Interreg Euro-MED

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FRED

Title of document:

Appendix 1: Training course material – FRED application user manual

Work package 2 – WP2

Piloting tools for wildfire prevention and mitigation

Activity 2.1 – A2.1

Pilot activity setup and training

Deliverable 2.1.1 – D2.1.1

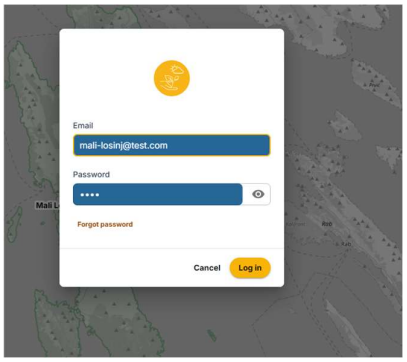
Training course material: Application & UAV operation

Contents

1. Login

In order to aces the FRED application, open your internet browser and visit the following URL: https://fred.rgo.hr/ .

You can change the language of the Login page using the language selector input on the left bottom side of the screen, flag-denominated button.



Enter your login credentials in the appropriate input fields: email and password and click the Login button to log into the application.

Choose the pilot area (depending on user role) and once my area is selected, the map is cantered to that area and zoomed so that the whole area is clearly visible. Other areas can be viewed as well, but with a restricted set of data and no editing privileges.

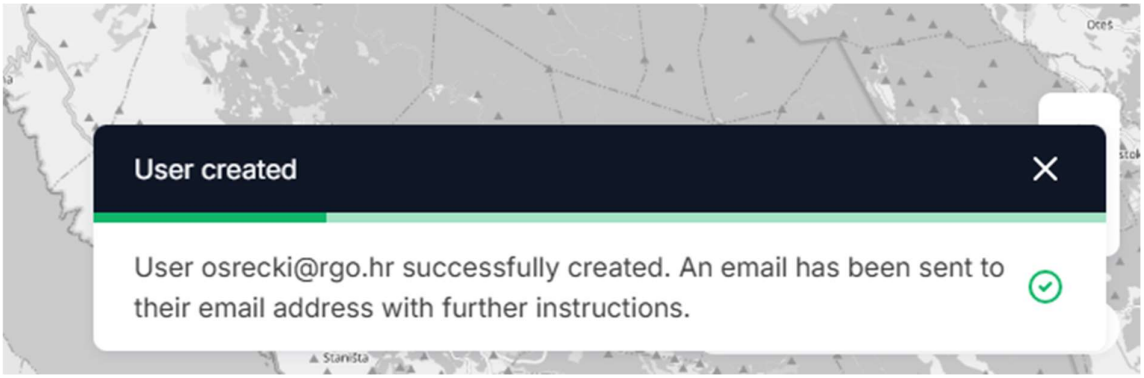
2. User management

User registration is made possible through the authorized entities for each pilot area.

There are three types of users:

- Admin user
  - has full read-only access to all data,
  - can edit all user information except the username,
  - can reset user passwords,
  - can delete users
- Power user
  - has full read and write access to all data within their designated area
  - can create new users and assign access rights for their respective pilot area
  - can reset user passwords for users from their respective areas.
- Standard user has full read-only access to all data within their designated area.

Each pilot area has a power user, represented by a pilot partner in the project.



The contact details of the power user are listed in the application.

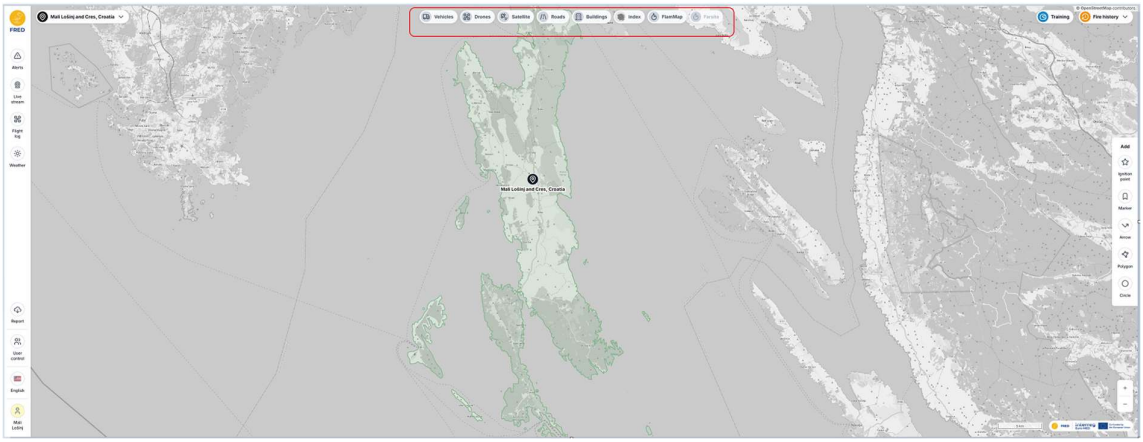
If new entity (private or legal) wants to create an account, it should contact the power user in question.

In case you forgot your password, click the Forgot password link on the Login page. This opens the Forgot password page where you can enter the

email address associated with your account and click the Send password reset email button. This will initiate sending of the email with the password reset link. Follow the instructions in the email to reset your password.

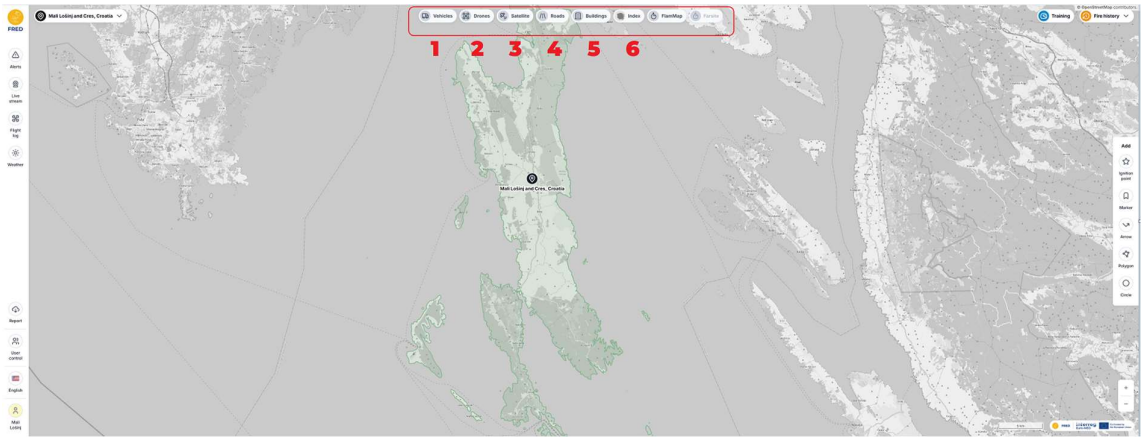
3. Map Management

In order to adapt the map to your preferences, you can activate/deactivate map layers available on top of the page.



