

Section/sub-section	Topic	Description	Further explanation	Checklist/meta-	Author response	Comments
Title	Title	The title must indicate that it is a systematic map.	The title should normally be the	Meta-data	Effects of	
Type of review	Type of review	Select one of the following types of review:	See CEE Guidance on systematic	Meta-data	systematic map	
Authors' contacts	Authors' contacts	The full names, institutional addresses and email		Checklist	yes	
Abstract	Structured summary	The abstract of the manuscript must not exceed		Checklist	yes	
Background	Background	Describe the rationale for the review in the	A theory of change and/or	Checklist	yes	
Stakeholder engagement	Stakeholder engagement	The actual role of stakeholders throughout the		Checklist	yes	
Objective of the review	Objective	Describe the primary question and secondary	The primary question is the main	Checklist	yes	
	Definition of the question	Provide reference to the question key elements,	For other question types see [4,5]	Meta-data	(P) Population:	
Methods	Protocol	Provide citation, DOI or open-access link to	The protocol should be peer-	Meta-data	https://doi.org/1	
	Deviations from protocol	Describe any ways in which the final methods of		Checklist	yes	
Searches	Search strategy	Detail the search strategy used, including:		Checklist	yes	
	Search string	Provide Boolean-style full search string and state		Meta-data	Primary Web of	
	Languages - bibliographic	List languages used in bibliographic database		Meta-data	English	
	Languages - grey literature	List languages used in organisational website		Meta-data	English	
	Bibliographic databases	Provide the number of bibliographic databases		Meta-data		11
	Web-based search engines	Provide the number of web-based search engines		Meta-data		1
	Organisational websites	Provide the number of organisational websites		Meta-data		18
	Estimating comprehensiveness	Describe the process by which the		Checklist	yes	
	Search update	Describe any update to searches undertaken	Compulsory (if update performed). A	Checklist	yes	
Article screening and	Screening strategy	Describe the methodology for screening		Checklist	yes	
	Inclusion criteria	Describe the inclusion criteria used to assess		Checklist	yes	
Critical appraisal	Critical appraisal strategy	Describe here the method used for critical	Optional	Checklist	no	
	Critical appraisal used in	Describe how the information from critical	Compulsory if critical appraisal	Checklist	no	
Meta-data extraction and	Meta-data extraction and coding	Describe the method for meta-data extraction		Checklist	yes	
	Approaches to missing data	Describe any process for obtaining and		Checklist	yes	
Data synthesis and	Narrative synthesis strategy	Describe methods used for narratively		Checklist	yes	
	Knowledge gap and cluster	Describe the methods used to identify and/or		Checklist	yes	
	Demonstrating procedural	Describe the role of systematic reviewers (who	Reviewers who have authored	Checklist	yes	
Results	Description of review process	Describe the review process including the volume		Checklist	yes	
	Number of search results	Provide the number of search results from	This number should not include web-	Meta-data		20,374 See table 3 in manuscript. Includes Web of Science Core
	Number of search results after	Provide the total number of search results from	This number should not include web-	Meta-data		17,551
	Full text screening excludes	Additional file containing list of and reasons for		Checklist	yes	
	Title screening results	Provide the number of articles retained following	Optional if screening titles and	Meta-data	NA	
	Abstract screening results	Provide the number of articles retained following	Optional if screening titles and	Meta-data	NA	
						This number only include results from Web of Science, Proquest
						Dissertations and Theses Global, and Google Scholar, which
						included the vast majority of search results and were screened on
						Rayyan. Other search results from specialized databases and
						website were screened separately. Records of these searches are
	Title and abstract screening	Provide the number of articles retained following	Optional if screening titles and			
	results	title and abstract screening.	abstracts separately	Meta-data		819
	Retrieval results	Provide the number of articles retrieved at full		Meta-data		787
	Unobtainable articles	Additional file containing list of unobtainable		Checklist	Yes	
						379 of these came from the main search process in Rayyan, 90
						unique articles were from website searches, specialized
						databases, articles found incidentally while searching for another
						full text, and articles referenced in an eligible article as describing
						469 the same study (Table 3)
	Full text screening results	Provide the number of articles retained following		Meta-data		
	Consistency checking: screening	full text screening.		Checklist	yes	
	Narrative synthesis	Results of consistency checking at all stages		Checklist	yes	
	Systematic map database	Describe the body of evidence identified using		Checklist	yes	
Discussion	Discussion	Additional file containing meta-data and coding		Checklist	yes	
	Limitations of the review	Discuss the review results and suggest further		Checklist	yes	
	Limitations of the evidence base	Discuss possible limitations in the methods used.		Checklist	yes	
Conclusions	Knowledge gaps and clusters	Discuss possible limitations in the evidence base.		Checklist	yes	
	Implications for	Describe knowledge gaps (unrepresented or		Checklist	yes	
	Implications for research	Summarise the state of the evidence base and	Reviews must not include practical	Checklist	yes	
Declarations	Competing interests	Discuss the way in which the identified evidence	In this section some advocacy for	Checklist	yes	
		Describe of any financial or non-financial		Checklist	yes	

References

- [1] James, K.L., Randall, N.P. and Haddaway, N.R., 2016. A methodology for systematic mapping in environmental sciences. *Environmental Evidence*, 5(1), p.7.
- [2] Bayliss, H.R., Haddaway, N.R., Eales, J., Frampton, G.K. and James, K.L., 2016. Updating and amending systematic reviews and systematic maps in environmental management. *Environmental Evidence*, 5(1), p.20.
- [3] Haddaway, N.R., Kohl, C., da Silva, N.R., Schiemann, J., Spöck, A., Stewart, R., Sweet, J.B. and Wilhelm, R., 2017. A framework for stakeholder engagement during systematic reviews and maps in environmental management. *Environmental Evidence*, 6(1), p.11.
- [4] Collaboration for Environmental Evidence. 2018. Guidelines and Standards for Evidence synthesis in Environmental Management. Version 5.0. www.environmentalevidence.org/information-for-authors.
- [5] Leeds Institute of Health Sciences. https://medhealth.leeds.ac.uk/info/639/information_specialists/1500/search_concept_tools. Accessed 12/11/2017.