This manuscript is basically an opinion piece, combined with a plea for additional enforcement by funders and editors. It asserts that research on climate risk and vulnerability is in danger because of the surge of the "booming climate services industry" - as they often produce studies with proprietary data, and they do not release the codes of their models. The manuscript lays out a vision for how the entire community could enforce a set of standards, and also seems to make a plea for additional funding and investment by research institutions for this area of research to allow academic researchers to keep up with the private sector.

At one level, the basic goals of the manuscript seem reasonable and laudable. Who could oppose research materials that are "Findable, Accessible, Interoperable, and Reusable"? But the manuscript comes off as slightly narrow-minded, failing to see the bigger picture of what is happening in the climate research arena, and taking a very self-centered, academic perspective – rather than considering what is really best for society.

Consider a couple of possible analogies – such as research on artificial intelligence (or quantum computing), or on carbon dioxide injection in sediments. In the case of artificial intelligence, one could make many of the same points made in this paper. The literature is dominated by papers from the private sector (or with strong ties to the private sector) and data and codes are not made available. Is that really harming society by reducing transparency and reliability? I would argue the opposite – that interest in AI from the private sector has driven massive investment in this area, and it comes with benefits and also some drawbacks. Research on AI is dominated by industry because there is a commercial interest in this – and so anyone working in this area probably has strong ties to one of the major companies in this space (OpenAI/Microsoft, Google, etc.). But if society were to pass a law saying that all materials must be "Findable, Accessible, Interoperable, and Reusable", it would slow down the research dramatically. Yes – there are some more specific concerns about AI that warrant some regulation, but most of these concerns can be satisfied without demanding complete openness. A similar case can be made for research on carbon injection in sediments. This was an area that I worked in until I engaged on a project led by Schlumberger Carbon Services. In 2 months and at a cost of $100k, Schlumberger did more and better work on a similar issue than a team of researchers from a dozen universities and state geologic surveys did over 5 years and with a budget of $10 million. Why? Schlumberger had developed the tools and the databases from their work with for-profit oil companies, and so they could apply these tools and these data libraries with ease. So would society really be better served if we demanded that all research on carbon injection be done with the same openness that these authors are demanding for climate impacts research? I think the answer is no.

In my view, it is a welcome change that the private sector has finally woken up the risks and therefore business opportunities of climate change. As an insurance industry executive told me many years ago, insurance companies buy and sell risk, but never create the risk. So the fact that now companies of many types see the opportunity in studying climate risk and climate impacts (whether to understand their own exposure or to sell products to municipalities) seems like a wonderful thing. They will invest more, and probably do better work than academic researchers – just like Schlumberger. Does that mean we should eliminate government funding for this area? No! Of course not. There remains plenty of government funding for AI research, and there are all sorts of good reasons for maintaining a healthy academic research community in climate

impacts research. A healthy competition is a good thing – and it provides all sorts of checks and balances. The assertion in this manuscript that papers that are not FAIR will be unreliable is not really true. Competition in the private sector is likely to be fierce, and this will drive companies to provide benchmarks and demonstrations of skill. This has not been true with some of the consulting firms that have done climate impact assessments for cities over the past decade – but this is still early days. I suspect more and more cities or towns, when hiring a firm to do a climate vulnerability assessment, will see plenty of competition and will demand demonstration of skill and reliability.

Now – there are clearly some aspects of this manuscript that are very reasonable. Peer-reviewed literature should only include results that can be reproduced by others – and journals have an obligation to enforce this. But plenty of scientific fields have struggled getting researchers to provide open-access to their data – so I don't see why this is a new problem.

As I wrote at the beginning of this review, this is an opinion piece. My own opinion is different than the one expressed by the authors – but that does not invalidate their opinions. So if the editors want to publish this, I cannot state that anything is factually incorrect. But if it is published, I would strongly suggest that the editors request a piece with an opposing perspective, as there is too much left out of this piece to publish alone. If the idea of publishing dueling pieces is not attractive, then I would reject this piece – but that is just my inclination.

If the authors want to improve and refine their manuscript, I would recommend that they focus on the following two areas:

1) **Overemphasis on Commercial Sector Threats**: The manuscript critiques the commercial sector's reliance on closed methods in climate-risk analytics, emphasizing the risks of misguiding decision-makers due to a lack of scrutiny and reuse. While this is a valid concern, the analysis could be more balanced. The commercial sector is well-positioned to deliver timely and context-specific information that is often highly relevant for private sector actors, such as businesses and financial institutions. The manuscript could acknowledge the complementary role that both open research and commercial services play in addressing climate risks, as well as the potential for collaboration between the two sectors to improve the overall quality and accessibility of climate-risk information.

2) **Limited Exploration of Data Sensitivity and Privacy Concerns**: The manuscript touches briefly on privacy concerns, particularly in relation to data sharing. However, it does not sufficiently explore the complex ethical and legal dimensions of sharing sensitive data in climate-risk research. Issues such as data sovereignty, consent, and the protection of vulnerable populations' information could be further examined. Given that climate-risk research often intersects with human rights and social justice concerns, addressing these topics would add an important layer of depth to the manuscript's argument.