



Interactive comment on “At the risk of floodwaters: historical flood risk and its social impacts in the area of the Wash in eastern England (Cambridgeshire, Norfolk, Lincolnshire) Mid 17th century–end of the 19th century” by E. Garnier

Anonymous Referee #2

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I recommend rejection of this paper on the grounds of the following points:

1. The second paragraph in chapter ‘Materials and Methods’ concerning the Bedford Level Corporation sources (page 6545 line 10-17) is copied verbatim from Darby (1983, p.105-106), also to be found in Darby (1968, p. 109-10). No indication is given in the paper that this text is a direct copy. The copying here is easily identifiable since Darby’s 1968 book is online (Google Books).

Additionally in the chapter ‘Study area and background’, page 6544 lines 10- 22 are

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almost verbatim taken from Summers (1976, p. 188-189). Oddly enough a smaller part of this text is referenced, but to Summers (1971), however, for the remaining lines 16-22 no reference is given.

2. The abovementioned copied paragraph on the sources of the Bedford Level Corporation (6545 lines 10-17) is the first more detailed paragraph on the primary sources used for the flood series in the chapter 'Material and methods'. In this position and referring to the 'Proceedings and Order Books of the Conservators of the Level' and 'the records of their meetings' this paragraph implies that these source categories were also systematically used in the construction of the flood series and the impact/adaptation analysis. However, since this text is copied and contains no appraisal/criticism of the sources by the author himself, and these sources do not appear later in the paper or in the reference list, there is insufficient evidence that these source categories of the Bedford Level Corporation Archives were indeed consulted.

3. A substantial part of the flood series and the subsequent analysis is based on the memorials and petitions to the Bedford Level Corporation (S/B/SP) – a small part of the whole collection. For problems with the use of these petitions, see further down (dating of floods, meteorological causes of floods), the main point here is that in the paper these petitions are not cited from the original source material. Instead the citation is each time taken largely or entirely from the modern summaries/descriptions of the documents in the online catalogue (four petitions are cited, catalogue link see at the end of this review: page 6545 S/B/SP38 – catalogue reference: KBLC/2/9/1/38; p. 6546 S/B/SP315 – cat. ref. KBLC/2/9/3/89; p. 6551 S/B/SP1002 – cat. ref. KBLC/2/9/12/34; p. 6553 S/B/SP1205 – cat. ref. KBLC/2/9/13/83). These four citations are in modern English and display no characteristics of 17th/18th/19th-century English.

Since citing the archivists' summaries instead of the original document is more than unusual, this raises severe doubts that the original documents have been consulted at all and that the flood series and analysis is based on work with the originals and not on the archivists' descriptions of these, thereby also wholly relying on the rigor and thorough-

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ness of the archivists. Additionally, the four citations are explicitly given as citations from the original primary source (6545 lines 21-22 'they describe exactly', 6551 line 3 'is described in the petitions', 6553 line 3 'In April 1822, petition of certain [...] says'), but they clearly are only the modern summaries: the 'citation' of S/B/SP315 on page 6546 even contains the archivist's remarks about an attached document, rephrased as 'A copy of the BLC agreement is attached' (6546, line 809) from the archivist's online summary 'A copy of 1717 agreement is attached.'

4. The chapter on 'Material and sources' also leaves the reader in confusion as to what extent 'the municipal archives of the cities of Cambridge Norwich, Wisbech or From [sic] King [sic] Lynn' (6545, lines 6-7) have been used. The previous words 'various paleographies [sic] over the centuries. These are varied and heterogeneous because they derive from different origins, such as [...]' (6545 lines 4-5) imply intensive, systematic use, but the only specification later given is:

'The municipal archives kept in the Norfolk Record Office and in Cambridgeshire Archives allow us to study the floods in an urban frame from the examples of the cities of Kings [sic] Lynn and Cambridge. In the first case, Hall or congregation (assembly) Rolls and books get regular information on the climatic extremes because the elected representatives watched to take measures [...]. For Cambridge, the Annals of Cambridge tell the history of the academic city under a document published in the 19th century. [...]' (6546, lines 17-25).