Set individual layers with the following buttons:

- Vehicles (1) to be able to see the fire brigade vehicles in real time
- Drones (2) to be able to see the connected drone(s) when they are turned on
- Satellite (3) to view the map in satellite image
- Roads (4) to be able to see the roads network
- Buildings (5) to be able to see the buildings
- Index (6) to be able to see the *Fire weather index*/*Fire danger index*/*Dynamic fire danger index* in the drop-down menu.

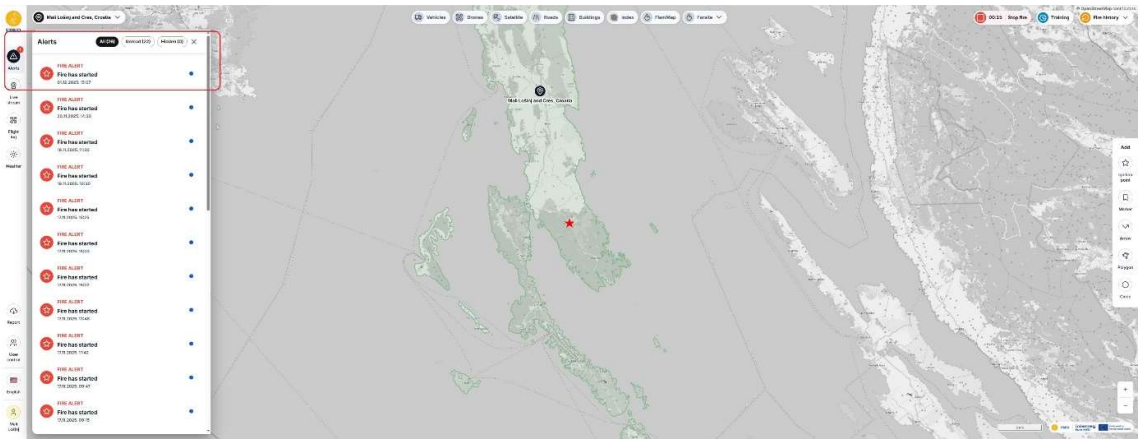


4. Alerts

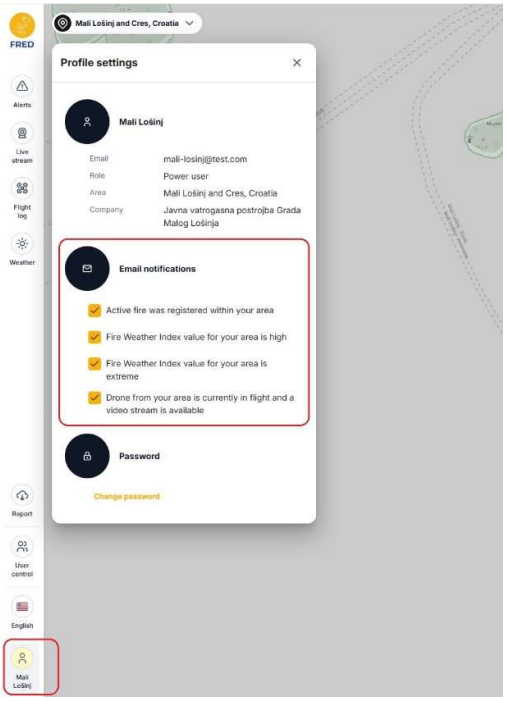
The left side of the page contains multiple buttons, with the first from the top being Alerts button, displayed at the top of the sidebar, ensuring they are immediately visible, Alerts are activated in three scenarios:

- Active Fire Registered;
- Fire Weather Index value for your area is high;
- Fire Weather Index value for your area is extreme;
- UAV (Unmanned Aerial Vehicle) in flight.

Alerts are communicated by *in-app notifications*:



