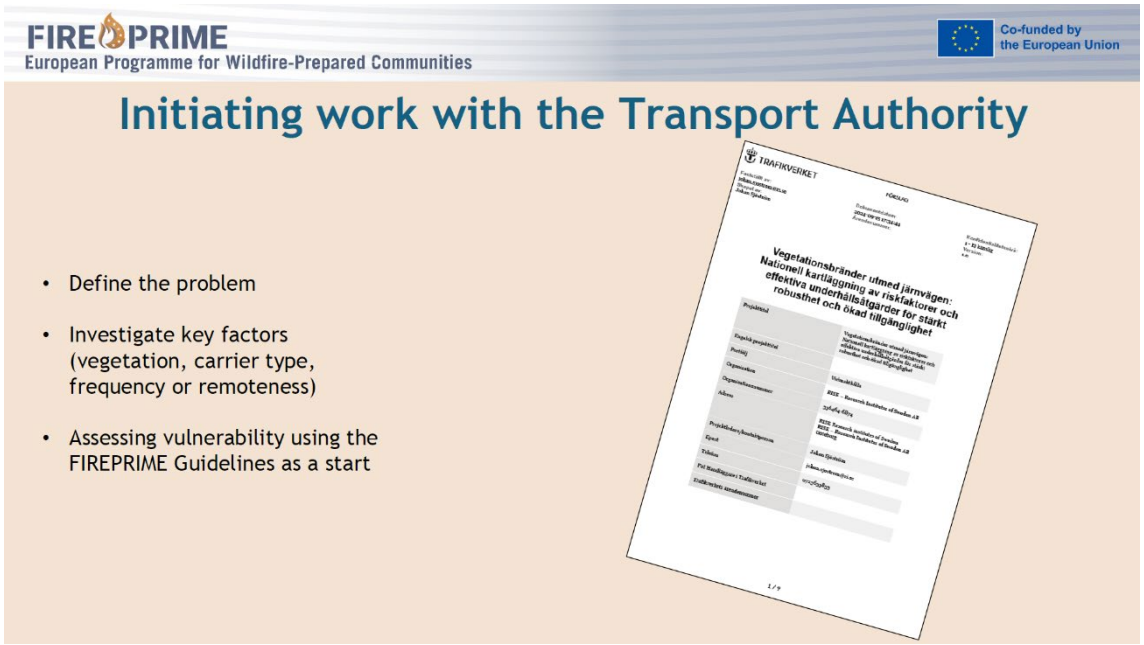
Co-funded by the European Union
Fires STARTING from the railroad are extra difficult
Several structures were lost


FIRE PRIME
European Programme for Wildfire-Prepared Communities
Co-funded by the European Union
Initiating work with the Transport Authority
• Define the problem
• Investigate key factors (vegetation, carrier type, frequency or remoteness)
• Assessing vulnerability using the FIREPRIME Guidelines as a start
TRAFIKVERKET
Vegetationsbränder utmed järnvägen: Nationell kartläggning av riskfaktorer och effektiva underhållsåtgärder för stärkt robusthet och ökad tillgänglighet

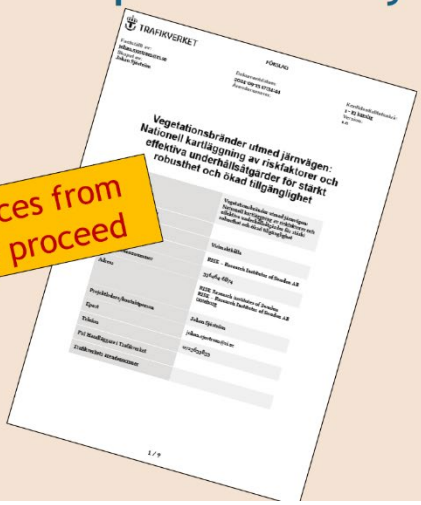
FIREPRIME
European Programme for Wildfire-Prepared Communities

Co-funded by the European Union

Initiating work with the Transport Authority

- Define the problem
- Investigate key factors (vegetation, carrier type, frequency or remoteness)
- Assessing vulnerability using the FIREPRIME Guidelines as a start

Too little resources from the authority to proceed



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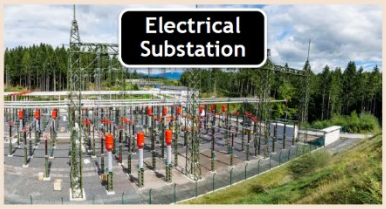
FIREPRIME Tools

FIREPRIME
European Programme for Wildfire-Prepared Communities

Co-funded by the European Union

Overview of Developed Tools



ACCESS THEM HERE

(1) Spanish pilot - Cataluña

(3) Austrian pilot - Tyrol

Wildfire Risk Assessments and Guidelines for Chemical Industry and an Electrical Substation

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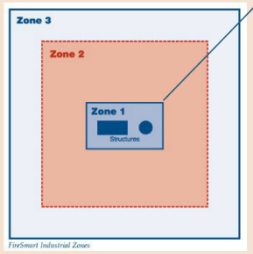
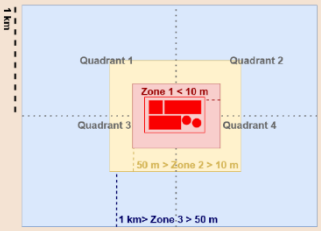
Collecting Existing Guidance and Data

Wildfire Risk Assessments and Guides

FIRESMART Guidelines for Oil and Gas, Canada



FIREPRIME Risk Assessment for Point Infrastructure



Zone 3, Zone 2, Zone 1, and IMPACT

FIREPRIME Assessment Objectives:

- Increase wildfire risk awareness of infrastructure managers
- Define and quantify relative indicators of current risk level
  - Provide recommendations to mitigate wildfire risk
  - Inform if more rigorous assessment are necessary.

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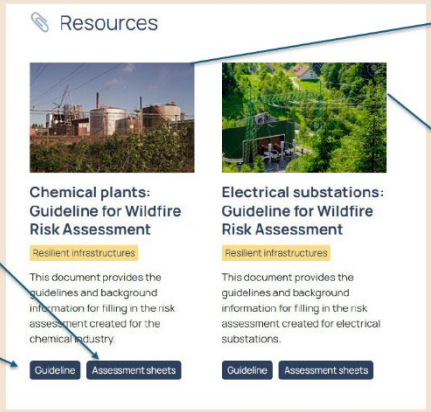
Wildfire Risk Assessments and Guides

Resources:

1. Guide with wildfire background and infrastructure vulnerabilities
2. Risk Assessment excel file with questions, possible scores, scoring and final rate calculation



Chemical Plant

Electrical Substation

- Point infrastructure
- Technical / Utilities (not public access)

34

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Guideline for Wildfire Risk Assessment

- 15 pages
- Useful references
- Photos and figures to illustrate risk concepts and scoring methodology

Background:

- Wildfire ignition mechanism and risk influencing factors
- Specific vulnerabilities and failure modes of infrastructure considered

Risk assessment scoring:

- Guidance and background on every questions to guide scoring
- Reccomendations based on final risk matrix score

35

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Guideline for Wildfire Risk Assessment

Excel macro assessment sheet: (1) Score each Zone (2) Risk Matrix Score (3) Recommendations

