

Reviewer 2

1. From the initial list of 1832 articles, 273 were selected, which represents a substantial reduction. In this process, there was a relevance screening that was conducted manually, as explained by the authors. In spite of a "conservative inclusion strategy" was applied, this process may be somewhat subjective and not easy to reproduce, so it is important to mention this in the text, or reconsider the methodology.

Response: We will describe the screening procedure in more detail. As discussed in the responses to Reviewer 1 (Comments 2 & 3), we will expand the Methods to explain how the 1,832 records were screened, including the inclusion criterion and the use of a single reviewer. We will also add a search strategy diagram (see Response to Reviewer 1, Comment 2), showing the progression to the final corpus of 273 papers, including the principal exclusion criteria.

We propose to include the following text in Section 2.1 (also see response to Reviewer 1, Comment 2):

"The literature search was conducted on 17 February 2026 using the Web of Science Core Collection and was restricted to English-language records published between 2015 and 2025. No restrictions were applied by Web of Science Category, and all document types were considered except books, book chapters and book reviews. The search returned a list containing 1,832 records, which was subjected to manual relevance screening. Because the broad search deliberately omitted hazard-specific terms, a large proportion of the retrieved records were clearly outside the scope of the review, and the screening consisted primarily of removing these records. All titles were screened first, and where relevance could not be established from the title alone, the abstract was consulted. Records were retained where a climate hazard affecting an African urban setting constituted a substantive focus of the study. Records were excluded where the African or urban context was incidental, or where climate change or climatic hazards primarily provided context for another research topic without substantive analysis of the underlying hazard. Examples include studies focusing on urban crime or conflict following climatic shocks, climate-induced migration, adaptation planning and governance, greenhouse-gas mitigation, urban agriculture, building energy performance, and environmental issues such as pollution or waste management. The screening was conducted by a single author. We considered this appropriate for our semi-systematic review because the broad search retrieved a large proportion of clearly out-of-scope records, making most exclusion decisions straightforward. Where relevance could not be established from the title alone, the abstract was consulted, and where uncertainty remained after consulting the abstract, the record was retained, this conservative approach being intended to minimize the risk of excluding potentially relevant studies. Full-text PDFs were obtained for all papers retained in the final corpus, including through institutional subscriptions in case articles were not openly accessible."

2. Fig. 3 needs a scale for the solid dots size, which reflects the number of mentions in the literature, as explained in the text.

Response: Agreed, we will add a scale to Fig. 3 indicating the number of literature mentions represented by dot size.

3. Although Fig. 5 graphically display how nodes/keywords are more or less connected, it is important to have this information also summarized in a table displaying how nodes/keywords rank in relation to the number of connections, contributing to clearly show which ones are more important.

Response: We will add a table listing all keywords included in the network, together with their number of occurrences and total link strength (TLS), which represents the cumulative strength of a keyword's connections. Given the length of the table, we propose to include it as an Appendix.

Rank	Keyword	Occurrences	Total link strength
1	<i>urbanisation</i>	86	351
2	<i>uhi</i>	63	302
3	<i>lulcc</i>	62	279
4	<i>temperature</i>	62	267
5	<i>lst</i>	53	240
6	<i>remote sensing</i>	49	216
7	<i>flooding</i>	59	201
8	<i>modelling</i>	47	160
9	<i>vulnerability</i>	38	159
10	<i>risk</i>	41	148
11	<i>precipitation</i>	47	147
12	<i>thermal comfort</i>	31	135
13	<i>vegetation</i>	26	125
14	<i>heat</i>	30	124
15	<i>adaptation</i>	36	109
16	<i>water</i>	27	105
17	<i>health</i>	23	103
18	<i>variability</i>	19	83
19	<i>ndvi</i>	17	79
20	<i>poverty</i>	17	76
21	<i>trends</i>	17	75
22	<i>gis</i>	19	73
23	<i>river (basin)</i>	20	65
24	<i>resilience</i>	19	65
25	<i>lcz</i>	13	64
26	<i>spatial</i>	15	63
27	<i>classification</i>	12	63
28	<i>environment</i>	16	59
29	<i>extremes</i>	14	58
30	<i>drought</i>	16	57
31	<i>microclimate</i>	14	57
32	<i>energy demand</i>	14	55
33	<i>impervious</i>	9	49
34	<i>informality</i>	12	48
35	<i>hazard</i>	11	45
36	<i>seasonal</i>	9	45
37	<i>mortality</i>	10	43
38	<i>coastal</i>	10	42
39	<i>energy balance</i>	8	42
40	<i>humidity</i>	8	39
41	<i>time series</i>	8	37
42	<i>malaria</i>	12	33
43	<i>development</i>	8	29
44	<i>groundwater</i>	11	28
45	<i>vector-borne</i>	11	23

46	machine learning	8	23
47	soil impact	8	17

4. Data and analysis in Fig. 6 bring interesting aspects, informing that the number of total publications and the number of studies using satellite-based remote sensing had both a ~linear increase from 2015 to 2024, while the proportion of remote-sensing studies in the period varied substantially in the first half of this period, but it remained nearly constant and close to 40% in the following years. However, the time interval from 2014 to 2025 yielded a sample size of 10 points, which is small to discuss these patterns in terms of coefficients of correlation and p-values. Discussion on results from Fig. 6 is already interesting by qualitatively evaluating the trends, and it would be much more precise without mentioning correlation coefficients and their statistical significance.

Response: Agreed, we will remove the correlation coefficients and associated p-values and discuss the patterns descriptively.

5. It is important to include somewhere at the beginning of the text what the authors mean by Land Surface Temperature (LST) because it may be confounded with air temperature near the surface. A clear explanation comes only at section 4.2.5.

Response: We will define Land Surface Temperature (LST) at its first occurrence in the manuscript and clarify that it refers to the radiative temperature, as distinct from near-surface air temperature.

6. Section 4 needs a table to summarize the findings from the meta-review and the expert-based thematic reviews.

Response: We will add a new Section 4.3, “Synthesis of thematic findings”, containing a summary table that brings together the findings from the meta-review and the expert-based thematic reviews. The table will summarize the principal findings and the main characteristics or limitations of the available evidence. This table will replace the current AI-assisted synthesis table in the main manuscript, which will be moved to the Supplement (see response to Reviewer 1, Comment 4).

7. In my view, it is important to consider if the topic “Slow-onset climate trends” in section 4.2.6 may be renamed to something like “Urbanization-climate interactions” mentioned in Table 2, which in my view it is easier to understand.

Response: In our view, “Urbanization-climate interactions” would not fully reflect the scope of this section, which addresses gradual climatic changes and their impacts in urban environments. We do agree, however, that the terminology could be more clearly defined, hence we will adopt the IPCC terminology “slow-onset events” for the section title and add:

“Here, slow-onset events refer to gradual changes in climatic conditions, such as increasing mean temperatures or changing precipitation patterns, consistent with the IPCC framing of slow-onset events (IPCC, 2023)¹.”

¹ IPCC: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, Core Writing Team, Lee, H. and Romero, J. (Eds.), IPCC, Geneva, Switzerland, 184 pp., <https://doi.org/10.59327/IPCC/AR6-9789291691647>