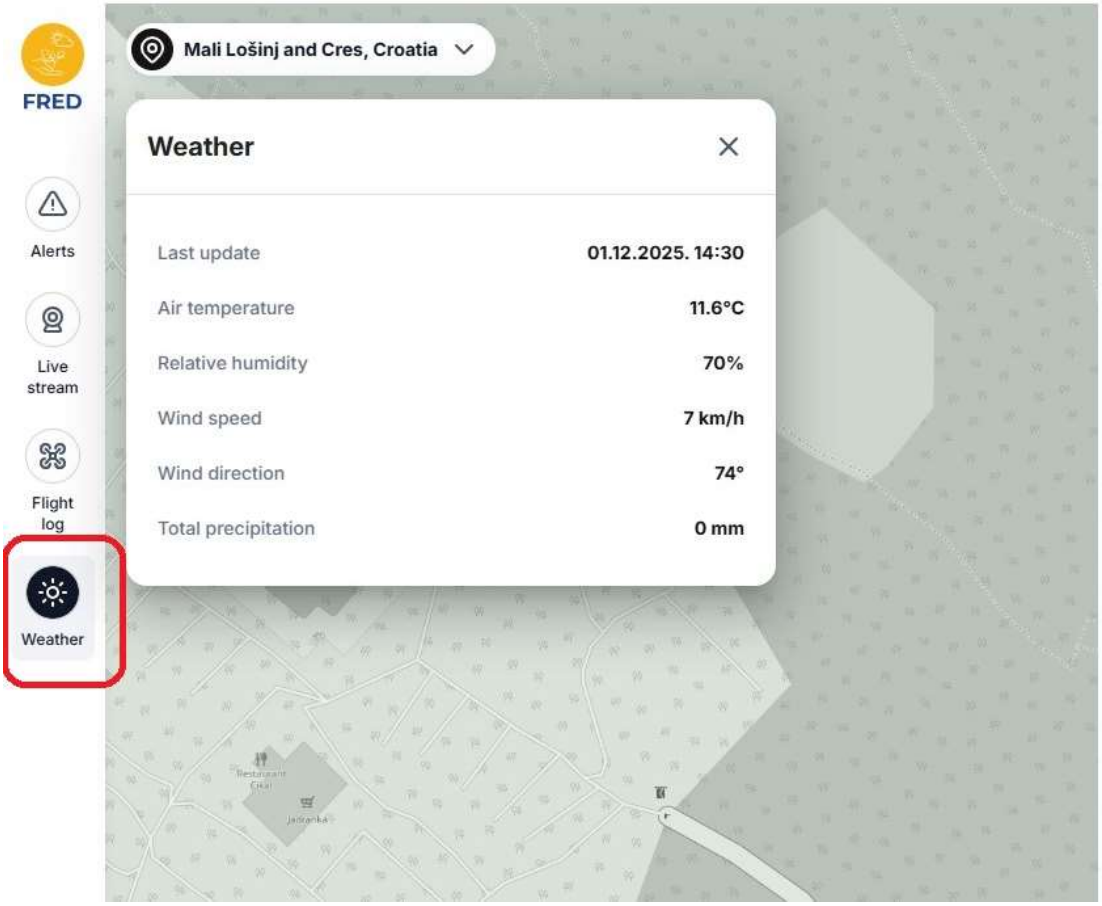
and by *e-mail notifications* which are set up in the Profile settings window:



Active status of the alert button (exclamation mark) is erased once the message is open. User can set up e-mail notifications individually, as preferred by opening the profile setting by clicking on the bottom button with the denomination of the domicile user area.

5. Weather data

Current meteorological data is displayed on sidebar, available by clicking on the Weather button.



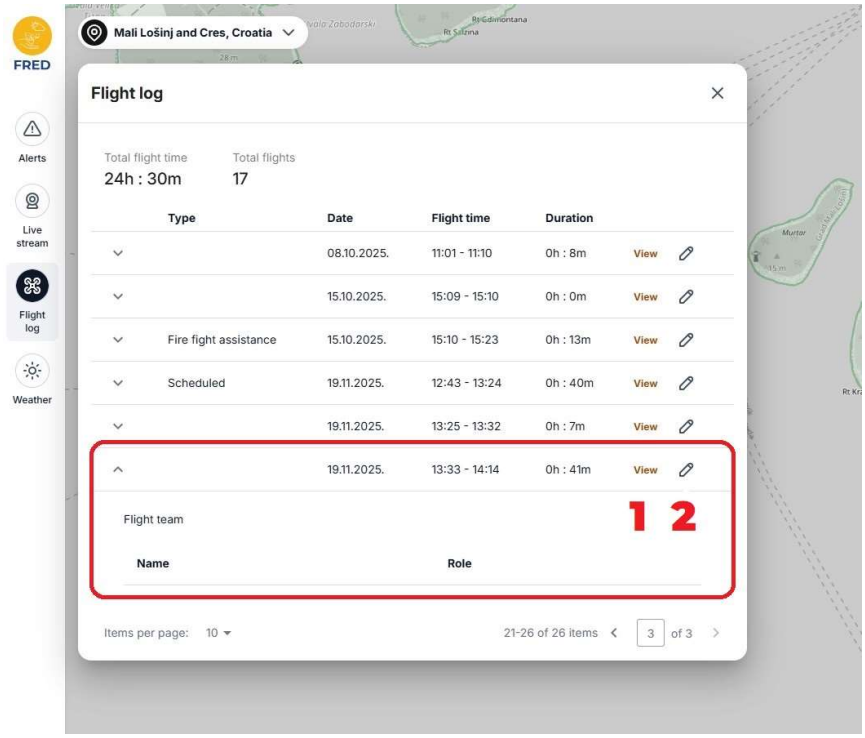
The following information is displayed: last updated date and time, air temperature, relative humidity, wind speed, wind direction and total precipitation. It is updated every hour.