No further reference to the municipal archives of the city of Norwich and the town of Wisbech, appears in the rest of the paper, or in the reference list. Indeed the use of the municipal archives of the city of Norwich in a study of Fenland floods would be surprising, since Norwich is nowhere near the Fens. In the reference list no hint is given to the specific sources or source groups used from the municipal archives (the whole study period or case studies?) neither for Norwich, nor for Wisbech, nor for Cambridge. It appears that for the paper the Cambridge municipal archives consist entirely of the 'Annals of Cambridge', a typical 19th-century local history, which would

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be the first one of its kind not to display the typical problems of misdating (a problem prevalent in English history due to the late calendar change in the mid-18th century). Nonetheless the paper does not indicate an independent verification of the flood information derived from the 'Annals of Cambridge'. This leaves the use of the municipal archives of King's Lynn, which are described in the paper. However, they are not, as stated (6546 lines 17-19) in the Norfolk Record Office (Norwich), but in King's Lynn. They are commonly called the King's Lynn Borough Archives (and are listed as such in the reference list), and are only a branch of the Norfolk Record Office. Unfortunately, the very general description of the used sources as 'Hall or congregation (assembly) Rolls and books' (6546, line 19-20) indicates a lack of familiarity with the collections, since for the time-frame of this paper (post mid-17th century) no rolls were produced for the assembly records any more and only books appear in the collections.

5. In the paper the assertion is made:

'This research is based on the exploitation of primary sources consisting mainly of textual [sic] archives and which, consequently, raises a problem of reading because they use various paleographies [sic] over the centuries. These are varied and heterogeneous because they derive from different origins, such as the archives of the Beford [sic] Level Corporation, the municipal archives of the cities of Cambridge Norwich, Wisbech or From King [sic] Lynn and newspapers were deprived [sic] of the notables and the academics of Cambridge Colleges' (6545, lines 1-8),

but as outlined above, the description and use of the sources leaves the reader in great confusion.

For the reader only the following primary sources can be traced in the paper and were clearly used for the flood series and/or impact studies:

I. The petitions to the Bedford Level Corporation (S/B/SP ...), but seemingly taken from the modern summaries written by the archivist in the online-catalogue

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II. Edited and printed diaries of Cambridge Fellows etc. (in the reference list are 6 memoirs/diaries)

III. The transcription of the parish register for the Holy Trinity parish in Ely was used for the mortality study.

The flood series also appears to a good degree to be based on the unverified information from the 19th-century local history of Cambridge, 'Annals of Cambridge'. If this information is enough to base a subsequent analysis of causes, seasonality and damages upon is to be questioned. Concerning the petitions, many important questions remain unanswered, such as: What is the geographical coverage of the Bedford Level Corporation archives in the Fenlands, since this corporation did not drain the whole Fenlands? What is the time-frame of the petitions to the corporation, especially when do they end and when is their information replaced with information from the British Hydrology Society Chronology data? Are there gaps in the series of petitions to the corporation? What was the administrative procedure to submit a petition, i.e. which persons could at which time and for what reasons submit petitions?

The data from the petitions are later included in and probably form a very substantial part of the data used in the analysis of cause, seasonality and damage of floods in the Fenlands. However, the paper only states vaguely that the petition 'is often precise' (6545, line 20), or 'can indicate the date' (6545, line 21) without explaining what percentage of the 260 flood connected petitions reaches that degree of precision. Also these petitions according to the paper 'rarely specify the weather conditions (rain, snow, ice, storm) or maritime (tide) which provoked the flood' (6546, lines 14-6). Since the petitions seem to be the backbone of the flood series, but rarely give the causes of the floods, what is the cause-analysis based upon? Since it is unclear how many of these petitions date the floods precisely, how can the resolution down to the monthly level for the floods be achieved? (And does this resolution pay attention to the calendar change and c. 10-day shift adjustment in mid-18th century, which if unconsidered breaks the homogeneity of the seasonal analysis completely?)