Zone 3
- 4 Quadrants
- General Local Risk and Average Burned Area

Zone 2
- Infrastructure location to Forest
- Slope of terrain

Zone 1
- Condition within Plant/Site
- Vegetation on site, Materials and condition of building, equipment

Impact

36

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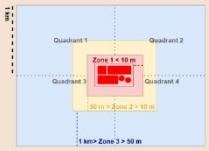
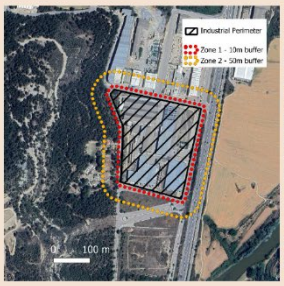
Guideline for Wildfire Risk Assessment

Excel macro assessment sheet: (1) Score each Zone (2) Risk Matrix Score (3) Recommendations





Zone 3
- 4 Quadrants
- General Local Risk and Average Burned Area

Zone 2
- Infrastructure location to Forest
- Slope of terrain

Zone 1
- Condition within Plant/Site
- Vegetation on site, Materials and condition of building, equipment

Impact

37

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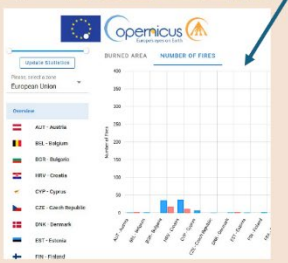
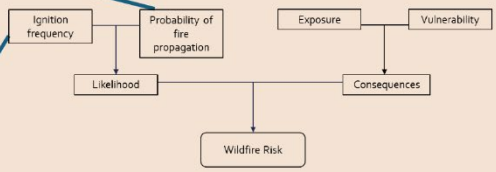
Wildfire Risk Assessments



Zone 3 and Zone 2

Zone 1 and Impact



38

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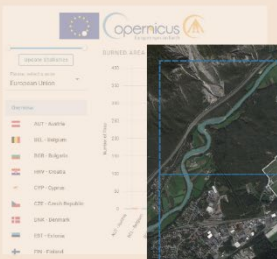
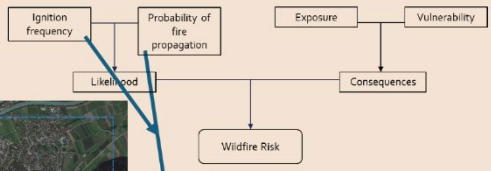
Wildfire Risk Assessments



Zone 3 and Zone 2

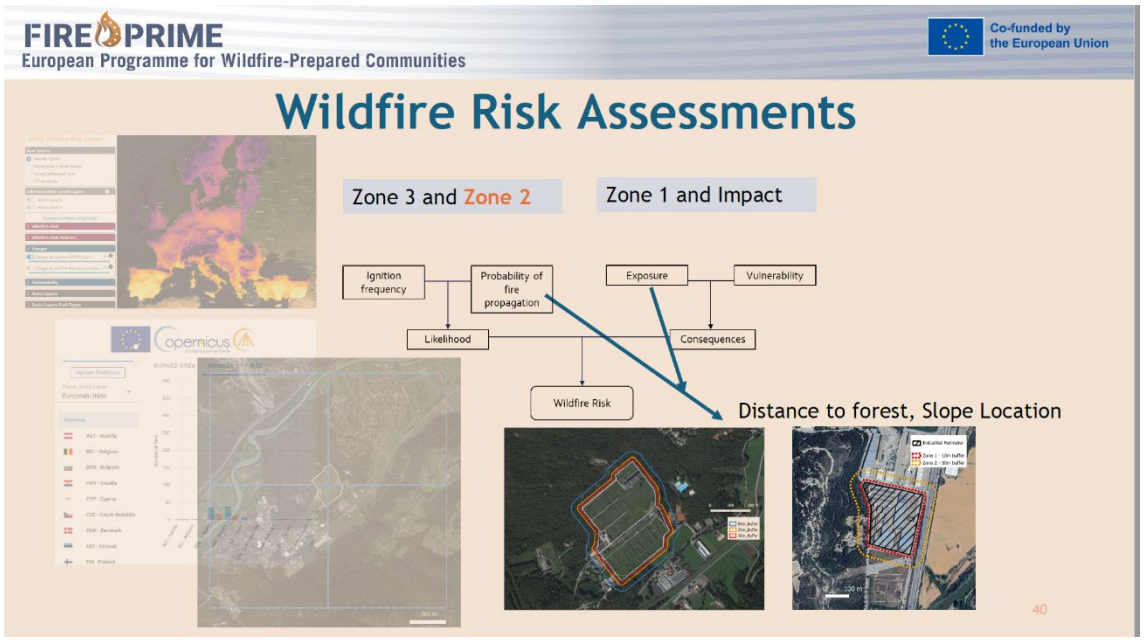
Zone 1 and Impact



Quadrants
Flammability

vegetation type &
density & continuity
Ignition likelihood

39


FIREPRIME
European Programme for Wildfire-Prepared Communities
Co-funded by the European Union
Wildfire Risk Assessments
Zone 3 and Zone 2
Zone 1 and Impact
Ignition frequency
Probability of fire propagation
Likelihood
Exposure
Vulnerability
Consequences
Wildfire Risk
Distance to forest, Slope Location
40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Wildfire Risk Assessments
Zone 3 and Zone 2
Zone 1 and Impact
Ignition frequency
Probability of fire propagation
Likelihood
Exposure
Vulnerability
Consequences
Wildfire Risk
Onsite fire propagation potential & protection systems
Hazardous substances and building structures vulnerability
41

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Wildfire Risk Assessments

Zone 3 and Zone 2

Zone 1 and Impact

Financial and supply chain impact

Service provided - customers and companies

Evacuation routes and drills and access

42

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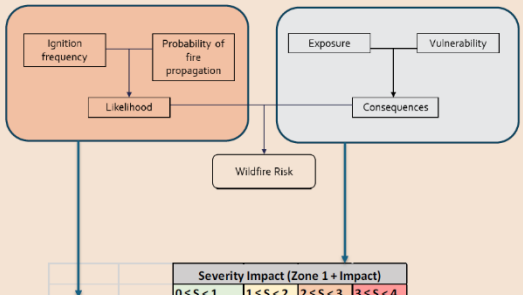
Wildfire Risk Assessments



Zone 3 + Zone 2 = **HAZARD SCORE**

Zone 1 + Impact = **IMPACT SCORE**

Combined in Risk Matrix ▫ **Overall RISK SCORE**

		Severity Impact (Zone 1 + Impact)			
		0 ≤ S < 1	1 ≤ S < 2	2 ≤ S < 3	3 ≤ S < 4
Likelihood	0 ≤ L < 1				
Hazard	1 ≤ L < 2				
(Zone 3 +	2 ≤ L < 3				
Zone 2)	3 ≤ L < 4				

2) Recommendations and advice based on Risk Rating

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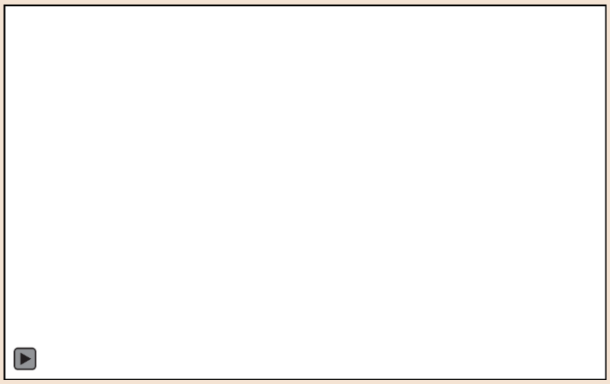
Guideline for Wildfire Risk Assessment

Excel macro assessment sheet: (1) Score each Zone (2) Risk Matrix Score (3) Recommendations



Zone 3 + Zone 2 = **HAZARD SCORE**

Zone 1 + Impact = **IMPACT SCORE**

Combined in Risk Matrix ▫ **Overall RISK SCORE**

44

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Conclusions

1. CI are varied and complex systems, playing an important role in society, and there are increasing regulatory, operational, and research interest in increasing their resilience to climate change risks.
2. Depending on the local region, and general wildfire risk perception, stakeholders contacted showed varying levels of interest and availability in interacting and providing feedback.
3. There are less data requirements to characterise risk for point infrastructure than linear infrastructure - required larger area maps, more advanced exposure analysis.
4. CI safety operators and managers are technically informed professionals, however they already have time and budget allocated for their risk assessments and procedures - need to include incentivization.

