

In this work the author presents a detailed analysis of fire regimes in the NE Mediterranean region with the use of historical and current geospatial data. These data were processed through a dynamic vegetation model coupled with wildfire simulation models, in order to: i) reproduce historical fire dynamics, and ii) to produce future projections of wildfire dynamics (burned area, fire interval, spatial patterns, among others) under various climatic scenarios.

The overall quality of the manuscript is good, the structure is well-designed and helps the reader follow the methodological steps and the corresponding results and conclusions. The use of English is also more than adequate, in my opinion. Minor corrections may be needed by the editor, but I did not notice anything substantial. A variety of datasets were processed and used and the results are quite detailed, considering also the supplementary material. The research design is solid. I believe the outcome is of interest and the work meets at least the general standards for publishing.

I would suggest that the author includes a workflow where all main and subsequent methodological steps are clearly presented. This could really help the reader in going through the manuscript.

Author Comment: Many thanks for your kind review and constructive feedback. A workflow has now been added to the main manuscript with an introductory sentence on Line 133. I'm also including the relevant section below:

To characterize both current fire dynamics and potential changes in wildfire regimes, simulations were conducted in two stages: historical simulations and future projections. The complete methodological workflow, from data input to final projections, is summarized in Figure 2. All post-simulation analyses were conducted using R and Python programming languages, Climate Data and NetCDF Operators (CDO/NCO).

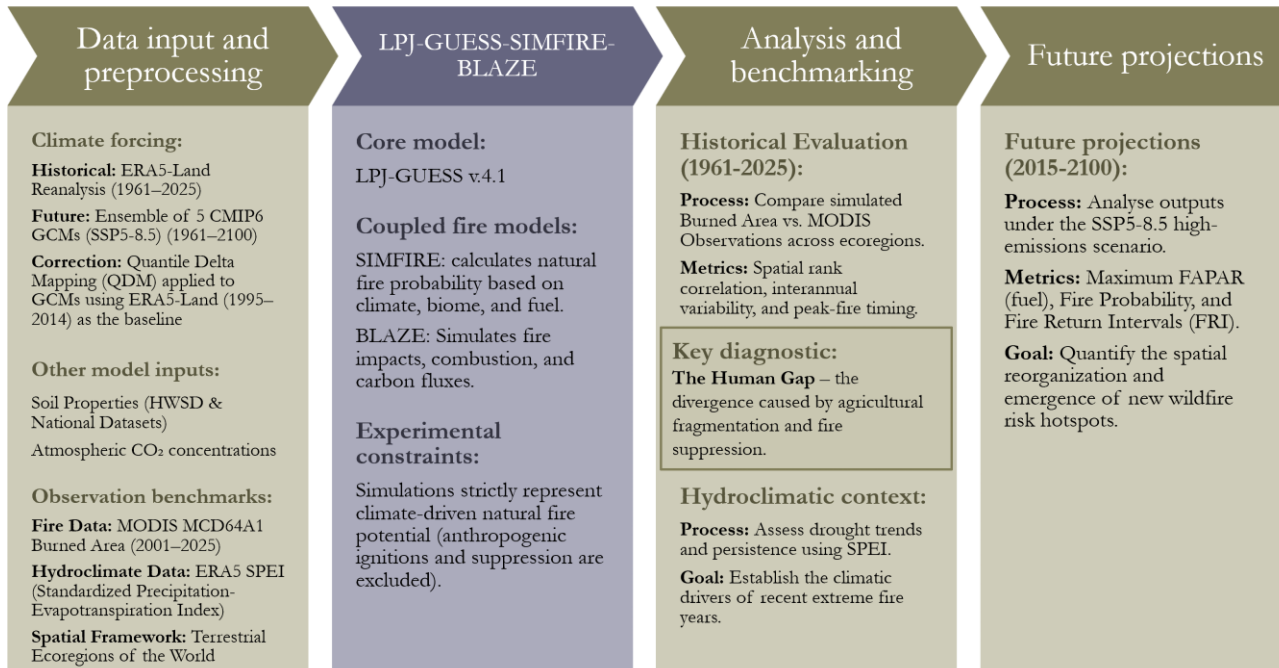


Figure 2. Methodological workflow and experimental design. The framework is divided into three primary phases and a final step: Data input and preprocessing which includes historical and projection datasets as well as others which the model requires, and observational benchmarks; model simulation with LPJ-GUESS-SIMFIRE-BLAZE; analysis and benchmarking using historical simulations, where the historical evaluation specifically contrasts simulated potential against satellite observations highlighting the “human gap”; and future projections using the high-emissions scenario (SSP5-8.5).