The paper does not clarify on what source the damage analysis/payments to flood victims is based upon, and in what relation these compensation payments stand to the total cost of the floods for the Bedford Level Corporation. The text seems to indicate that the source is again the petitions to the corporation ('Corporation regularly paid the victims [...] compensation policy' 6552, line 3-9, less clearly state in Figure 7), but it is not explained how the compensation payments can be inferred from the compensations demanded in the petitions.

There are more problems with the paper, which will only be presented in a summary way, and which have partly already been outlined in the review of de Kraker.

- The time-frame given in the title ('mid-17th to the end of the 19th century') does not fit the content of the paper which presents a flood series 'to the present day' (6542, line 25) or a 'chronology of floods up to the beginning of the 21st century' (6548, line 10-1).

- Data homogeneity: At some unspecified point in the 19th century the shift from data coming from primary sources to data coming from the database of the British Hydrological Society Chronology occurs. The paper states 'For the period 1663-1900, only 11 events are listed by BHS Chronology of British Hydrological Events out of a total of 38 floods' (6548 lines 16-17), so data homogeneity is indeed in question.

- Climatic signal in the Fenland flood series: The modern Fens are an artificial landscape that was subjected to ever increasing drainage and flood protection works over the past 350 years. The drained peat shrinks, which brought failure to the early drainage attempts, and today the embanked rivers are often higher than the surrounding fields. The influence of land use (traditional or post-drainage), the technology involved in drainage and flood protection, the quality of maintenance of these features, the level of the shrinking peat soil, the changing coastline etc. will render the detection of changing climatic patterns, which in turn alter the flood patterns, extremely difficult.

- In the chapter on 'Demography, Ely' the impression arises that the whole city of Ely is represented by the employed data. 'To complete this demographic approach, the ex-

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ample of the city of Ely was chosen, because [...]’ (6555, line 3). Later the text is more precise ‘the Holy Trinity parish registers of Ely record’ (6555 line 11-12). Holy Trinity was one of three parishes in Ely, and it is fine to base the rather tentative mortality analysis on its data, as long as it would be made clear that it represents only part of the city.

- In general the paper needs extensive reworking on grammar and orthography.

Correction of geographical terms:

In the paper the geographical term of ‘Great Britain’ (the largest island of the British Isles) is taken as a substitute for the political term of ‘United Kingdom’ (of Great Britain and Ireland) (‘countries’... ‘Great Britain’, 6542, line 12).

The terms ‘Fen/Fenland(s)’ and ‘eastern England’ are confused. Even though the Fens are situated in eastern England, they constitute only a small part of this area, and are in terms of topography and landscape a very distinct region, that by no means represents the rest of eastern England (6543, line 11).

The 1953 flood affected the coasts of eastern England (Lincolnshire, Norfolk, Suffolk, Essex) not the ‘North of Great Britain’ (this would be Scotland, 6550, line 23-4).

Even though the text refers to the part of the North Sea bordered by the Fenlands correctly as the ‘Wash’, in Figure 1 this part of the sea is erroneously described as the ‘West Estuary’.

References:

Memorials and petitions to the Bedford Level Corporation:

Cambridgeshire Archives, KBLC Bedford Level Corporation, 2 Administration, 9 Memorials and Petitions, subfolders 1-28 (for searches enter cat. ref. in ‘Staff Reference Number’ in the ‘Catalogue’ under ‘Advanced Search’)

<http://calm.cambridgeshire.gov.uk/CalmView/TreeBrowse.aspx?src=CalmView.Catalogfield=RefNokey=KBLC>

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Summers, D., The Great Level. A history of drainage and land reclamation in the Fens, Newton Abbot – London – North Pomfret et al. 1976.

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