45

3.7. DGECHO actions on population preparedness and vulnerable groups

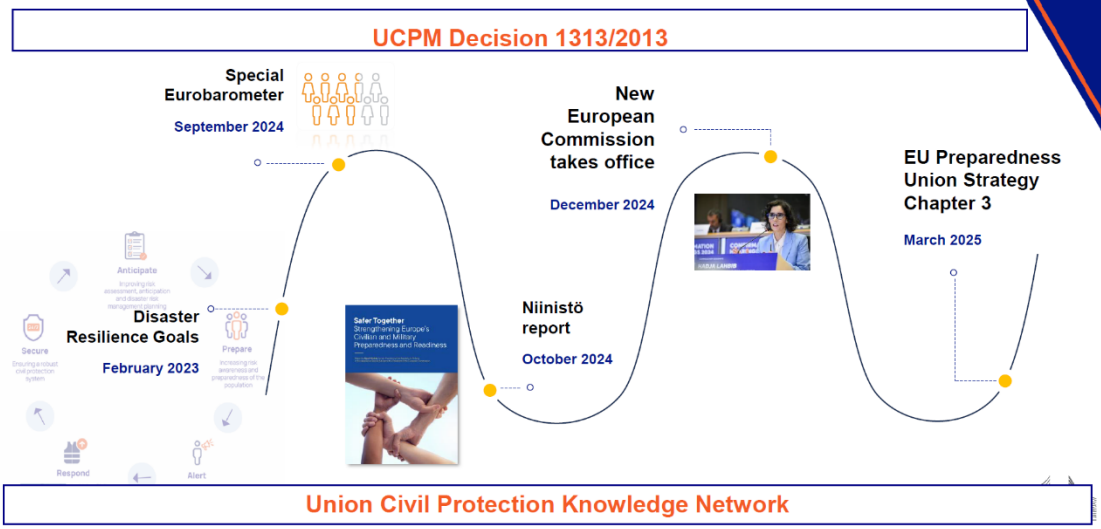
3.7.1. Abstract

The presentation provided by DG ECHO focused on current priorities and actions on population preparedness under the EU Preparedness Union Strategy, with particular attention to vulnerable groups. The first part outlined the wider EU policy framework and the key initiatives currently driven by DG ECHO to improve citizen preparedness. These include, among others, strengthening early-warning systems, increasing public risk awareness, promoting self-sufficiency for the first 72 hours of an emergency, and integrating preparedness into school curricula. Examples of EU-funded projects addressing population preparedness were highlighted, including PrepareEU, Empower-Citizens, FIREPRIME, and WUITIPS, along with an overview of relevant upcoming funding opportunities.

The second part of the presentation focused on the evolving European risk landscape, emphasising cross-border threats and the increasing impact of climate change on disasters such as wildfires. Within this context, DG ECHO described its strategic attention to vulnerable groups, particularly targeting persons with disabilities, and first response and crisis communication adapted to these needs. The presentation stressed the need to ensure that preparedness actions, tools, and messaging are inclusive and accessible to those most at risk.

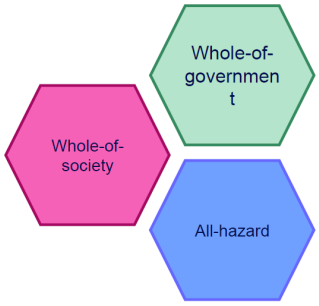
3.7.2. Presentation printout

Population preparedness: EU Legal and policy context



Population Preparedness in the Preparedness Union Strategy

Need for a more integrated, proactive, upscaled approach to preparedness



European Union

1. Foresight and anticipation
2. Resilience of vital societal functions
3. Population preparedness
4. Public – private cooperation
5. Civil – military cooperation
6. Crisis response
7. Resilience through external partnerships

Population Preparedness
Key actions

- Action 26. Improve early warning systems
- Action 27. Increase awareness about risks and threats
- Action 28. Develop guidelines to reach a population self-sufficiency of minimum 72 hours
- Action 29. Include preparedness in school education curricula and training of educational staff
- Action 30. Promote preparedness in Erasmus+ and the European Solidarity Corps
- Action 33. Develop guidelines on how to act in emergencies, adapted to all types of disability

European Union

Union Civil Protection Knowledge Network

Next steps

DG ECHO to finalise the mappings, draft guidelines and concepts using service contracts and existing tools

Co-creation of the final products with Member States through the Knowledge Network

Engagement with associated DGs and Citizens
(up to 11 DGs for action 26; Citizens Panel)

Consult with Member States at PROCIV

Implementation through capacity building and funding, dissemination, CP Forum, Knowledge Network Platform

European Union

Union Civil Protection Knowledge Network

Union Civil Protection Mechanism projects addressing Population Preparedness

... and UCPM Capacity Building funding opportunities

- preparEU pilot project
- Empower - Citizens
- Fireprime
- Wuitips
- ...

Technical Assistance for Disaster Risk Management (Track 1)

Knowledge for Action in Prevention and Preparedness (KAPP)

Technical Assistance Financing Facility (TAFF)

European Union

Union Civil Protection Knowledge Network

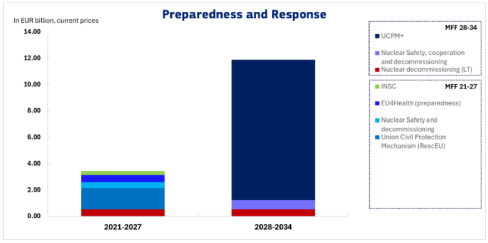
Operational calls and Horizon Europe

Preparedness Union Strategy -
- Knowledge for Action in Prevention & Preparedness (KAPP)
- Technical Assistance for Disaster Risk Management (Track 1)
- Technical Assistance Financing Facility (TAFF)

} For authorities

All open again in early 2026!

Also: *DRAFT* HORIZON-CL3-2027-01-DRS-02: Societal resilience, engagement of the younger generations and digital innovation for disaster resilience



Erasmus + and European Solidarity Corps

Erasmus +
Key Action 2: Cooperation among organisations and institutions
- Small-scale and Cooperation partnerships
- Alliances for Innovation and Forward-Looking Projects

Jean Monnet Actions

European Solidarity Corps: Participation of young people and organisations working in education and training and on disaster preparedness:
– Volunteering Projects
– Volunteering Teams in High Priority Areas
– Solidarity Projects

All just opened in November 2025!

