

Journal Paper Reviewed: Gomez Rave, D. V., Scolobig, A., and del Jesus, M.: Review article: Rethinking Preparedness for Coastal Compound Flooding: Insights from a Systematic Review, EGU sphere [preprint], <https://doi.org/10.5194/egusphere-2025-262>, 2025.

Journal: Natural Hazards and Earth System Sciences (NHESS)

Second Round Review – 25.07.25

1. General Comments

The edited preprint titled "Rethinking Preparedness for Coastal Compound Flooding (CF): Insights from a Systematic Review" has been substantially improved based on the reviews and thanks to the effort of the authors. The edits made to date are appreciated and several additional comments are provided below.

The definitions and applications of the risk equation and the disaster management cycle are now more clearly articulated, with appropriate references, and the background has been significantly strengthened. While the paper provides a clear explanation for its use of the term "preparedness," this usage diverges from much of the existing literature. In this preprint, "preparedness strategies" is employed as an umbrella term encompassing both preparedness and adaptation strategies. This is primarily a matter of differing time scales: preparedness typically addresses response and recovery activities tied to specific hazard events, whereas adaptation refers to long-term strategies not linked to particular events. To avoid confusion, the authors could either use the more conventional phrasing "preparedness and adaptation strategies," or explicitly define their broadened use of "preparedness strategies," including clear inclusion and exclusion criteria.

This preprint on compound coastal flood risk makes a valuable contribution to the literature on disaster risk reduction and climate adaptation. With minor revisions it would be suitable for publication.

2. Specific Comments

Coastal Focus

It is stated that the study focuses on Coastal Compound Floods specifically. Sometimes "coastal CF" is used and sometimes just "CF" is used. It should be clear that the statements do not apply to all compound floods broadly, but rather that you superficially address coastal compound floods. Consider using the abbreviation coastal compound flood (CCF), which is used elsewhere in the scientific literature.

The term "coastal" could also be mentioned in the research questions. As they are currently stated the research questions could cover all compound flood types.

Regional Analysis

The integration of case studies is now well structured by timescale and region. The outline of the three phases helps to frame the shifts that have occurred in the field along with limitations. Some comments on specific regions are found below:

Europe: You could comment on the fact that in Europe there is a baseline for hazard mapping and use of certain technical tools with the EU Flood Directive.

Asia: You address the entire region of Asia but only mention examples from China. Your study list in Table 2 includes other countries such as Vietnam and Indonesia. They could also be mentioned here.

North America: Only the USA is covered here but in Table 2 you also have a study from Canada. Some relevant aspects of the Canadian context could be covered here.

Methodology

The methods are now very clearly explained including limitations. As mentioned, the fact that this method uses titles and abstracts is a key limitation and as a result, there are likely many relevant papers not included here. The paper would be strengthened if the authors could comment on what would be required to apply similar tools to the entire text of the scientific publications. It would be interesting to know what the key barriers would be (eg. computation time, less transparency etc.).

3. Technical Corrections

TC #	Line #	Comment
1	Abstract (Lines 9–20)	“helps strengthening the link...” Should be “helps strengthen the link...”
2	65	Phrasing awkward: " In particular, FRM practices under occurrence of concurrent drivers must address the limitations of traditional single-hazard assumptions"
3	263	You mention researcher and other information, is this the author of the article or the researcher using this meta-analysis method?
4	Table 2 (Line ~422)	Netherland is used, but the country is "the Netherlands"
5	Figure 6 (Line ~430)	In the caption: “research focused on CF and orange circles indicating those centred on coastal flooding preparedness...”
		“Centred” uses UK spelling. Elsewhere you have “centered.” Pick one spelling standard: UK or US English — NHESS typically accepts UK but consistency is key. It seems like Figure 6 is missing a legend for the map. Either the symbols on the map should correspond to the rest of the figure or a legend is needed.
6	465	“preparedness campaigns mainly aimed at addressing conflicts (e.g. with NGOs or other organisations questioning ecological and environmental impacts of the programme)” “Programme” vs “Program” — standardize spelling to UK or US.
7	663 - Figure 8	The style of this figure makes it hard to read with the "swirl" shape. For clarity, I would recommend a more straight branch diagram without the swirl effect.
8	780	Lack of logical flow: "A vast majority of the analysed studies does not incorporate behavioural insights into preparedness frameworks. This omission is critical: if individuals—and institutions— simplify risk without including compound dynamics, then communication, EWS, and planning efforts must be adapted to counteract such tendencies." This section first suggests that behaviour needs to be considered but then mentioned the need to include compound dynamics. Clearly state the argument with a logical flow.

9	796	Repetition: When local perspectives are sidelined, transformative change becomes unlikely
10	Multiple	Both the American spelling “modeling” and British spelling “modelling” is used in several places.