Comment on nhess-2021-326
David N. Bresch (Referee)


The paper is well devised and written. Nice to see the paper start from Greek mythology and good to see the paper swiftly becomes more tangible, indeed. Good also to take a short cut to the core, rather than reviewing the scholarly journey from managing hazards to risks. Laudible to recount Hyogo and Sendai (that part might be a bit on the longish side), too. The paper then comments on many of the known challenges in multi-risk assessments and the lack of case studies at least in the academic literature. Sad to note that there are quite some in reports etc., especially in the context of local or regional climate adaptation. The research agenda presented does clearly state the cornerstones of such an endeavour, yet the proof will be in the (open-source and -access) implementation and its transferability, which will very much depend on the interoperability of (sub)models and modules. Hence some emphasis might have been put on interoperability rather than a fully unified framework which might take a long time to emerge and even more so to be readily applicable. The approach from the problem side, i.e. embracing sustainability challenges, looks promising - yet framing the problem from a resiliency angle (i.e. the strengthening thereof) might proof to be very valuable, too.