Before applying:
- Familiarise yourself with the European Solidarity Corps Guide and the -Erasmus+ Programme Guide
- Check whether your organisation is eligible.
- Apply for the Quality Label

Fill in copyright information.

Thank you

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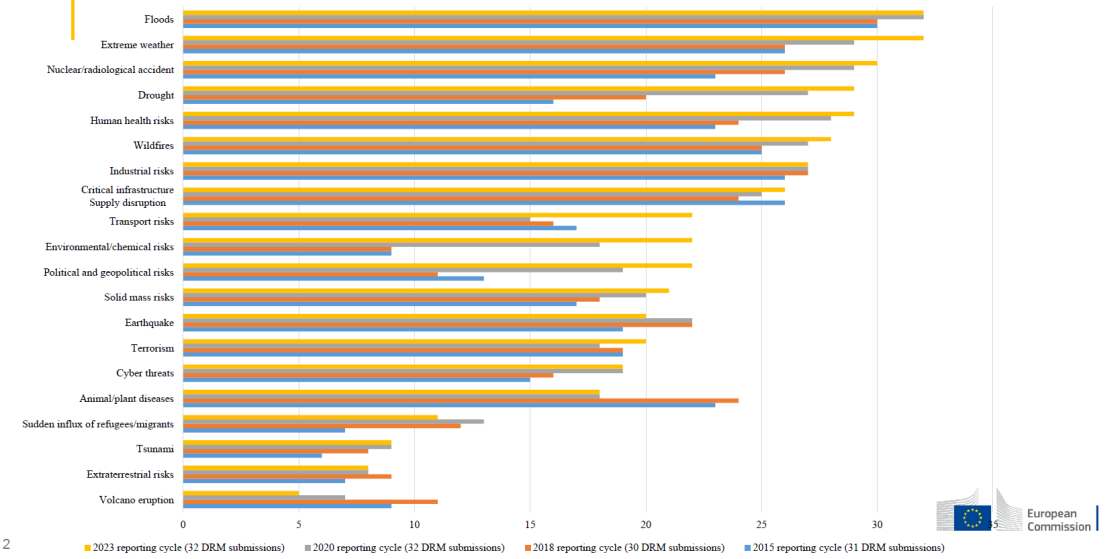
Wildfire in Disaster Risk Management Reporting

DRGs and Article 6 report findings

Riccardo Grisanti, ECHO.B.2 - Civil Protection Policy

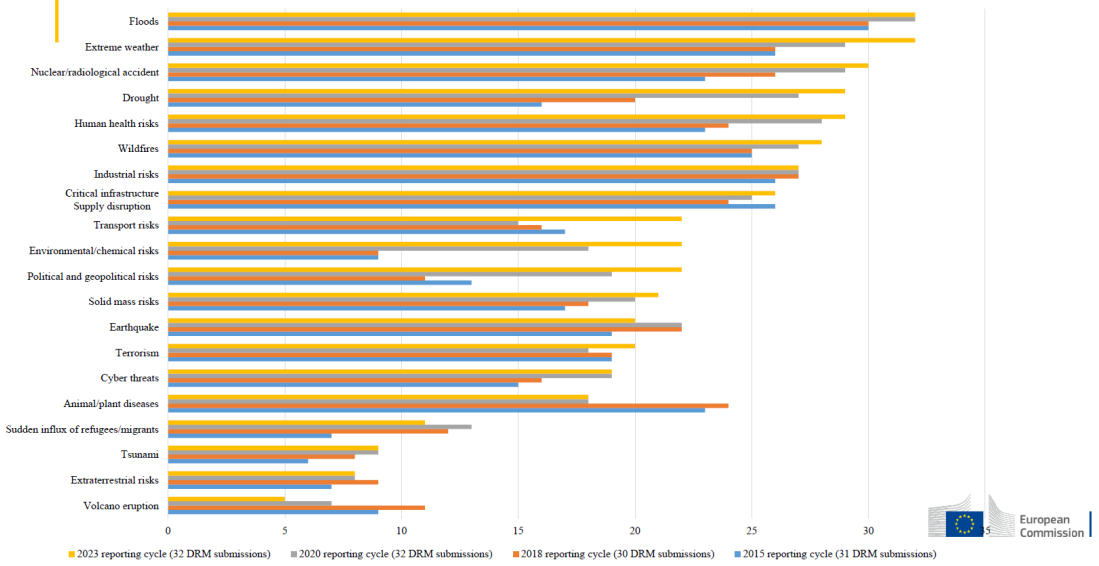
1

Risk landscape evolution



2

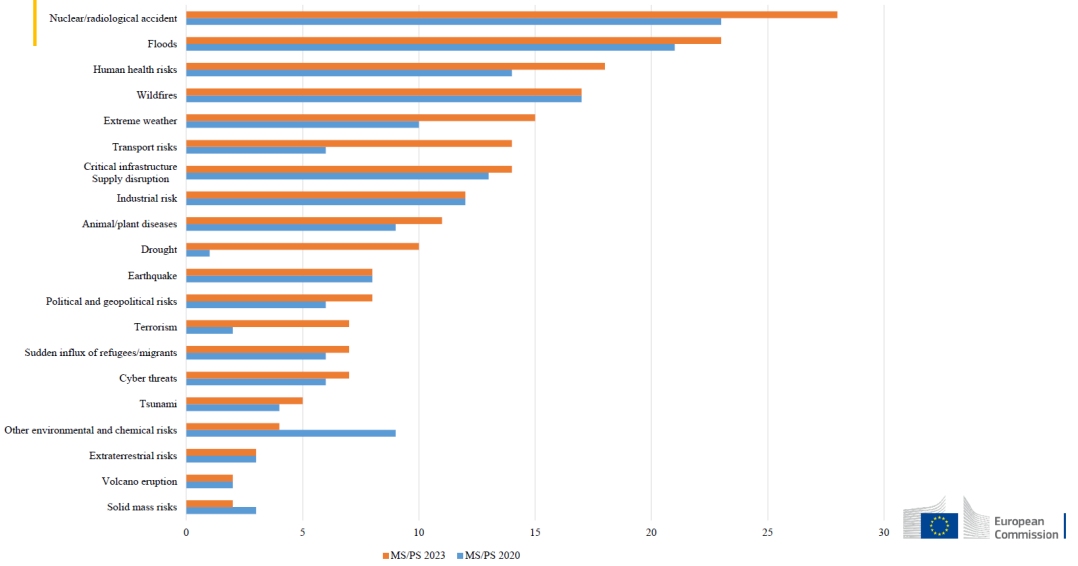
Risk landscape evolution



European Commission

2

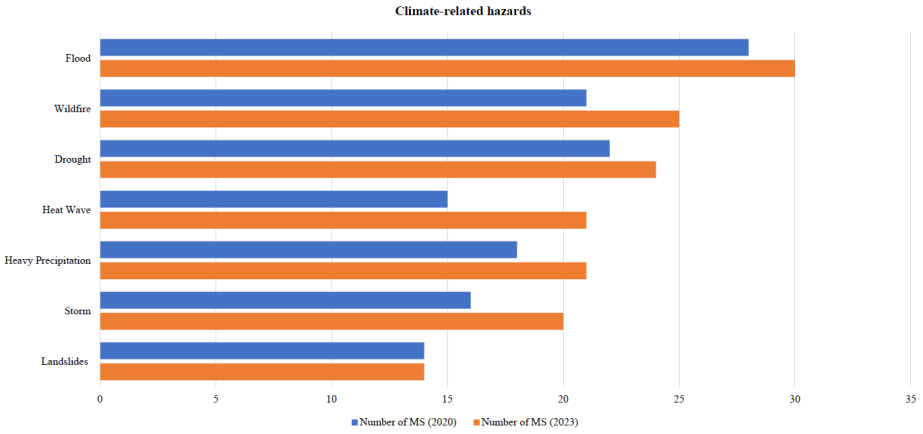
Cross-border risks identification and evolution



