



FRED

Fire Free MED



November 2024

PROGRAMME: Interreg Euro-MED
IMPLEMENTATION: 01/2024 - 10/2026
BUDGET: 2.381.700 EUR

The FRED project overall objective – implement advanced ICT/UAS¹ (drone) tools for climate change adaptation, disaster risk prevention and mitigation in the wildfire segment at 6 public authorities in six MED countries: Croatia, Slovenia, Italy, Bosnia and Herzegovina, Montenegro, Portugal.

WHAT WE HAVE DONE SO FAR

- kick-off, partner and SCOM meetings held in February 2024 in Opatija, HR and November 2024 in Potenza, IT
- deliverable *D1.1.3 Capitalization paper - lessons learnt from past projects* was finalized
- deliverable *D1.2.1 Functional design of the FRED platform* was drafted by RGO communications with support from scientific and pilot partners
- under the strong guidance of Democritus University of Thrace, School of Agricultural Science and Forestry, deliverable *D1.1.1 Preliminary data collection and processing study* was finalized in order to compile all necessary data which will be studied and analyzed for the purpose of determining fire danger index in pilot areas. Wildfires are phenomena that occur in specific “habitats” and under specific conditions. These are primarily characterized by the availability of enough fuel to sustain a fire, the presence of ignition sources, including human activities and particular

Project partners:

- University of Rijeka Faculty of Maritime Studies (HR)
- RGO Communications Ltd. (HR)
- Fire rescue service Sežana (SI)
- Rocca di Cerere UNESCO Global Geopark (IT)
- The National Park UNA (BA)
- The Municipality of Ulcinj (ME)
- Public fire brigade of the Town of Mali Lošinj (HR)
- Centre of Integrated Geomorphology for the Mediterranean Area (IT)
- Democritus University of Thrace (EL)
- CIMBAL – Intermunicipal Community of Baixo Alentejo (PL)

Where we presented FRED:

- European Maritime Day in Croatia
- International Conference on Sustainable Transport” – SuTra 2024

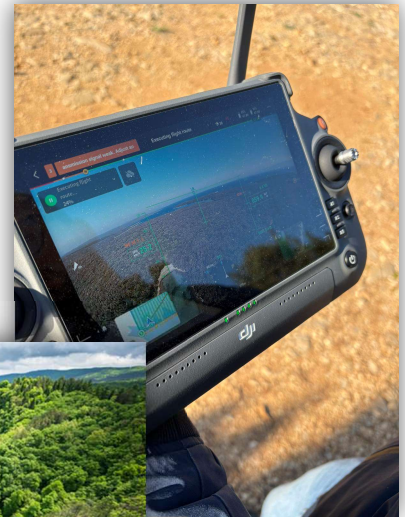
¹ ICT – information and communication technology; UAS - Unmanned Aircraft System (e.g. drone)

topographical features that can either support the spread of a destructive fire or help contain and suppress it. For example, Digital Elevation Models (DEM) and Canopy Height Models (CHM) were collected/created for each pilot area, as they can directly and indirectly be used in a wildfire analysis.

- the Lead partner, University of Rijeka, Faculty of Maritime Studies has completed the procurement of the first drone set with necessary additional load in order to start with the initial data collection by means of LIDAR and other more advanced sensing tools.

WHAT WE ARE DOING NOW

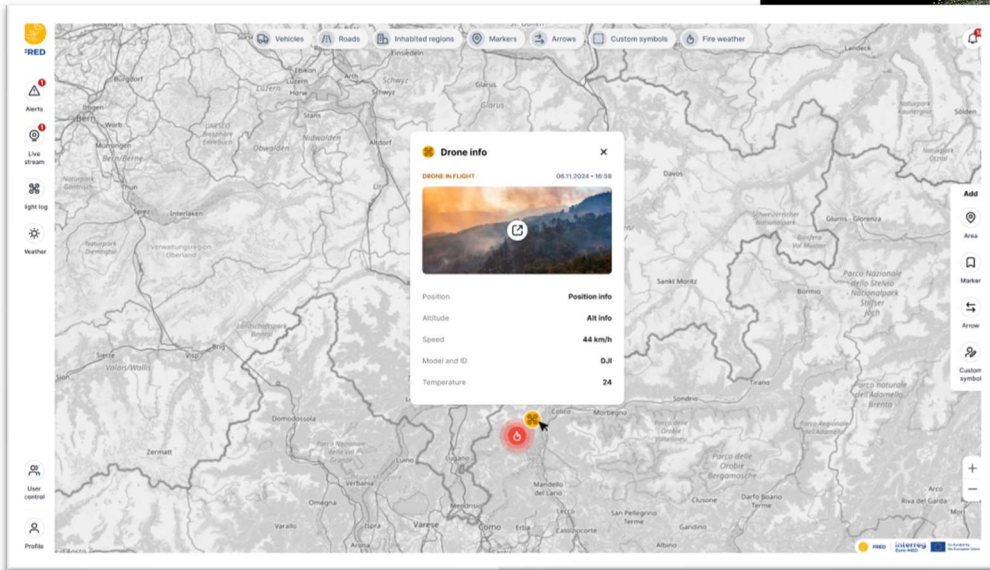
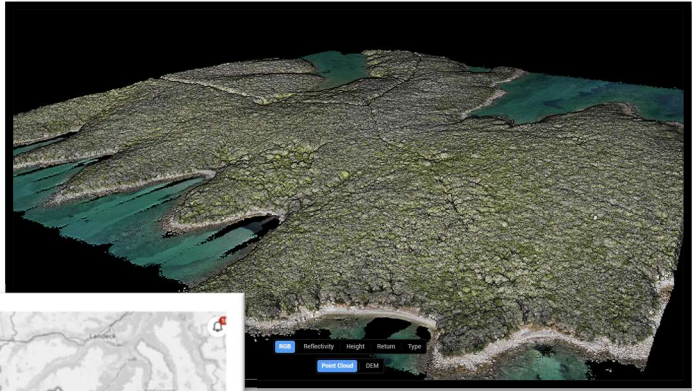
- the lead partner is conducting data collection flights with a UAS over pilot area sites for the purpose of fuel mapping (vegetation spread and composition), video available at: https://www.rgo.hr/upload/FRED_data_collection.mp4
- D.1.2.1 Functional design of the FRED platform is being updated following the valid input from partners
- the FRED platform is under development by RGO Communications Ltd.
- defining pilot use cases within the scope of deliverable *D1.1.2 Pilot case implementation methodology paper*



THINGS TO COME

- all pilot partners will finalize procurement of UAS setups for their respective pilot use cases
- the FRED platform operational and implemented in all pilot areas
 - start of piloting period in which firefighters and other emergency units will utilize the FRED platform and UAS in combined capacity
 - rollout of project results outside project partnership and project coverage.





```
#Read the LAS file
las <- readLAS("E:/LiDAR Metrics/LiDAR metrics with R/Cropped_File.las")
# validate LiDAR data
las_check(las)
```

