



## PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
<b>TITLE</b>			
	1	Identify the report as a systematic review.	This is identified in the title: A Systematic Review of Factors Contributing to Ineffective Cultural Heritage Management
<b>ABSTRACT</b>			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	In the abstract, systematic literature review methodology is described.
<b>INTRODUCTION</b>			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	Explains gaps in heritage management research, focusing on inefficiencies and their global implications.
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	The objectives of this study are to identify the factors contributing to ineffective heritage management. Addressed those factors will enhance the capacity of administrative institutions and thus promote robust heritage management that benefits local and national interests.
<b>METHODS</b>			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	This was discussed in section 2.1. Criteria include, for example, the years (2000-2023) and the focus on tangible heritage, excluding intangible heritage.
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.	It is mentioned in section 2.1, Data Sources. The databases are Google Scholar, Scopus, and Web of Science. In addition, grey documents from international organisations were recognised for their authority in protecting cultural heritage, and the snowballing method was used to choose them.
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	<p>The search keywords used in the three databases included “ineffectiveness, failure,” “cultural heritage,” and “management plans.” To narrow the research scope and focus on recent developments in cultural heritage management, the advanced search option was employed, specifying the period from 2000 to 2023.</p> <p>Criteria were established to refine and select the most relevant materials:</p> <p>1- Context: The focus was on tangible</p>



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			<p>cultural heritage, heritage sites, and historical buildings, excluding intangible heritage, natural heritage, and protected areas.</p> <p>2- Scope: Emphasis was placed on heritage management for conservation, excluding aspects such as investment, tourism, or development.</p> <p>3- Conservation: Natural threats like climate change and earthquakes were excluded from the conservation management processes studied.</p>
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.	The results were systematically filtered, as Figure 1 in Section 2.1 shows. The first step involved screening the titles, abstracts, and keywords to identify articles containing the relevant terms. In the second step, the full texts of these articles were thoroughly reviewed to evaluate their relevance to the study's main theme.
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.	The collection of information was performed manually by the researcher, analyzing the identified literature.
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.	The primary outcome was identifying factors impacting heritage management effectiveness. Sub-outcomes are classified by themes.
	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.	The variables for which data were sought are listed in Table 1.
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.	The results were filtered based on the criteria used for selection and the scrutiny of the article's content and suitability for the purpose of the study.
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.	A narrative synthesis was employed to organise thematically relevant findings; no statistical effect measures were employed.
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)).	Using the criteria mentioned above and classifying the findings according to the topics covered in the systematic review of the literature.
		Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	No statistical methods or data conversions were used.



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	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	Figure 1 is used to show the process of publication selection.
	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.	Not applicable.
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	Not applicable.
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	Not applicable.
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	The results were ranked qualitatively based on the study context, research scope, and conservation focus.
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	The results obtained from the previous studies were analyzed using a narrative approach. This approach is acceptable for analyzing and drawing logical conclusions from the available data.
<b>RESULTS</b>			
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.	The search and selection process results are shown in Figure 1.
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	Exclusions were due to irrelevance, duplication, or insufficient data.
Study characteristics	17	Cite each included study and present its characteristics.	The summary of the search results is shown in Table 2 and Appendix 1.
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	This was considered in the Method section. Also, the results were ranked based on the study context, research scope, and conservation focus.
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.
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	This was considered in the Method section. Also, the results were ranked based on the study context, research scope, and conservation focus.
	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.
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	Heterogeneity described qualitatively based on thematic groupings.
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	Not applicable as sensitivity analysis was not



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Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	This was considered in the Method section. Also, the results were ranked based on the study context, research scope, and conservation focus.
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	This was considered in the Method section. Also, the results were ranked based on the study context, research scope, and conservation focus.
<b>DISCUSSION</b>			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	Results interpreted as aligning with broader evidence on heritage management inefficiencies.
	23b	Discuss any limitations of the evidence included in the review.	Limitations include potential publication bias and reliance on available literature.
	23c	Discuss any limitations of the review processes used.	Limitations include the fact that despite the extensive literature results obtained, many papers from Scopus and Web of Science are duplicated in Google Scholar.
	23d	Discuss implications of the results for practice, policy, and future research.	It proposes continuing research into heritage management because the surrounding environment may change, introducing additional aspects that impact the efficacy of conservation measures. In addition, it proposes future research directions to address gaps in heritage management in different contexts.
<b>OTHER INFORMATION</b>			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	Not applicable as review registration was not performed.
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	Not applicable; no protocol prepared.
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	Not applicable as no registration was done.
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	No external funding was received.
Competing interests	26	Declare any competing interests of review authors.	No competing interests declared
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 and references provided; no analytic code used.



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