



RISKFP OVERVIEW

RiskFP is a **geospatial web-based modeling platform** developed to support both forest managers and forest insurance actors in managing the vulnerability of their assets/portfolios to fire risk.

RiskFP includes four main modules that are available for bushfire zones of about 50km*50km with spatial resolution of about 10-25m :

1. Realistic disaster scenarios and CO2 release
2. Risk mapping
3. Seasonal and climate forecast for critical days
4. Wildland Urban Interface

RiskFP has been tested by **several users** (mainly forest managers, insurers and fire-fighters) in **several regions worldwide**: Brazil, Chile, South Europe, and Australia.

RISKFP SERVICES

RiskFP includes **four main modules**:

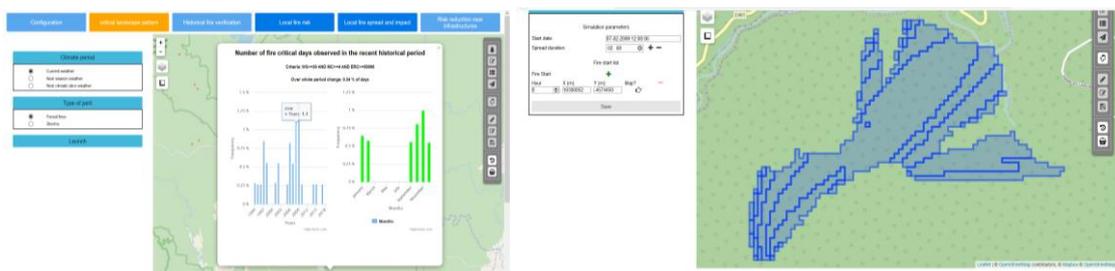
- **Realistic Disaster Scenarios and CO2 releases**

The generator of Realistic Disaster Scenario is based on two components:

- the **“critical landscape fire weather patterns”**, an empirical fire weather index that identifies severe-extreme fire weather days during which weather and fuel conditions could lead to extreme fires

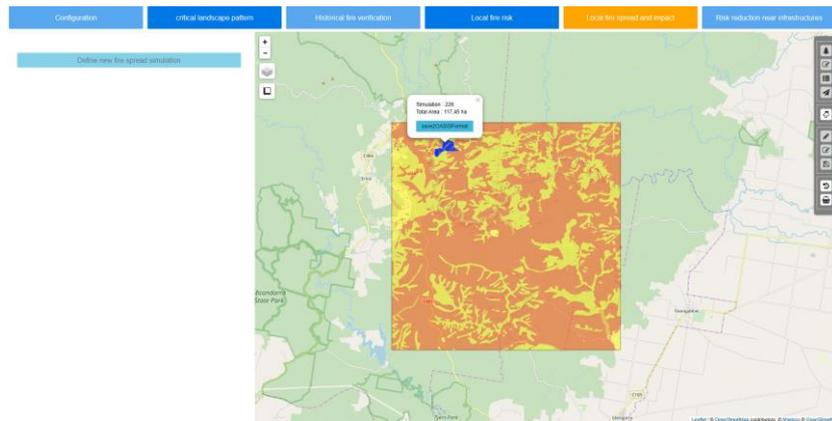
- a **fire propagation model** based on the well-known Wildfire Analyst® that estimates fire growth and spread patterns based on sub-hourly fire weather on days with the identified critical landscape fire weather patterns. The simulated scenarios could be used to complete information from historical fires in damage and loss modelling.

A CO2 emission calculation of the release based on the scenario modelled.



- **Risk mapping**

RiskFP allows to map precisely on a periodical basis (e.g. daily) the local forest fire risk for the given day through the graphical representation of several hazard levels. This feature provides the user with an **overview of the most critical locations** regarding the potential behavior of the fire in case of an hypothetical ignition in this same area for a certain day. The information on the structural risk allows having a daily mean estimate of the fire risk for a given area and a given period, according to the **weather conditions forecast, existing vegetation fuels, elevation, slope and aspect of the Digital Terrain model**. The structural risk is calculated through the weighted sum of important fire behavior variables such as the flame length, Rate of Spread and Fireline intensity as well as vegetation variables such as fuel load and fuel moisture.

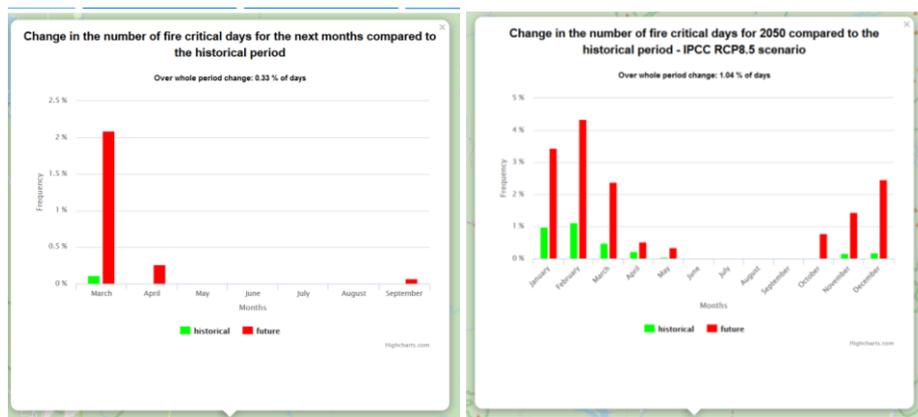


- **Seasonal and climate forecast for critical days**

The forecasting service focuses on offering the forestry sector with an operational forecast tool to predict their potential exposure to fire risk and feed decision-making processes at both a **seasonal horizon and long-term horizons**. It provides information on the frequency of large fires.

It consists in **assessing the frequency of critical days during which weather conditions could lead to large fires** (based on critical landscape patterns) in the future and to compare it to “normal” conditions. This service relies on the:

- Seasonal forecasts provided by the Copernicus Program that are updated each month by the European Center for Medium-Range Weather Forecast (ECMWF) and the main European Met Offices.
- Climate scenarios provided by the International Community (IPCC, CORDEX) and that allow to take into account the evolution of weather conditions due to climate change at a long-term horizon .



- **Fire Wild-Urban-Interface (FireWUI)**

FireWUI allows the estimation of thermal damages on vegetation and building materials at the wild-urban-interface (WUI). It can be useful to evaluate the effectiveness of risk reduction options like fuel treatment strategies (forest cleaning within the vicinity of buildings or of the urban interface, forest cleaning near isolated assets in forests) on wildfire exposure at the WUI scale, depending on local conditions of wind, topography and vegetation.