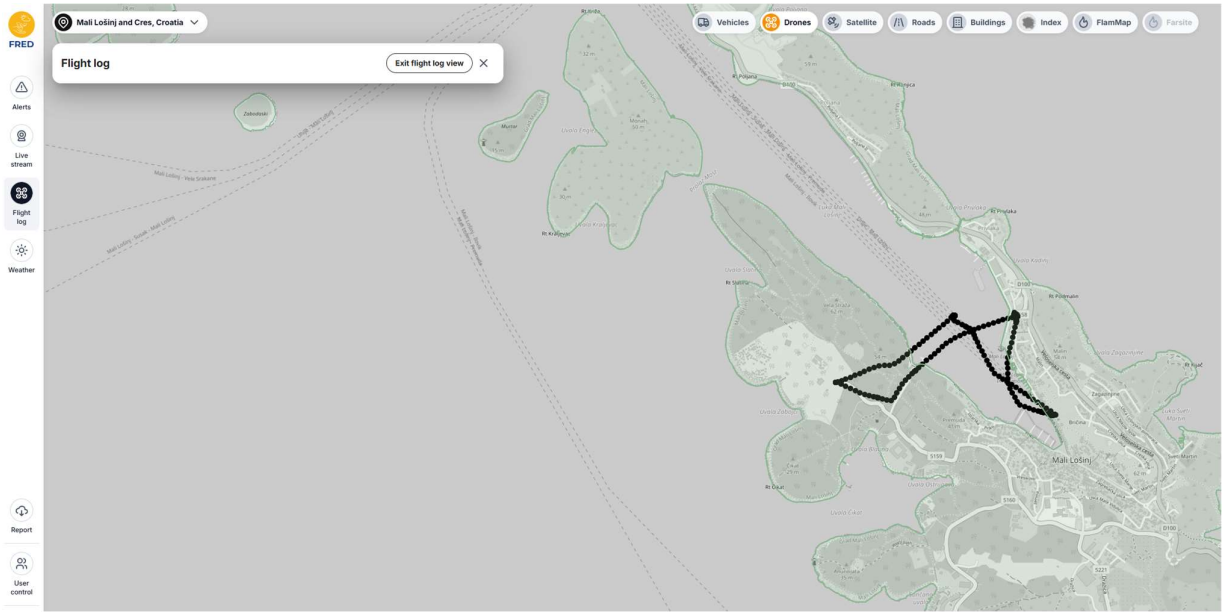
6. UAV utilization

In order for UAVs to provide real-time video feeds, fire detection capabilities, and communication tools to enhance situational awareness and operational efficiency, click the Live stream button on sidebar. In the window you will be able to see telemetry (1), the stream video (2), which you can extend to full screen view (3). You will also be able to see the exact position of the drone on the map (4). Also, Volume control, Pause and Settings buttons are available in the stream window.

When the UAV is turned on it is visible in the map when the drone layer is activated, at the top of the map.

For each drone flight, a flight log must be made in the online form that can be accessed by clicking the Flight log button on the left sidebar. After each flight a record of the flight is made in the list. Access the particular flight record according to time and date and edit/input required fields (2) and view the flight trajectory on the map by clicking view button (1).

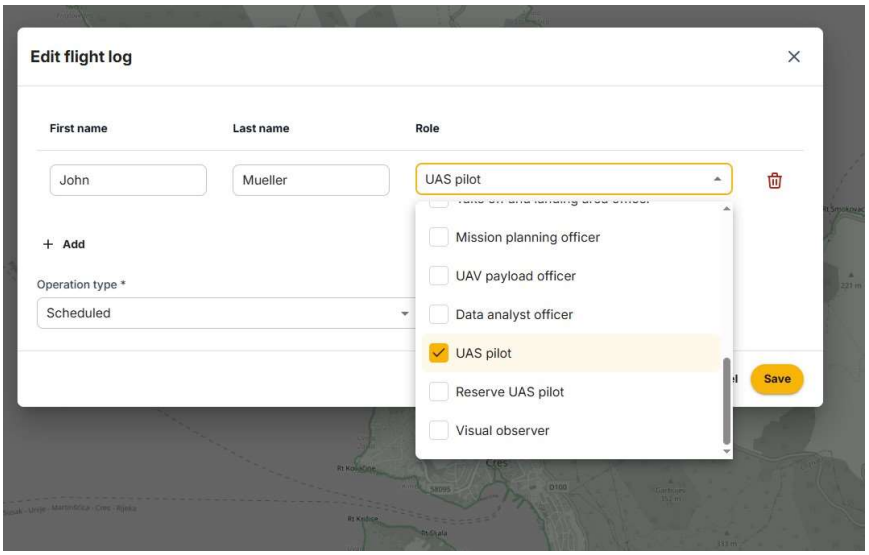


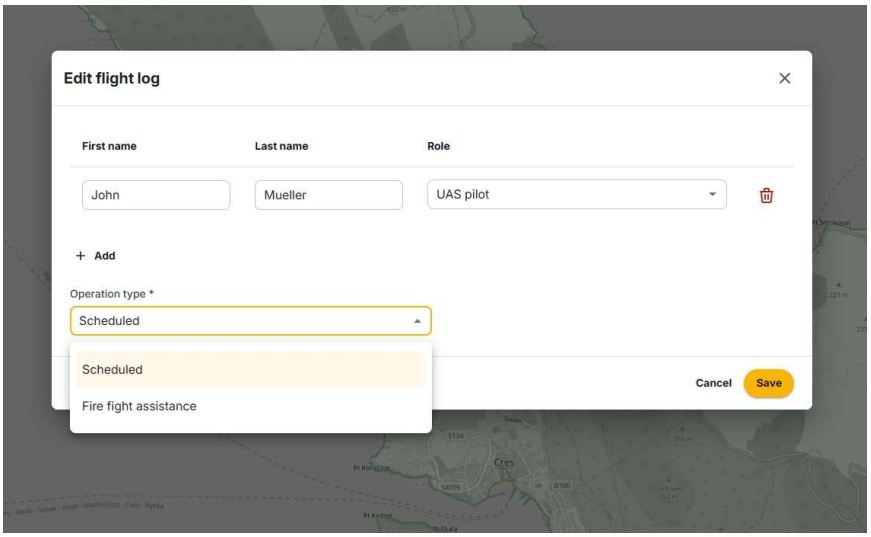


Opening the dialog widow (2), input the following by clicking +Add button:

- first and last name,
- role, choose from drop-down menu
- operation type, choose from drop-down menu;

and Save.

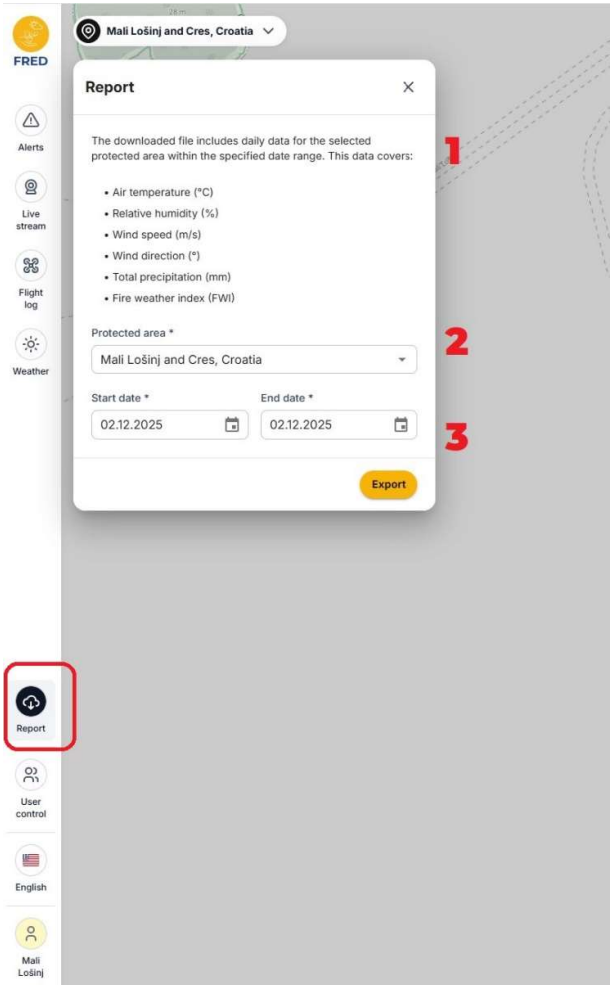

Edit flight log
First name
Last name
Role
John
Mueller
UAS pilot
Add
Operation type *
Scheduled
Mission planning officer
UAV payload officer
Data analyst officer
UAS pilot
Reserve UAS pilot
Visual observer
Save


