

PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	Title page: "Mapping Urban Socio-Economic Resilience to Climate Change: A Bibliometric and Thematic Analysis of Global Research (1990–2025)"; study type labelled "Review" on the title page
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	Abstract (p. 1): structured abstract reporting background, objectives, methods, results, and conclusions
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	Section 1. Introduction (paragraphs 1–5): rationale grounded in global urbanisation trends, climate change policy frameworks, and the absence of a prior integrated bibliometric–thematic synthesis of urban socio-economic resilience over 35 years
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	Section 1. Introduction (paragraph 5): explicit aim "to evaluate the current state of knowledge regarding the resilience of urban socio-economic systems to climate change" across 5,076 peer-reviewed

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			publications (1990–2025)
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	Section 2.2. Screening and Eligibility Assessment: four analytical dimensions (urban context, climate hazard, socio-economic component, resilience/adaptation); relevance score ≥ 3 retained; score = 2 manually reviewed; score ≤ 1 excluded; socio-economic dimension mandatory
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	Section 2.1. Data Source and Search Strategy: Web of Science Core Collection; search conducted on 04 December 2025; document types: article, review article, proceeding paper, book chapter, early access; language: English; indexes: SCI-EXPANDED and SSCI
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	Section 2.1. Data Source and Search Strategy: full Boolean query presented combining socio-economic terms (S_{aE}), urban descriptors (S_{Urban}), resilience terminology (S^{Res}), and climate change keywords (S^{cle}); initial retrieval: 8,534 records; after filters:

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			6,278 records
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	Section 2.2. Screening and Eligibility Assessment: automated Python script assigned relevance scores (0–4) based on title, keywords, and abstract; mandatory manual validation of the socio-economic dimension applied to all records reaching the relevance threshold; borderline cases (score = 2) manually reviewed
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	Section 2.3. Data Processing and Analytical Approach: data collected from Web of Science metadata (titles, abstracts, author keywords, publication year, country, document type); bibliometric and thematic analyses applied to the final dataset of 5,076 publications
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	Section 2.3. Data Processing and Analytical Approach: outcomes include publication dynamics, geographic distribution, keyword co-occurrence patterns, thematic clusters, sectoral distribution, and hazard frequency; all compatible records

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			within each dimension were analysed
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	Section 2.3. Data Processing and Analytical Approach: variables include document type, publication year, country of origin, author keywords, and abstract text; Section 2.4. Methodological Scope and Limitations: assumptions on incomplete metadata acknowledged
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	Section 2.4. Methodological Scope and Limitations: methodological limitations acknowledged (single-database coverage, English-language restriction, unvalidated automated screening); mandatory manual validation stage applied as partial mitigation; no formal study-level risk-of-bias tool applicable to bibliometric review
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	Not applicable — bibliometric and thematic review; no quantitative effect measures calculated
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	Section 2.2. Screening and Eligibility Assessment: automated relevance scoring on four

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			predefined analytical dimensions followed by mandatory manual validation; studies grouped by temporal period, geographic region, economic sector, hazard type, and methodological approach for thematic synthesis
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	Section 2.3. Data Processing and Analytical Approach: bibliometric data exported from Web of Science; keyword co-occurrence networks constructed; sectoral and temporal classifications applied; abstract-based city and country identification performed for geographic mapping
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	Section 3 (Results): temporal evolution figures (Figures 2–3), geographic distribution maps (Figures 4–5), keyword word cloud (Figure 6), co-occurrence network (Figure 7), sectoral publication counts (Figure 8), sectoral trends (Figure 9), hazard frequency distribution (Figure 10)
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	Section 2.3. Data Processing and Analytical Approach: narrative thematic

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			synthesis integrated with bibliometric network analysis; rationale for combined approach stated in Section 1 (Introduction) and Section 2; no meta-analysis performed
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	Not applicable — no meta-analysis performed; thematic and geographic variation explored qualitatively in Sections 3.1, 3.4, 4, and 4.1
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	Not applicable — no quantitative meta-analysis; methodological robustness discussed in Section 2.4. Methodological Scope and Limitations and Section 4.1. Limitations of the review processes
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	Section 2.4. Methodological Scope and Limitations: restriction to Web of Science Core Collection (Scopus excluded), English-language publications only, and exclusion of grey literature acknowledged as potential sources of geographic and linguistic reporting bias
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	Not applicable — no formal certainty assessment (e.g.,