European Commission

3

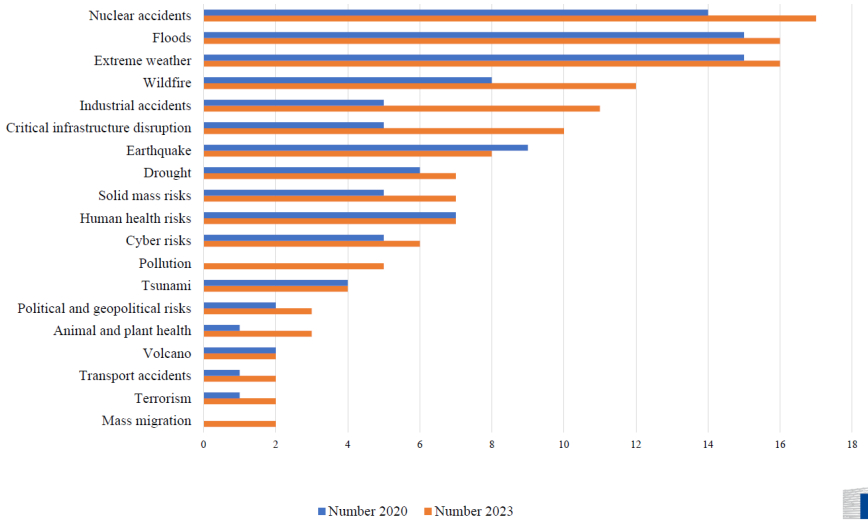
Climate change impacts



European Commission

4

Risks covered by EWS



European Commission

5

Context

- 16% of the global population lives with some kind of disability
- Situations of emergencies exacerbate existing vulnerabilities.
- The Preparedness Union Strategy focuses on these aspects as well

European Commission

7

Action 33 of the Preparedness Union Strategy

"Develop guidelines on how to act in emergencies, adapted to all types of disability (sensorial, physical, intellectual) and training of first responders to recognize the type of disability and how to act accordingly."

European Commission

8

Action 33 of the Preparedness Union Strategy

Persons with disabilities	First responders	Crisis communication
• Provisions of right tools on how to act • Tailored approaches to disabilities	• Recognition of the types of disabilities • Action tailored to the disability	• Development of public warning reaching all citizens, including those with vulnerabilities

European Commission

9

Full text/further information

Report

Staff working document

10

European Commission

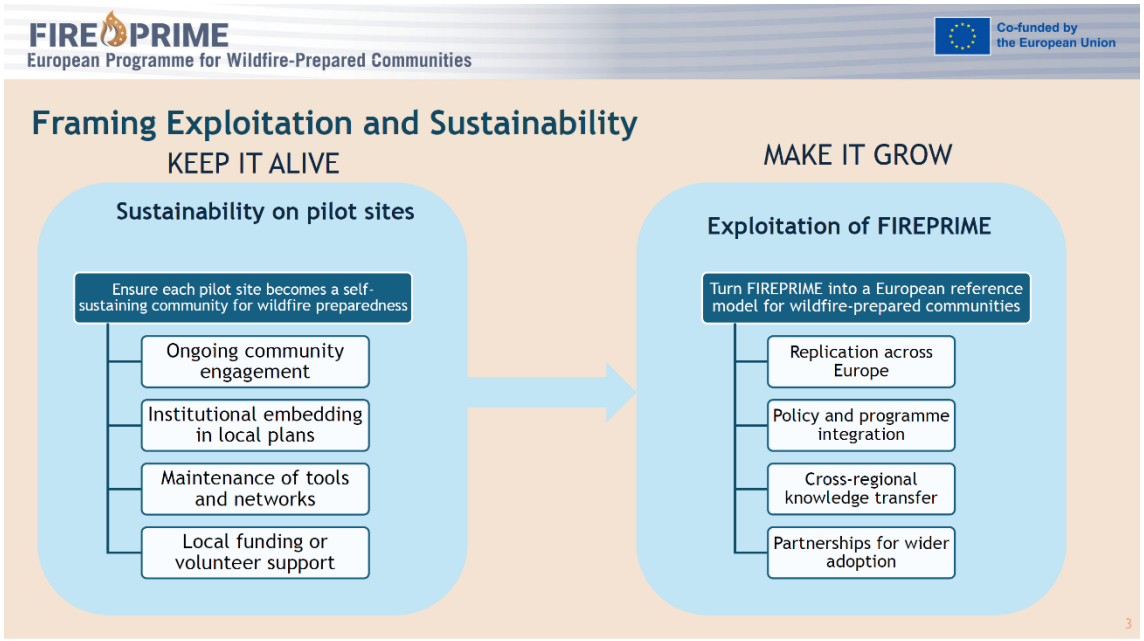
3.8. FIREPIRME exploitation challenges and opportunities

3.8.1. Abstract

The presentation addressed how FIREPRIME can evolve from a pilot-scale initiative into a sustainable and scalable programme for wildfire-prepared communities across Europe. The discussion was structured around two complementary goals: “Keep it Alive”—ensuring continuity in the pilot areas—and “Make it Grow”—facilitating expansion into new territories. The FIREPRIME framework combines a practical toolkit (smartphone app, educational resources, and risk management tools) with community-based governance and local empowerment strategies. Opportunities and challenges were analysed for each pilot country. In Spain, strong local engagement, alignment with municipal priorities, and the presence of self-protection groups support long-term sustainability, though continued funding will be essential. In Austria, low wildfire risk perception and competing hazards pose barriers, yet rising institutional interest and a strong volunteer firefighting culture provide clear avenues for expansion. In Sweden, awareness generated by recent fire events and synergy with existing “fire-smart gardening” campaigns offer potential, although financial support and regional adaptation remain key issues. At the European level, FIREPRIME demonstrates high potential for integration into civil protection preparedness frameworks and risk-reduction policies. The programme can fill local data gaps, complement ongoing communication campaigns, and support emerging structures for community-level wildfire resilience. Unlocking long-term sustainability will require incentives, dedicated governance models, diversified funding mechanisms, and partnerships beyond emergency services, including insurance and other private-sector actors.