Edit flight log
First name
Last name
Role
John
Mueller
UAS pilot
Add
Operation type *
Scheduled
Scheduled
Fire fight assistance
Cancel
Save

7. Export report

Daily data that can be exported for the selected protected area within the specified date range covers:

- Air temperature (°C)
- Relative humidity (%)
- Wind speed (m/s)
- Wind direction (°)
- Total precipitation (mm)
- Fire weather index (FWI).



When you click Export, a .csv type file will be made available for download.

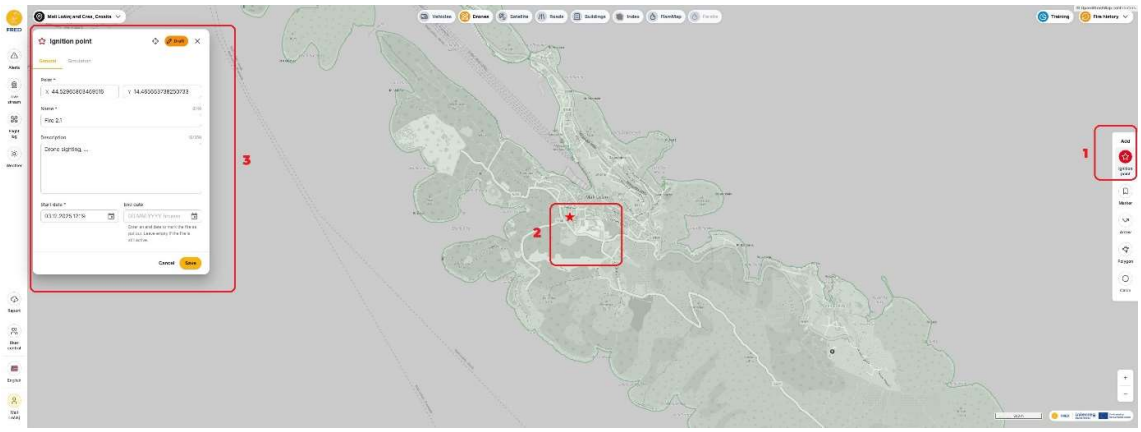
8. SITAC symbol management

All SITAC symbols available in the application are located on the right sidebar, divided into categories on the basis of their map input method, whether they are a:

- Marker (point on the map) (2)
- Arrow (3)
- Polygon (4)
- Circle (5)

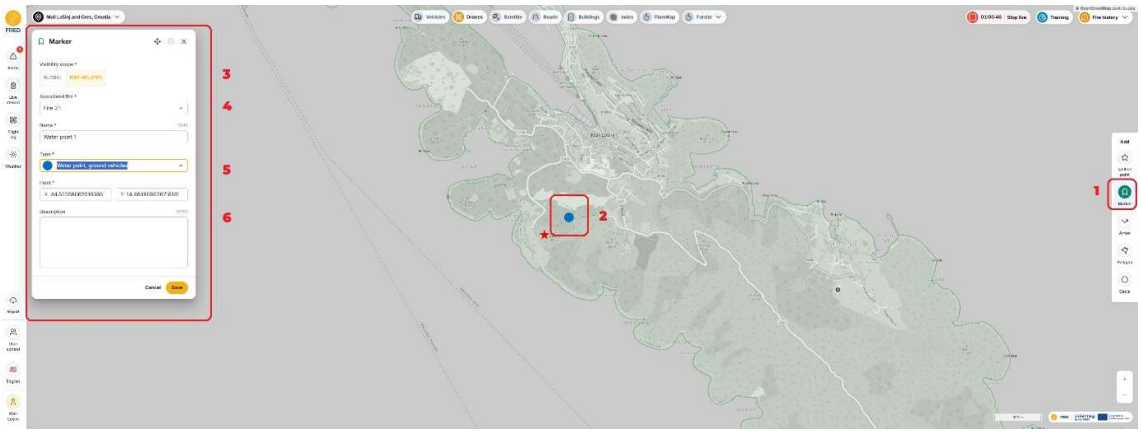
Additionally, there is an Ignition point button (1) available on the same sidebar.

To mark an ignition point on the map, click on the Ignition point button (1), place the star mark on the exact preferred position and click on the map (2). The dialogue widow appears on the left side of the screen (3). It provides coordinates of the position on the map automatically. Insert a Name, Description, preferred start and end dates (if possible). Start date is entered automatically, but can be edited. Click Save in order for the Fire to be registered.

