

## The anonymous referee #1

Review:

The deadliest sudden weather-related events in the Czech Lands, 1851-2025 CE  
Brázdil et al

Review comment as of 23 FEB 2026

**RESPONSE:** We would like to thank the anonymous referee #1 for evaluation of our paper with raising many critical comments, which we are trying to respond below.

### General comments:

Lines 50-51: The question is, to what extent were road accidents a direct or major result by weather... or by inadequate driving? In most cases, I would assume that weather is an additional factor, but not the exclusive cause for accidents, unless cars were swept away by floodwater.

**RESPONSE:** Accepted. We fully agree with the referee's expression to road accidents. But we believe, that our sentence "Mortality during traffic accidents connected with adverse weather has also been considered (Brázdil et al., 2022a, 2022b)." is in this context sufficient, because we are not going here into more detail.

Lines 66-71 / Lines 76-79: This section is about to name your data sources. You may only describe the source types of your work. Examples of detailed content are misplaced here, but nice to be given elsewhere in your paper where it fits best.

**RESPONSE:** Looking on the review, we suppose that the referee is well oriented in the character and use of documentary data in this type of analyses. But we suppose that the same is not a case of many other potential readers. From these reasons we would like to preserve examples on the mentioned lines for well understanding of character and explanatory potential of data about fatalities, used in our study.

Line 291: How come that suicides count as flood fatalities? It's not good to give that sentence without proper explanation. When a person commits suicide, it has nothing to do with the impact of weather, but with an individual decision, and such events should not count in the total number of flood fatalities. You may mean the overall societal outcome and follow-ups of that catastrophe, including people killed/injured during the aftermath work, suicides may also count here, but such should be distinct from people killed by floodwater or in/on collapsing structures.

**RESPONSE:** We fully agree with your expression. From reasons you mention above we did not include 3 suicides after July 1997 flood in total number of fatalities (58 instead of 61) and we further calculated with 58 fatalities (see also our expression to the first your comment in Specific comments and Table A1).

### Specific comments:

Line 21 / Line 31: Number of fatalities of the July 1997 flood correct?

**RESPONSE:** The both numbers are correct: 58 fatalities follow from our analysis in Sect. 4.1.6 (lines 291-292), where 3 related suicides as indirect victims of this flood were not counted (see also Table A1). Number 61 follows from cited paper Brázdil et al. (2023), which included also these 3 suicides.

Line 21: 58 in Moravia and Silesia;  
**RESPONSE:** See above explanation.

Line 31: 61 in CZ and 54 in PL  
**RESPONSE:** See above explanation.

Line 28: Consider: "... at least 189 fatalities..." (Thieken et al, 2023)  
**RESPONSE:** Accepted. The part of corresponding sentence was corrected as follows:  
"Germany with at least 189 fatalities".

Line 63: Please enter the period you've been covering by newspapers/magazines  
**RESPONSE:** Accepted. The corresponding sentence was corrected as follows: "Newspapers and magazines, that covered the whole analyzed period, have always been interested in publishing reports about hydrometeorological extremes, ..."

Line 80: "until 1949"... source/reference should be given  
**RESPONSE:** Accepted. The sentence on line 80 was corrected as follows: "Registers of deaths were maintained by church offices until 1949, when based on the act No. 268/1949 Coll. (Sbírka zákonů, 1949) this agenda was transferred to the state administration."  
The new reference:  
Sbírka zákonů: Sbírka zákonů republiky Československé, Rok 1949 (Collection of Acts of the Czechoslovakian Republic, 1949 Year), Praha, Czechoslovakia, 1949.

Line 136-137: About "... often at night": Why is that? In case it is an important result to be noted, please give some more details about why nighttime events produce most consequences. If not, leave it out. You can also note in brackets if you may refer to a later section where it is somewhat explained... like: "(see 4.1.1, etc)".  
**RESPONSE:** Accepted. The sentence on lines 136-137 was modified as follows: "Flash floods, with their sudden onset in areas outside the core triggering rainfall, have had many fatalities, particularly in night, when people were already sleeping at home."