3.8.2. Presentation printout


FIREPRIME
European Programme for Wildfire-Prepared Communities
Co-funded by the European Union
Wildfire Prepared Communities: A long way to get here
•Nothing similar at EU level: Existing unidirectional communication strategies, with low commitment from potentially affected people.
•Need to adapt these programs approaches at EU, promoting wildfire prepared communities → More engagement and empower local communities
FIREWISE USA
First attempts on doing isolated steps to assist community preparedness
•Tools/Methods to assist risk assessment: WUIWATCH, WUIVIEW
•Communication tools on risk awareness and preparedness: eFIRECOM, CUIDAR, SparkleFire, EduFire Toolkit, Art&Fire
•One-day activities with neighbors/children: MEFITU, RECIPE, Preparedness Days organized with different municipalities…
•Comprehensive analysis of wildfire risk in BCN WUI identifying social, ecological, and infrastructural vulnerabilities. Based on this, it developed innovative strategies and tools to enhance fire resilience and promote inclusive, participatory risk management
WUICOM BCN
FIREPRIME
•European Program for Wildfire Prepared Communities
2


FIREPRIME
European Programme for Wildfire-Prepared Communities
Co-funded by the European Union
Framing Exploitation and Sustainability
KEEP IT ALIVE
Sustainability on pilot sites
Ensure each pilot site becomes a self-sustaining community for wildfire preparedness
Ongoing community engagement
Institutional embedding in local plans
Maintenance of tools and networks
Local funding or volunteer support
MAKE IT GROW
Exploitation of FIREPRIME
Turn FIREPRIME into a European reference model for wildfire-prepared communities
Replication across Europe
Policy and programme integration
Cross-regional knowledge transfer
Partnerships for wider adoption
3

FIREPRIME
European Programme for Wildfire-Prepared Communities

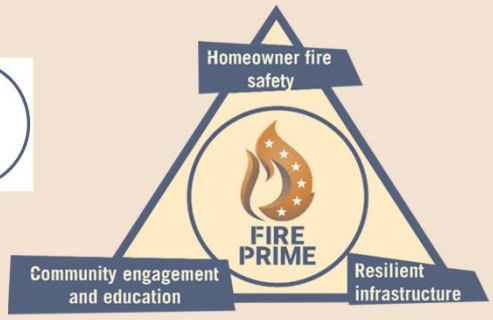
Co-funded by the European Union

What is FirePrime?

COLLABORATIVE FRAMEWORK

- Collaborative framework for citizens and local authorities to foster wildfire risk awareness and preparedness measures based on households and community empowerment

FIREPRIME TOOLKIT



4

FIREPRIME
European Programme for Wildfire-Prepared Communities

Co-funded by the European Union

SUSTAINABILITY IN SANT CUGAT

CHALLENGES

- To engage other communities
- To keep the engagement with pilot communities
- Integrate FIREPRIME toolkit into local action
- Financial support

OPPORTUNITIES

- Local volunteers supporting FirePrime implementation engaged.
- Self-protection groups.
- Alignment with local stakeholders.
- Wildfire as a local priority.
- Toolkit successfully implemented and adapted.

5

FIREPRIME
European Programme for Wildfire-Prepared Communities

Co-funded by the European Union

SUSTAINABILITY IN AUSTRIA

CHALLENGES

- Low risk perception of the communities living in the WUI
- Other hazards (e.g. floods, torrential hazards) seem to occupy the interest of communities and authorities
- Very strong lobbies (e.g. tourism)
- Financial support (e.g. maintenance of the App) may be difficult given national austerity measures.

OPPORTUNITIES

- There is an increasing interest of authorities and ministries given recent significant wildfire events
- The FIREPRIME programm could be integrated in existing schemes originally planned for other hazards
- Voluntarism, especially in the fire services is large in Austria (more than 4500 volunteer fire fighters) and could support the further deployment of FIREPRIME.

6

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SUSTAINABILITY IN SWEDEN

CHALLENGES

- Interest comes from relevant wildfire events
- Vulnerable houses
- Financial support

OPPORTUNITIES

- Alignment between wildfire-resilient garden practices and other homeowner incentives: Fire smart gardens
- Distribution of simplified flyers through the Civil Contingencies Agency (MSB)
- Further development of the app with regional fire danger and fuel information

7

FIREPRIME
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From pilot to a widespread program

How can we build on the lessons from our pilots to design a scalable and lasting model for community wildfire preparedness?

8

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TOPICS TO BE ADDRESSED

9

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TOPICS TO BE ADDRESSED

	Local	National	International
Contextual adaptation	Risk perception. Local social, economic and risk contexts.	Risk context. Languages.	Basic guidelines. Lessons learned and exchange.
Stakeholder involvement	Municipalities, neighbors' associations, local fire stations, schools…	CP agencies, regional governments…	DG ECHO, NGOs…
Governance	Self-protection groups.	Bridge between local and board committee. Programme adaptation.	Board committee.
Dissemination	Community campaigns. Local media. Schools.	National guidelines. Communication.	Best-practice sharing. EU-wide communication. Website.
Capacity building	Training for community leaders, volunteers and CP local authorities.	Trainers. Content adaptation.	Contents development.

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FIREPRIME
European Programme for Wildfire-Prepared Communities

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TOPICS TO BE ADDRESSED

	Local	National	International
Private-public collaboration	Local sponsors (e.g. forestry companies…)	Insurance companies. National sponsors.	Innovation partnerships.
New tools and methods	Tools adaptation.	Tools adaptation Interoperability with national standards/databases.	New risk assessment, awareness and preparedness tools.
Policy and planning alignment	Harmonize FirePrime with local plans.	Links with national DRR and resilience strategies.	Links with DRR and resilience policies.
Monitoring and evaluation	Track local preparedness indicators.	National preparedness assessments.	Common framework for Preparedness metrics.
Funding mechanisms	To implement activities.	National adoption.	International funding.

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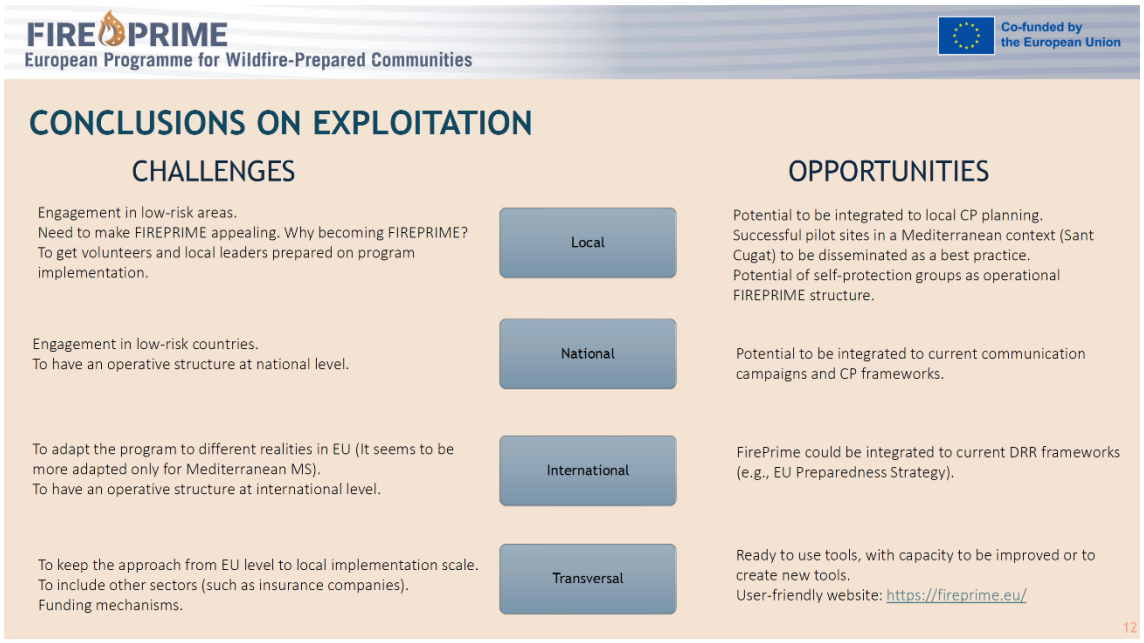
FIREPRIME
European Programme for Wildfire-Prepared Communities
Co-funded by the European Union
CONCLUSIONS ON EXPLOITATION
CHALLENGES
OPPORTUNITIES
Engagement in low-risk areas.
Need to make FIREPRIME appealing. Why becoming FIREPRIME?
To get volunteers and local leaders prepared on program implementation.
Local
Potential to be integrated to local CP planning.
Successful pilot sites in a Mediterranean context (Sant Cugat) to be disseminated as a best practice.
Potential of self-protection groups as operational FIREPRIME structure.
Engagement in low-risk countries.
To have an operative structure at national level.
National
Potential to be integrated to current communication campaigns and CP frameworks.
To adapt the program to different realities in EU (It seems to be more adapted only for Mediterranean MS).
To have an operative structure at international level.
International
FirePrime could be integrated to current DRR frameworks (e.g., EU Preparedness Strategy).
To keep the approach from EU level to local implementation scale.
To include other sectors (such as insurance companies).
Funding mechanisms.
Transversal
Ready to use tools, with capacity to be improved or to create new tools.
User-friendly website: https://fireprime.eu/
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FIREPRIME
European Programme for Wildfire-Prepared Communities
Co-funded by the European Union
Thank you!
More information:
gcanaleta@paucostafoundation.org
@FIREPRIME_EU
Fireprime project
https://civil-protection-knowledge-network.europa.eu/projects/fireprime
UNIVERSITAT POLITÈCNICA DE CATALUNYA BARCELONATECH
Universitat Oberta de Catalunya
PAU COSTA FOUNDATION
BOKU UNIVERSITY
RISE Research Institutes of Sweden
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4. Round-table discussion - Shaping FIREPRIME's future

