

## Review of Feng et al. 2026

**Title:** 21<sup>st</sup> Century Strong Wind and Heavy Precipitation Hazards in the Asian Monsoon Region Driven by Mesoscale Convective Systems: Climatology, Variability, and Trends

**Authors:** Jie Feng, Jian Yang, and Zhongdong Duan

**Summary:** The authors present a multi-faceted study of MCSs and their associated hazards across the AMR. The authors use various datasets, both satellite and land based, to examine the frequency of MCSs, the hazard production of MCSs, and trends in MCSs across the region. I generally find the manuscript well written and adding some interesting information to the body of literature of MCSs in the region. However, I do have a few comments about the analysis and the use of land-based observations. While these I do not think rise to the level of major revisions, they are close. I defer to the editor in making this decision. I am happy to read the paper again.

**Recommendation:** Minor Revisions

### Minor Comments (Comments are not listed in order of importance):

1. First, I would like to apologize to the authors on the lateness of this review. Between conferences and classes, it slipped through the cracks. My apologies.
2. Section 1: There need to be some spaces between certain words and the parenthetical citations that follow.
3. Section 1: Please state your hypotheses for this manuscript. This is critical to the scientific processes and will greatly improve the motivation for the scientific analysis that follows.
4. Lines 115: A think a bit more clarification on the heavy precipitation threshold here is needed. Is the 20 mm/hr a rate or an accumulation threshold? The prior means this could be achieved in a sub-hourly timeframe, where 20mm mm of rainfall did not actually fall in an hour (i.e., 5 mm fell in 15-minutes). If it is an accumulation, meaning 20 mm rainfall actually fell in an hour, please indicate. This also needs to be discussed for the HRE criteria.
5. Throughout: The severe wind, hail, and tornado reports are likely quite biased by population. This is a known problem in severe weather hazards databases across the globe. I believe some more discussion (and caveats) about this needs to be included in terms of understanding the results. The attempt to look at this in terms of prefectures still likely is biased by population, as prefecture size is also dependent on local population.
6. Section 3.2: Was any attempt to examine the characteristics as a function of seasonality made? This seems to be a pretty important aspect of the analysis, given the seasonality of the monsoon circulation. This might also help with supporting the conclusion in lines 235-238.
7. Section 3.3: Please make sure it is clear these results are over a certain region for a given time and should not necessary be generalized to other regions. They can be compared to similar analyses in other regions on the globe.
8. Line 322-327: I am not sure this is correct/can be justified based upon what is presented. We know that descending rear-inflow jets in MCS can cause severe wind. These clearly depend on rainfall characteristics and background thermodynamics/moisture profiles.

9. Section 3.3.3: Choosing a daily timescale for the tornado and hail events associated with MCSs does not seem valid. We know in convective scenarios that, within a diurnal cycle, we often see upscale growth from discrete isolated convection to MCSs. This analysis does not, to my understanding, account for the fact that these discrete cells could be producing the main hazards. This is even more true since it is aggregated on the prefecture level and is again compounded by the population bias in the hail/tornado data. This is probably my most major comment and almost warrants a major revisions decision. The only reason I am not, is I think this section can be removed from the manuscript and it still be publishable.
10. Figure 7: This figure is very channeling to see. The dots and the terrain overplotting blend together. Please find a way to make this clearer.