Line 137: Please leave out the word "terrible". That word is strongly judgmental.  
**RESPONSE:** Accepted. The word "terrible" was deleted – see the preceding comment to lines 136-137.

Lines 165-166: Is it possible to have Bohemian/Austrian Gulden converted into currency which is in use today? Such as CZK or even EUR? It would give the reader a better understanding of the total losses.  
**RESPONSE:** We see rather problematic to re-calculate past damage in guildens in CZK or EUR. From this reason and just to have any idea about amount of money we used rather practical comparison: "(for comparison: in 1871, the cost of a planned 38 km-long single-track railway in southern Bohemia was 4.298 million guildens)".

Line 205: About: "corresponding to a 100-year return period" ... source/reference?  
**RESPONSE:** Accepted. The following reference was added:  
Brázdil, R., Dobrovolný, P., Elleder, L., Kakos, V., Kotyza, O., Květoň, V., Macková, J., Müller, M., Štekl, J., Tolasz, R., and Valášek, H.: Historické a současné povodně v České republice (Historical and Recent Floods in the Czech Republic). Masarykova univerzita, Český hydrometeorologický ústav, Brno, Praha, 370 pp., ISBN 80-210-3864-0, 2005.

Lines 339/360: Before going into details about what happened in Czechia on 04 July 1929, it would be good to have a short sentence mentioning the huge territory being affected by extremely severe weather that day. You have that briefly mentioned in line 360, but it would be better having that as entrée. The affected area stretched from Lake Constance region up to Wielkopolskie region in Poland, and from the Vienna area up to northern Brandenburg region in Germany. Since there are various historical sources, you may refer to the ESWD (European Severe Weather Database) as background data pool.

**RESPONSE:** We would like to keep the style of description for individual extreme events, when information about other territories appears at the end of description. From this reason we add the following sentence as the last: “More specific, according to European Severe Weather Database (2026), the affected area stretched from the region of Lake Constance up to the Wielkopolskie region in Poland, and from the Vienna area up to northern Brandenburg region in Germany.”

The new reference:

European Severe Weather Database: <https://eswd.eu/en>, last access: 4 March 2026, 2026.

Lines 410-411: You can leave that clause out from the sentence because these historical facts are already given indirectly due to the date given in line 407. In addition, you may mention “World War II” in the first line after the date, so the situation of February 1945 should be clear. Such as: “On the night of 23 February 1945, during World War II, ...”

**RESPONSE:** Accepted. The first sentence was corrected as proposed, i.e. “On the night of 23 February 1945, during World War II, ...” On the other hand, the sentence “Given the location of the war front to the west, the plane likely flew a roundabout route over Czech territory (Fig. 12b), which was still occupied by the German army.“, we see as important, because it explains selected flight line.

Lines 416-417: According to Veselý Výlet, VV38/2013, summer edition 2012, p.16.: 22 soldiers died on the spot (due to the crash or froze to death). Six soldiers survived the plane crash, while one of them died due to exhaustion. Based on that, one counts 23 people and 5 survivors. See also your figure 12/d.

**RESPONSE:** Information about fatalities may differ according to different sources. The event was described by many sources, including Veselý Výlet. Here we used fatality data from Krejčí (2014), not from Veselý Výlet. According to Archa Krkonoš (2026), one of soldiers (Erich König) died on the following day in the hospital in Trutnov. It means, that the following sentence is correct: “A total of 24 soldiers died in the crash itself, froze to death afterward, or died from exhaustion.” We added citation of Archa Krkonoš to the text.

The new reference:

Archa Krkonoš: HMU havárie letadla JU-52 1945 (HMU accident of the JU-52 plane, 1945), <https://archakrkonos.cz/udalosti/59-hmu-havarie-letadla-ju-52-1945/>, last access: 4 March 2026, 2026.

Line 516: Kühne et al (2025): Four deaths were recorded from Czech Republic in the period from 2001 to 2020. In your line, it reads “Europe” instead of “Czech Republic”. For Europe, the cited paper refers to 1,282 lightning strike fatalities. Please change it accordingly.