During the second day of the workshop, a round table discussion focused on how FIREPRIME could be useful—or even integrated—across different administrative levels (local, national, and EU) and in different countries. The discussion benefited from the participation of Maria Martín de Almagro (DG-ECHO), Montse Mora (MITECO, Spain), Núria Gasulla (Direcció General de Protecció Civil, Catalonia, Spain), and Gavriil Xanthopoulos (Institute of Mediterranean Forest Ecosystems, Greece).(Figure 4).

Figure 4. Round table discussion at FIREPRIME workshop.

The speakers shared their insights in response to a set of guiding questions presented by Guillem Canaleta (PCF), who moderated the session:

- *What are the main barriers you have faced working on WUI fire risk management at your institution? Would FIREPRIME be useful to solve some of the challenges?*
- *Do you see any synergy with the project? Any opportunity to use some of the FIREPRIME tools to your current WUI risk management approach?*
- *What mechanisms or collaborations do you see as essential to promote the uptake of FIREPRIME tools at regional/national/European levels?*

From the perspective of MITECO, FIREPRIME outcomes were considered highly valuable for supporting the adoption and dissemination of national best practices in wildfire preparedness. In particular, the educational materials and self-protection guidelines developed within the project were seen as capable of enhancing existing national tools and improving communication with residents living in WUI areas.

Civil Protection of Catalonia highlighted the usefulness of the FIREPRIME toolkit for strengthening governance and operational strategies at local level. The tools were identified as particularly relevant for assessing self-protection capacities within communities, supporting

mayors and municipal actors in preparedness planning, and providing a clearer operational picture of local vulnerabilities. Overall, FIREPRIME was seen as a meaningful contribution to capacity building across municipalities.

The international expert from Greece noted that the FIREPRIME risk assessment approach aligns well with methodologies previously applied in Greek contexts. For broader European implementation, it was emphasized that the toolkit should be adapted to different WUI typologies and local realities. When integrated with local governance structures, the approach can effectively support both evacuation decision-making and community preparedness.

From the DG ECHO perspective, FIREPRIME was recognised as a valuable contribution to refining existing EU-level WUI guidelines, filling data gaps at community scale, and supporting preparedness communication, particularly for vulnerable groups. It was also noted that FIREPRIME tools and findings could be disseminated through the Civil Protection Knowledge Network. Several European funding instruments were identified as potential pathways to support future uptake, including the KAPP call, Horizon Europe Cluster 3, Erasmus+, and the European Solidarity Corps.

5. Co-creation session

A two-hour co-creation session was organised as part of the workshop to foster in-depth discussion on the exploitation of the FIREPRIME project. Participants were divided into thematic groups, each addressing a different aspect of FIREPRIME sustainability and exploitation. The session was structured into two rounds of one hour each. After the first round, participants rotated to a different table, ensuring that each participant contributed to two separate thematic discussions.

Each group focused on specific exploitation-related topics and was facilitated by two members of the FIREPRIME consortium, who remained at the same table throughout the session. Their role was to moderate the discussions and document the key ideas and conclusions.

The thematic tables were defined according to participants' profiles and expertise. Topics included:

- App sustainability and business models
- Uptake and integration of the critical infrastructure tools
- Exploitation pathways in Catalonia
- Exploitation at European level

The co-creation process was built around a forward-looking exercise in which participants were invited to envision a successful FIREPRIME programme ten years into the future and then work backwards to identify the key steps, decisions, and conditions that would have enabled this success.

5.1. App sustainability and business models

The discussion focused on how to ensure the long-term sustainability of the FIREPRIME smartphone app beyond the project lifetime (Figure 5) . Participants envisioned FIREPRIME as a widely adopted, free-to-use tool with broad uptake across Europe, adaptable to different WUI contexts and useful for both residents and local authorities. Maintaining free access was considered essential to maximise participation, while future development could include enhanced interactivity, local networking features, and improved aggregation of information to support decision-making at different scales.

Data management and governance were identified as critical issues. Participants noted that avoiding formal data certification could reduce legal and operational burdens, while softer mechanisms—such as reminders or safety notifications—could encourage users to keep information updated. The possibility of developing differentiated versions of the app for citizens and authorities was discussed, recognising that data use and responsibilities vary between Member States and governance levels.

Regarding funding, participants agreed that long-term maintenance would require diversified support, as DG ECHO does not typically fund app upkeep. Potential pathways included partnerships with insurance companies or private-sector actors, integration with existing European platforms, and follow-up projects focused on deployment rather than development. Municipalities and national authorities were seen as key multipliers for dissemination, particularly when embedding the app into preparedness campaigns. Overall, the discussion highlighted the need to clarify governance responsibilities, secure sustainable funding, and prioritise usability and visibility while keeping the app freely accessible.

Figure 5. Co-creation session with the first group participants on the App sustainability and business models.

5.2. Uptake and integration of the critical infrastructure tools

The discussion focused on how the FIREPRIME critical infrastructure wildfire risk assessment tools could be improved, adopted, and integrated into operational and regulatory frameworks (Figure 6). Participants identified several potential enhancements to increase usability and attractiveness for operators. These included developing more user-friendly data collection interfaces, such as a dedicated app or on-site digital forms, and expanding the methodology to cover a broader range of critical infrastructures. Suggested extensions included photovoltaic installations, nuclear power plants, military facilities, and sites involving explosive or hazardous material storage. Participants also highlighted the importance of integrating wildfire risk assessments with evaluations of other natural hazards to support a more comprehensive, multi-risk approach.

