

Nat. Hazards Earth Syst. Sci. Discuss., referee comment RC2
<https://doi.org/10.5194/nhess-2022-140-RC2>, 2022
© Author(s) 2022. This work is distributed under
the Creative Commons Attribution 4.0 License.

Comment on nhess-2022-140

Anonymous Referee #2

Referee comment on "Seasonal fire danger forecasts for supporting fire prevention management in an eastern Mediterranean environment: the case of Attica, Greece" by Anna Karali et al., Nat. Hazards Earth Syst. Sci. Discuss.,
<https://doi.org/10.5194/nhess-2022-140-RC2>, 2022

This work examines the utility of probabilistic seasonal forecasts from the fifth generation ECMWF system combined with the Canadian FWI index for fire season forecasts over Greece, with a focus on the Attica region. The results are potentially of high value, given that this region is prone to regular fires.

The general approach makes sense and the results are analysed using good quality standard assessment methods which give consistent results.

I have two main points, which relate to potentially improving forecast skill, rather than the quality of the study per se:

1) I'm not sure how the Greek fire service plans resource allocation, but, rather than attempting an aggregate forecast for the entire fire season, would it not be useful to, say, divide the fire season in two, and give forecasts for each half separately (e.g. for may-july initialised in march/april; and for july-sep initialised in may/june). This would allow forecasts with shorter lead times, which should in turn improve skill.

2) Related to this: the question of why the forecast skill seems to be so low for the longer-timescale components of the FWI system (those for the denser fuels). I guess this arises from two things: if I understand correctly, the authors do not use observations to spinup the FWI system. Since the BUI and DC have spinup timescales of the order of 15 and 50 days, so initialisation with obs would surely give some additional predictability for the latter in particular. This would be more relevant if my suggestion 1 is implemented.

-----minor points

The reliability diagrams are useful in that they're an alternative way of validating the forecasts, but perhaps could be in supplementary material, as they seem to largely just backup the ROCSS results.

I find the LM0/LM1 acronyms rather unnecessary and confusing. Suggest using e.g. '1 month lead' as it's not much longer, and much clearer.