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			GRADE) applied; confidence in findings discussed qualitatively in Section 4.1. Limitations of the review processes and Section 5. Conclusions
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	Section 2.2. Screening and Eligibility Assessment and Figure 1 (PRISMA 2020 flow diagram): 8,534 initial records → 6,278 after database-level filters → 1,104 excluded (low relevance score) → 98 excluded (manual review) → 5,076 publications retained for final analysis
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	Section 2.2. Screening and Eligibility Assessment: 1,104 records excluded for insufficient thematic coverage of urban socio-economic resilience (relevance score ≤ 1); 98 borderline records excluded following manual qualitative assessment for absence of explicit socio-economic dimension
Study characteristics	17	Cite each included study and present its characteristics.	Section 3.1–3.7 (Results): characteristics of the 5,076-publication dataset presented

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			across temporal, geographic, document-type, sectoral, hazard, and thematic dimensions; Supplementary Materials: complete publication list provided
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	Not applicable — individual study-level risk-of-bias assessment is not conducted in bibliometric systematic reviews; dataset-level methodological limitations discussed in Section 2.4 and Section 4.1
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	Not applicable — bibliometric and thematic review; results presented at dataset level in Sections 3.1–3.7 (Figures 2–10) and synthesized in Section 4 (Discussion)
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	Section 4 (Discussion, paragraphs 1–8) and Section 4.1. Limitations: characteristics and limitations of the synthesized literature discussed; geographic, sectoral, and methodological biases identified
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	Not applicable — no meta-analysis performed; bibliometric synthesis

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			results presented in Figures 2–10 (Section 3) and interpreted in Section 4 (Discussion)
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	Not applicable — no formal heterogeneity testing; geographic, sectoral, and thematic variation discussed qualitatively in Sections 3.1, 4, and 4.1
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	Not applicable — no quantitative sensitivity analyses performed; robustness discussed in Section 2.4. Methodological Scope and Limitations and Section 4.1. Limitations of the review processes
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	Section 4.1. Limitations of the review processes: reliance on Web of Science Core Collection (Scopus excluded), English-language restriction, and exclusion of grey literature identified as primary sources of potential reporting bias affecting geographic representation
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	Not applicable — no formal certainty assessment (e.g., GRADE); confidence in findings discussed qualitatively in Section 4.1. Limitations and Section 5.

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			Conclusions
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	Section 4. Discussion (paragraphs 1–8): paradigmatic trajectory from equilibrist to transformative frameworks contextualized against prior bibliometric reviews [24, 29] and major policy milestones (Paris Agreement 2015, IPCC SR1.5 2018)
	23b	Discuss any limitations of the evidence included in the review.	Section 4.1. Limitations of the review processes (paragraphs 1–2): single-database coverage, English-language restriction, exclusion of grey literature, and potential underrepresentation of rapidly urbanizing regions
	23c	Discuss any limitations of the review processes used.	Section 4.1. Limitations of the review processes (paragraphs 2–4): bibliometric methods capture frequency not qualitative depth; subjectivity in thematic classification; automated screening not formally validated with Precision/Recall; post-pandemic developments may be incompletely represented

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	23d	Discuss implications of the results for practice, policy, and future research.	Section 4.2. Implications of the results for practice, policy, and future research: four post-2026 research pathways (cross-city longitudinal studies, mixed-method assessments, transport compound-hazard analysis, governance mechanism studies); recommendations for urban planners and policymakers
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	No registration number provided; the review was not pre-registered
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	No protocol was formally prepared or deposited prior to the review
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	Not applicable — no prior registration or protocol prepared; no amendments to report
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	Funding section (after Section 5. Conclusions): “This research received no external funding”
Competing interests	26	Declare any competing interests of review authors.	Conflicts of Interest section (after Funding): “The authors declare no conflicts of interest”
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	Data Availability Statement: data available on request from the



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			corresponding author (avram.sorin@ucv.ro); Supplementary Materials: complete list of selected publications provided with the article

From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;372:n71. doi: 10.1136/bmj.n71.
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