Another key aspect concerned the operational relevance of the tool for infrastructure managers. Participants stressed the need to incorporate clearer guidance on mitigation and response actions to be taken by plant managers and operators when a wildfire approaches within defined distance thresholds. In addition, the assessment should better account for how surrounding landscape conditions and vegetation evolve over time, including mechanisms for monitoring these changes and updating risk levels accordingly.

Regarding uptake and long-term commitment, the discussion emphasised the importance of identifying and engaging the actors responsible for implementing the European Directive on Critical Entities. Professional associations and operator networks were seen as important entry points, as were local authorities responsible for land management around critical infrastructure sites. Participants also identified potential multipliers, such as insurance companies, that could

help promote adoption. While voluntary uptake is possible, legislation was considered a key driver to ensure consistent implementation, with examples cited from countries where operators are already required to assess wildfire risk.

Finally, participants discussed incentives and implementation mechanisms to encourage regular use of the assessment. Introducing a certification scheme was proposed as a way to increase visibility and credibility, alongside defining a limited validity period for assessments to ensure they are periodically updated as conditions change. Linking the tool to existing operational awards or sustainability and safety recognition programmes was also identified as a promising strategy to motivate uptake and embed wildfire risk management more firmly within organisational practices.

Figure 6. Co-creation session with the first group participants on the uptake and integration of the critical infrastructure tools

5.3. Exploitation pathways in Catalonia

The discussion highlighted that exploiting FIREPRIME in Catalonia requires addressing governance, data management, and community engagement challenges (Figure 7). The information generated by the FIREPRIME App was seen as valuable for emergency services and decision-makers, but also sensitive for residents. Transparency about data use and clear consent mechanisms were therefore considered essential, with local data storage identified as an important trust-building feature. While integrating FIREPRIME outputs into existing GIS platforms could significantly improve emergency planning—particularly when combined with social vulnerability mapping—participants stressed that such integration is only meaningful if a sufficiently representative number of residents engage with the tool.

Municipalities were recognised as key actors in sustaining FIREPRIME, although their capacity varies widely across Catalonia. Smaller municipalities may require support from regional structures, while the involvement of local Civil Protection services was seen as critical for successful implementation. Flexible governance models were considered necessary to reflect the diversity of territorial and administrative contexts across the region.

Community dynamics were identified as a decisive factor for uptake. Neighbourhoods with strong social cohesion are more likely to engage, whereas others may require additional facilitation and incentives. Participants emphasised that the App should not be viewed solely as a data collection tool: the assessment process itself can raise awareness and stimulate collective reflection when combined with complementary activities such as Preparedness Days. In the long term, FIREPRIME was seen as a catalyst for embedding wildfire preparedness into a broader culture of risk awareness and resilience across Catalonia.

Figure 7. Co-creation session with the second group participants on exploitation pathways in Catalonia

5.4. Exploitation at European level

Participants envisioned FIREPRIME in ten years as a flexible, EU-level programme embedded within existing European wildfire and civil protection frameworks. In this vision, FIREPRIME would be linked to broader EU initiatives, such as EFFIS, and made available to Member States on a voluntary basis. Countries would be able to select and implement those components of the programme that best suit their national and local contexts, while also using FIREPRIME as a platform for exchanging practices, experiences, and knowledge across Europe. The discussion emphasised that, although the programme would be supported at EU level, implementation and ownership should remain primarily at local and municipal scales, where wildfire risk is experienced and managed most directly (Figure 8).

To reach this long-term vision, participants identified the need for continued research and development. This includes expanding and diversifying pilot applications, further validating FIREPRIME tools, and refining their objectives depending on target users (e.g. awareness-raising, preparedness, or civil protection support). Particular attention was given to improving engagement strategies for communities with low-risk awareness. Participants also highlighted the value of conducting cost–benefit analyses comparing preparedness investments through FIREPRIME with traditional suppression-focused approaches, as this evidence would be critical for securing sustained funding and political support.

Long-term sustainability was recognised as dependent on stable funding mechanisms and clear governance arrangements. The discussion stressed the importance of defining what elements require funding—such as technical maintenance, tool updates, or local actor involvement—while exploring models where public authorities contribute expertise and institutional support rather than direct staffing costs. Maintaining capacity at local level was considered essential; therefore, training programmes for local volunteers, community leaders, and municipal staff were seen as a cornerstone of future deployment. While a bottom-up approach was regarded as suitable for most countries, participants acknowledged that different governance cultures may require tailored approaches, combining top-down and bottom-up strategies as appropriate. Overall, FIREPRIME was viewed as a modular, adaptable framework capable of supporting diverse European realities while strengthening local preparedness and resilience.

Figure 8. Co-creation session with the second group participants on exploitation pathways at European level

6. Workshop wrap-up

Below are some of the main conclusions of the second FIREPRIME workshop that we consider relevant for the development and implementation of the FIREPRIME sustainability and exploitation plans:

- FIREPRIME has demonstrated strong relevance and applicability across diverse European Wildland–Urban Interface contexts, confirming the value of a common EU framework combined with local adaptation.

- The three FIREPRIME streams—homeowner fire safety, community engagement and education, and resilient infrastructures—are mutually reinforcing and should be sustained and exploited as an integrated toolkit rather than as standalone products.

- The FIREPRIME App is a key asset for future exploitation. Keeping it free and accessible is essential to maximize uptake, while long-term sustainability will require dedicated governance and diversified funding mechanisms beyond DG ECHO project funding.

- Municipalities and local civil protection services are critical multipliers for deployment, dissemination, and long-term continuity, particularly when the tools are embedded in existing preparedness campaigns and governance structures.

- Trust, transparency, and data governance are decisive for uptake. Clear communication about data use, storage, and consent, along with privacy-by-design approaches, are essential to maintain citizen confidence.

- Community engagement activities proved most effective when they were participatory, hands-on, and locally meaningful, reinforcing the importance of Preparedness Days, and co-creation formats.

- Non-formal education settings, especially youth organizations, showed high impact for wildfire awareness and preparedness, highlighting the need to sustain and replicate educational tools through structured implementation guides and training-for-trainers approaches.

- The resilient infrastructure risk assessment tools demonstrated strong potential to raise awareness and inform decision-making, but wider uptake will depend on simplified interfaces, clearer operational guidance, and alignment with regulatory and incentive frameworks.

- Incentives—regulatory, financial, reputational, or insurance-based—were identified as key drivers to encourage sustained application of wildfire risk assessments by infrastructure operators.

- At regional level, FIREPRIME can support capacity building, vulnerability assessment, and strategic planning, but representativeness of participation is essential to ensure the operational value of the collected information.

- At European level, FIREPRIME shows high potential for integration within existing civil protection and wildfire frameworks, such as EFFIS and the Civil Protection Knowledge Network, while remaining voluntary and modular for Member States.

- Continued research, pilot expansion, and validation are needed to refine tools, address low-risk-perception contexts, and strengthen the evidence base for preparedness-oriented investment.

- Long-term sustainability will require stable funding models, potentially combining EU programs, national and regional contributions, private-sector partnerships, and follow-up implementation projects.

- Overall, the workshop confirmed that FIREPRIME can act as a catalyst for embedding wildfire preparedness into a broader culture of risk awareness and resilience, supporting a shift from reactive response to proactive prevention and preparedness across Europe.