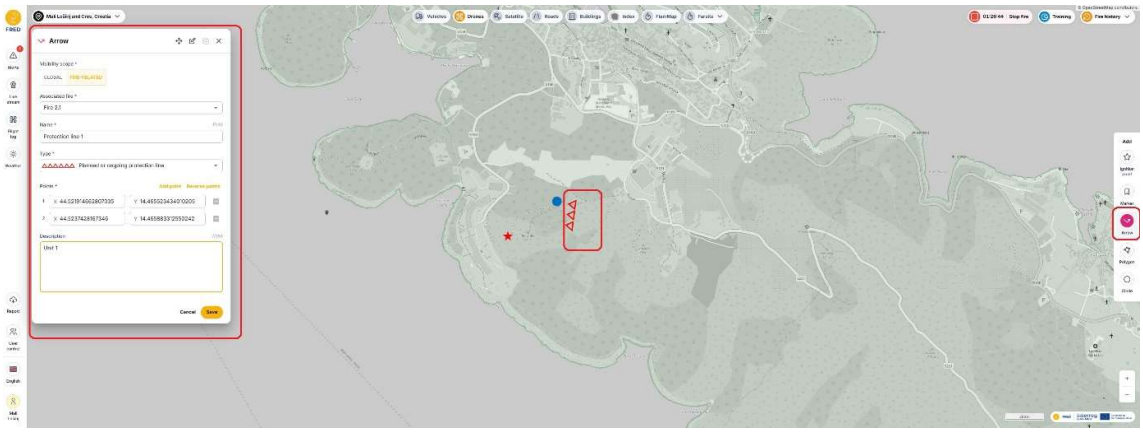


Should you want to move the ignition point (the star mark) on the map, you can do that in the move mode within the dialogue window. Click on the move symbol at the top of the dialogue window, you will be notified that the move mode is on by a notification at the bottom of the screen (black pop-up window), move the star mark to the preferred position. At the same time, point coordinates change in the dialogue window. To end the move mode, click on the move symbol at the top of the page. *The same move mode methodology applies to all other symbols*.

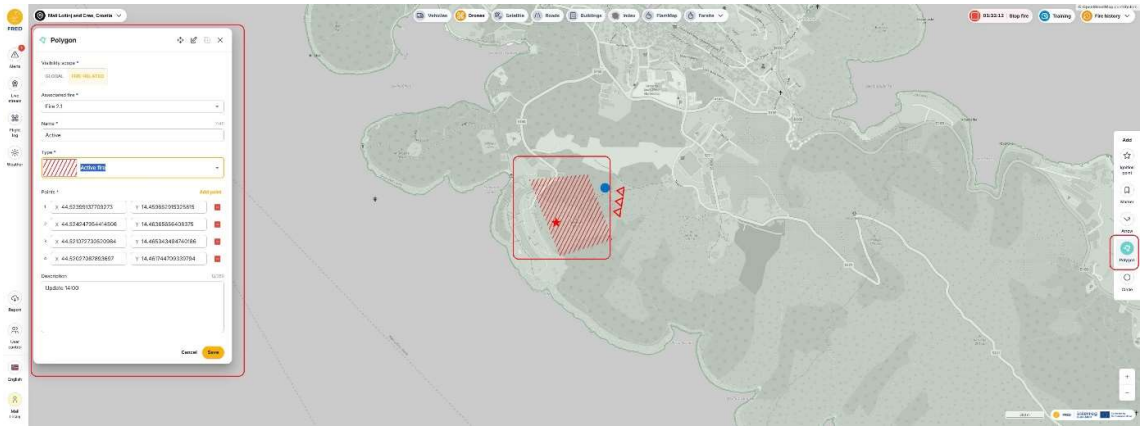
In order to add a Marker, click on the Marker button (1). Place the marker on the preferred position on the map (2). A dialogue window appears with the automatic coordinates inserted. Choose whether this marker is global or related to a particular fire (3), if so, select the associated fire from the drop-down menu (in case there are multiple ongoing) (4), insert a name of the marker and select the type from the drop-down menu (5), input description if necessary (6), click the Save button. To reopen the dialogue window, click on the symbol again. The move and duplicate buttons at the top of the window enable the marker to ne moved in move mode and to be duplicated to another point on the map.



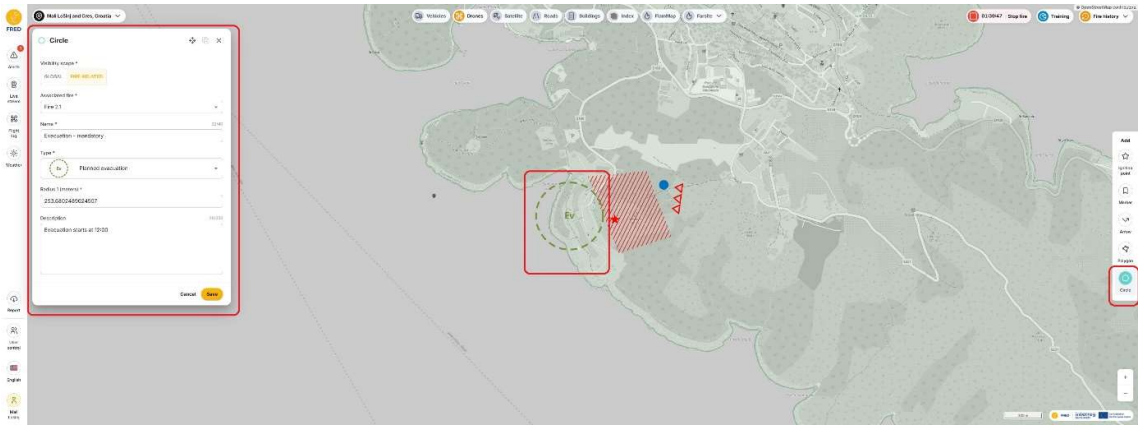
In order to make an Arrow type of symbol on the map, repeat the same steps with the Arrow button on the sidebar. Click Save button. To reopen the dialogue window, click on the symbol again.



In order to make a Polygon type of symbol on the map, repeat the same steps with the Polygon button on the sidebar. Click Save button. To reopen the dialogue window, click on the symbol again. Apart from Move and Duplicate buttons, there is an Edit points button at the top of the window to adjust area when there is a need for an update.