**RESPONSE:** Our sentence is as follows: “For example, Kühne et al. (2025) reported no more than 4 deaths by a single lightning strike in Europe during 2001–2020, even though this occurred on 6 different occasions.” For correction of this sentence see the subsequent comment. We do not compare our data with “Four deaths were recorded from Czech Republic

in the period from 2001 to 2020.”, as you mention. We believe that our sentence is correct, because we put it in comparison with 13 deaths during a single lightning strike in Koňákov.

Line 516: What is meant with “... on 6 different occasions.”? You refer to four individual fatalities by lightning, but how come there were six different occasions?

**RESPONSE:** Accepted. To clarify better our expression, we changed it as follow: “... on 6 different occasions in Turkey (3 events), Poland (2 events) and Germany (1 event).”

#### **Technical corrections:**

Line 28: use plural (“floods”) since several regions and river catchments were affected in Germany, Belgium, and the Netherlands

**RESPONSE:** Accepted and corrected.

Line 29: Change to “Ahr River”

**RESPONSE:** Accepted and corrected.

Line 85: Change: “..., among other causes” (instead of “and so forth”)

**RESPONSE:** Accepted and corrected.

Lines 85-86: Give “(Fig. 1 a/b/c)” in the text at the end of the sentence before (early line 85). The following sentence is already given in Fig. 1 a/b/c caption. Don’t write down the same things twice.

**RESPONSE:** Following this comment, we changed corresponding sentence as follows:

“For example, Fig. 1 shows various memorials to 3 further considered disastrous events in the Czech Lands.”

Line 108: Note “Wetterzentrale webpage” here, but don’t give such a web link in the paper text like that.

**RESPONSE:** Accepted. The corresponding sentence was corrected as follows: “The maps were downloaded from Wetterzentrale webpage (Wetterzentrale, 2026); they visualize the Twentieth Century Reanalysis ...”

The new reference:

Wetterzentrale: <https://www.wetterzentrale.de/en/reanalysis.php?model=noaa>, last access: 4 March 2026, 2026.

Line 135: Change: “... most commonly cause fatalities due to...”

**RESPONSE:** Accepted and corrected.

Lines 135-136: Change: “..., mudflows, heart attacks, and incidents occurring during rescue operations, among other causes.”

**RESPONSE:** Accepted and corrected.

Line 155: Change: “... and for 77 (31.5%), the sex of the victims remained unknown.”

**RESPONSE:** Accepted and corrected.

Lines 214-215: Change: “To the 24 fatalities recorded in Prague, one must add a man who drowned in Vrchlice Stream in Kutná Hora.”

**RESPONSE:** Accepted and corrected.

Line 237: Change into: ... 'Breiter House' ... Better use inverted comma and capital letters to flag the proper name of that estate.

**RESPONSE: Accepted and corrected.**

Line 240: Change: "..., and in 16 cases (18.2%), the sex was unspecified."

**RESPONSE: Accepted and corrected.**

Line 261: Change: "..., were flooded."

**RESPONSE: Accepted and corrected.**

Line 265: Change: "... approximately 50 km<sup>2</sup>, encompassing 22..."

**RESPONSE: Accepted and corrected.**

Line 266: Change: "affected" to "... occurred to 680 houses, ..."

Line 266: Change: "... of farmland, sewer systems, watercourses, ..."

Line 266: Change: "etc." to "..., and other assets."

**RESPONSE: Accepted. Because of all three comments concern the same sentence, we changed it as follows: "In the affected area of approximately 50 km<sup>2</sup>, encompassing 22 municipalities, significant damage occurred to 680 houses, 6,000 ha of farmland, sewer systems, watercourses, domestic animals, and other assets (Rovnost, 17 June 1970, p. 1)."**

Line 291: Change: "Three additional..."

**RESPONSE: Accepted and corrected.**

Line 309-310: Change: "..., among other causes."

**RESPONSE: Accepted and corrected.**

Line 409: Change: "Dresden-Klotzsche"

**RESPONSE: Accepted and corrected.**

Line 519: Change: "... three catastrophic floods..."

**RESPONSE: We suppose, that the journal style prefers to use "3" instead of "three".**

Line 542: Change: "... these nine events..."

**RESPONSE: We suppose, that the journal style prefers to use "9" instead of "nine".**