



## **Forecasting wildfire danger using ECMWF GEFM datasets and the caliver R package**

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Forecasting wildfires is challenging because it involves the use of a wide variety of information, in different formats and large volumes. Fire observations, for instance, measure burned areas by processing remotely-sensed satellite imagery. Fire models such as the Global ECMWF Fire Forecasting system, instead, use weather reanalysis products to assess the potential predictability of fire danger as well as weather forecasts to extend the advance warning. The analysis of such a complex information needs to be carried out through open-source and transparent analysis workflows, to ensure reproducibility and avoid duplication of efforts. We will present an open-source tool called "caliver" for the calibration and verification of wildfire model outputs. This tool is developed in the R programming language and publicly available under an open license. We will also invite R users to join the short-course in which we will illustrate the main functionalities and show the results of our preliminary experiments calculating fire danger thresholds for various regions on Earth. We will compare these with the existing global thresholds and, lastly, demonstrate how these newly-calculated regional thresholds can lead to improved calibration of fire forecast models in an operational setting.