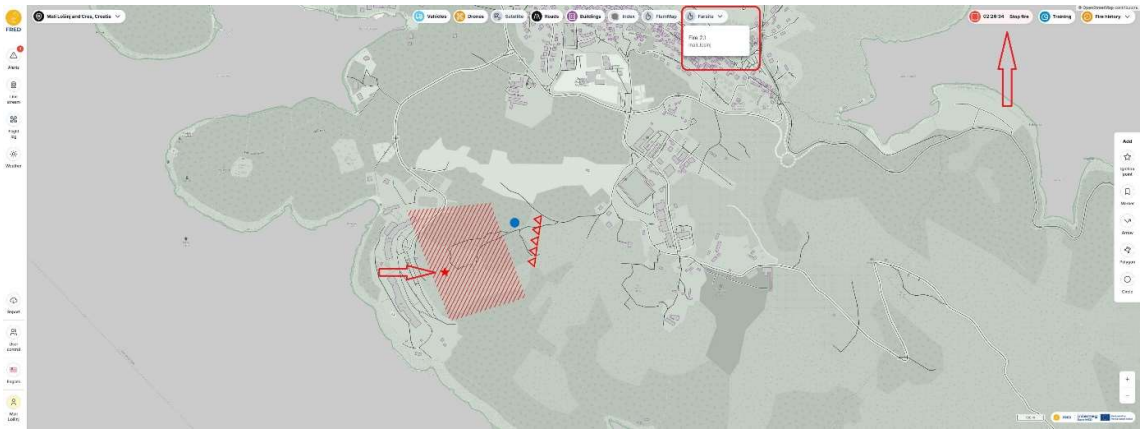


In order to make a Circle type of symbol on the map, repeat the same steps with the Circle button on the sidebar. Click Save button. To reopen the dialogue window, click on the symbol again.

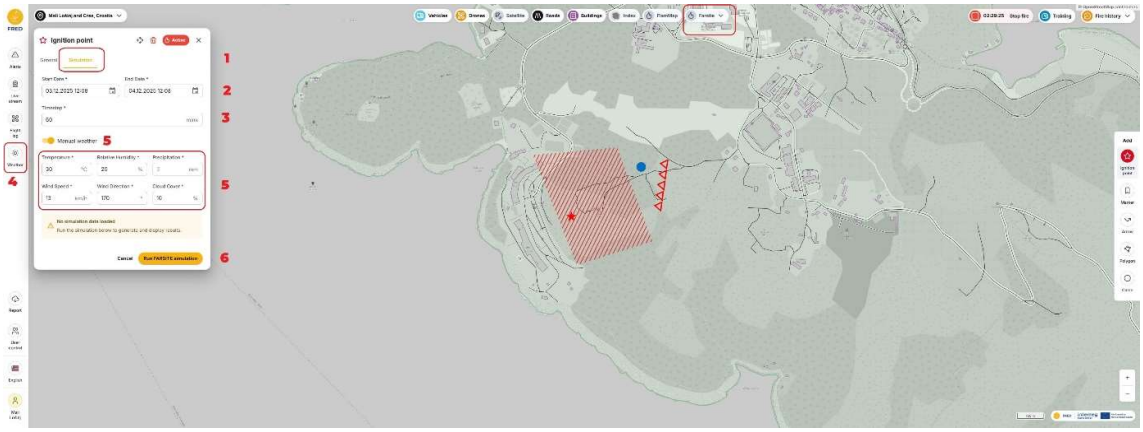

Circle
Ev

9. Farsite simulation

In order to run the Farsite fire propagation simulation, which has to be linked to a particular ongoing fire, click the Farsite button at the top of the screen and select the fire you wish to run the simulation on, click on the fire in question if there are multiple fires active.

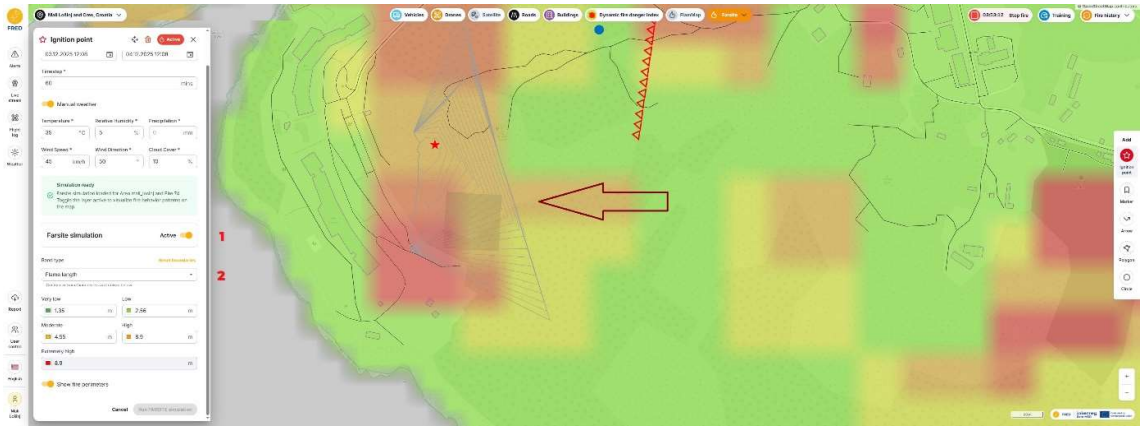


The Dialogue window Ignition point, tab Simulation opens (1).



Once the window is open, make sure to input the preferred data. Set the preferred timeframe for the simulation (2), timestep is set to 60 minutes, choose whether to use automatic weather data, also visible in the Weather button on sidebar (4) or manual weather data by moving the toggle switch (5). If manual weather is selected, input preferred weather data in data fields (5). Run the simulation (6). Over the period of approximately 1.5 -2 miniates, the message appears at the bottom right corner or the screen:

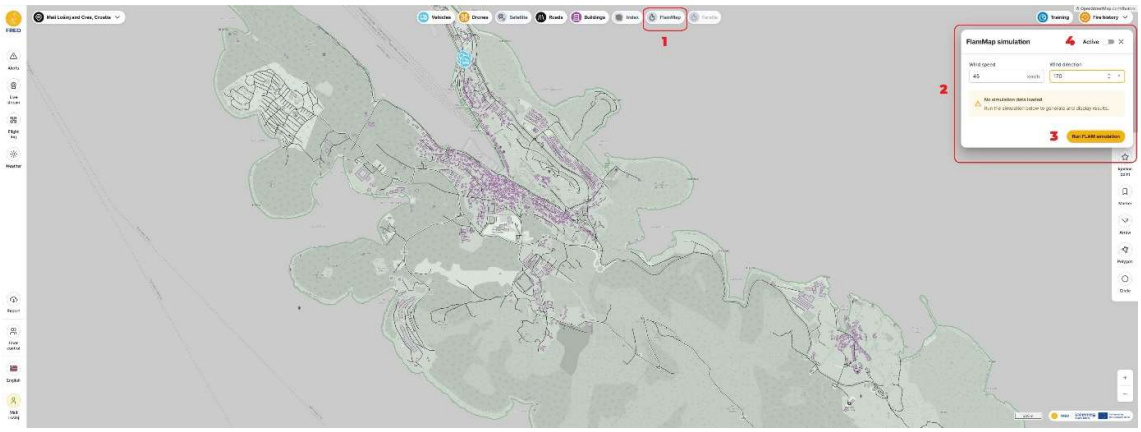
When it is processed, the dialogues window is extended. Activate the Farsite simulation toggle switch (1) to have the results visualized on the map.

