

# General description Accurate and spatially integrated fire risk madanger estimation, fire first FirEUrisk training,

# The FirEUrisk fuel classification system and the European fuel map

Accurate and spatially explicit information on forest fuels is essential for designing integrated fire risk management strategies, as fuel characteristics are critical for fire danger estimation, fire propagation and emissions modelling, among other aspects. The first FirEUrisk training, delivered by Elena Aragoneses from the University of Alcalá (Spain), will first provide attendees with the importance of fuel types and fuel models in fire risk assessment and other fire-related applications, and then will give an overview of the project's new fuel classification system. During the training event, the attendees will be provided with the knowledge and tools necessary to use it and explore the related European fuel map to assess fire risk in Europe. Data access and tools to analyse the dataset, along with examples of potential usage, will also be presented to help attendees adapt the FirEUrisk classification system to different spatial scales and different purposes.

If you're interested in attending, please complete the registration form.

# **Main objectives**

- Provide an overview of the basics of how to use the FirEUrisk fuel classification system and the European fuel map to assess fire risk in Europe.
- Understanding the FirEUrisk fuel classification system to facilitate its usage.
- Exploring the FirEUrisk European fuel map.
- Understanding how fuel parameters can be assigned to the FirEUrisk fuel classification system and using them to model fire behaviour.
- Inspire for potential usage of the products.

# Expected results/outcomes

Provide the audience with the basic tools (knowledge and materials) to start working on fire risk reduction using the FirEUrisk fuel classification system and the European fuel map. After the training, participants will be able to:

- Understand the legend of the FirEUrisk fuel classification system.
- Work with the FirEUrisk European fuel map, understanding its characteristics and limitations.
- Map fuel parameters for Europe using the crosswalk to fire behaviour fuel models (FBFM).

### **Format**

**Audience** 

2 hours: The webinar will be based on frontal presentation and hands-on training exercise to be completed on attendees' computers (requiring the installation of the free QGIS software <a href="https://qgis.org/es/site/forusers/download.html">https://qgis.org/es/site/forusers/download.html</a>). Specific documents and files will be shared with the attendees few days before the training. Graduate and PhD students, researchers, and actors involved in wildfire risk management

# Agenda/Outline of the Training Session

	Date	February 2, 2023. Morning, 10-12h CET
	Speaker(s)	Elena Aragoneses (UAH) (e.aragoneses@uah.es)



- Introduction: What are fuel types and fuel models? Role of this information in fire risk assessment and other fire-related applications.
- The FirEUrisk fuel classification system and the European fuel map: possible uses.
- Basis of the FirEUrisk fuel classification system. Concepts behind the definition of categories. Overview of the FirEUrisk fuel classification system (understanding the legend). How it was built and why it is useful – main characteristics (hierarchical, scalable, integration, etc).
- The European fuel map:
  - Basic characteristics: format, layer, projection, etc. Hands on: open the map in a GIS and explore it.
  - Overview of how it was developed: input layers (land cover datasets and bioclimatic models), where information was extracted from, custom resampling method.
  - BONUS: Limitations of the methods: Why could the European fuel map not work well for local study areas?
  - Validation of the European fuel map: overview of the two validation approaches, results, limitations.
  - BONUS: Where can errors come from? Possible sources of errors in the European fuel map.
- How can we model fire behaviour?
  - o Fuel parameters: what are they and why are they necessary?
  - Crosswalk from FirEUrisk to FBFM. Hands on: join the crosswalk table to the European fuel map to generate maps of fuel parameters (using an already-prepared table by UAH).
  - o Alternative approaches (theoretical): custom crosswalks and completing with detailed information (datasets, LiDAR, etc) for smaller regions.
- Expansion of the fuel classification to other scales.
- Hands-on: Where can we find the FirEUrisk fuel classification system and the European fuel map? (repository and paper).
- Summary: product strengths and weaknesses, final recommendations and acknowledgements.
- Q&A.

## Agenda