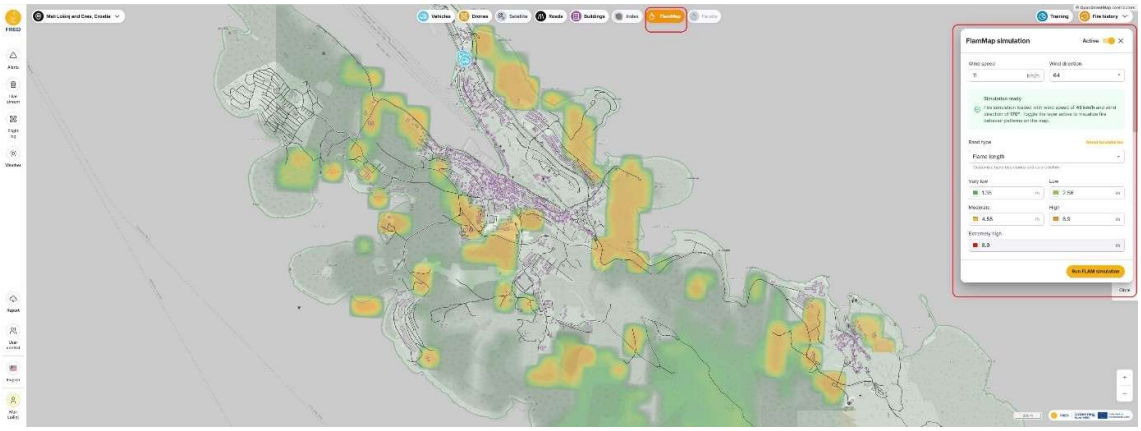


10. FlamMap Simulation

In order to run a FlamMap fire propagation simulation, click on the FlamMap button at the top of the page (1).

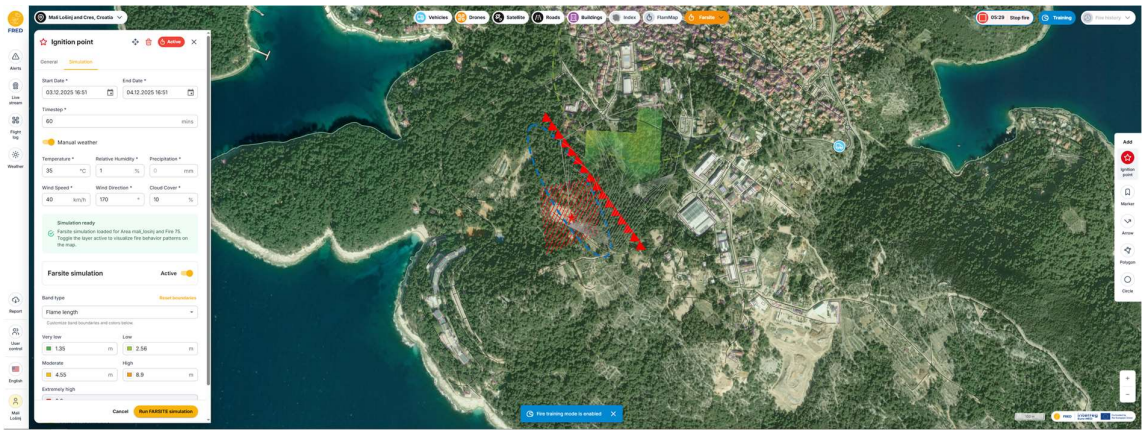
In the Dialogue window, input the preferred parameters (2), run the simulation (3) and toggle the Active switch to get the visualization on the map (4).





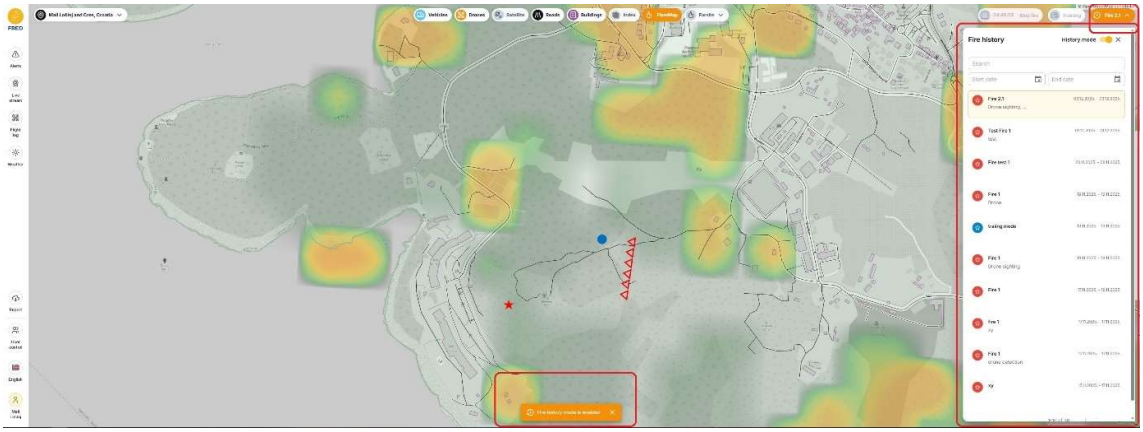
11. Training mode

In order to access the training mode of the application, where all recorded events and edit interventions related to that specific fire event, are visible only when the training mode is switched on, without alert actions to other registered users. All data inserted on the map in relation to that fire event is removed from the map once the training mode is deactivated.



12. History mode

To access history mode of the application, to be able to see all past recorded fire evets, click on the History mode button at the top right of the screen. Select the fire event you want to view by clicking on the line.



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