

Supplementary Material S1

Search strategies, normalisation thesaurus and VOSviewer parameters

Table S1.1. Scopus search queries (all executed on 17 April 2026; document search, all fields as specified per query).

Query	Domain	Raw records	Search string (Scopus Advanced Search syntax)
Q1	S — smart tourism	172	TITLE-ABS-KEY ("smart tourism" AND "ecosystem")
Q2	S — smart tourism	110	TITLE-ABS-KEY ("smart destination" AND ("framework" OR "model"))
Q3	S — smart tourism	103	TITLE-ABS-KEY ("smart tourism" AND "digital transformation")
Q4	S — smart tourism	4	TITLE-ABS-KEY ("digital hub" AND ("tourism" OR "rural" OR "community"))
Q5	H — digital heritage	1,075	TITLE-ABS-KEY ("cultural heritage" AND "digital" AND "tourism")
Q6	H — digital heritage	1,075 (duplicate export of Q5; documented)	—
Q7	H — digital heritage	40	TITLE-ABS-KEY ("sociocultural" AND "tourism" AND ("digital" OR "technology" OR "smart"))
Q8	C — conflict	719	TITLE-ABS-KEY ("Ukraine" AND "tourism")
Q9	C — conflict	181	TITLE-ABS-KEY ("post-conflict" AND "tourism")
Q10	Auxiliary M — methodological (QFD)	47	TITLE-ABS-KEY ("quality function deployment" AND ("tourism" OR "hospitality"))
Q11	Auxiliary R — regional (Carpathians)	160	TITLE-ABS-KEY ("Carpathian" AND "tourism")

Total raw records: 3,686. After deduplication by DOI and title: 2,271 unique tourism-relevant records. After research-hygiene filters (Supplementary Material S3): 2,238 records; tri-domain core (S/H/C): 2,074 records.

Note on search strings. All queries were run in Scopus Advanced Search on 17 April 2026 as document searches on TITLE-ABS-KEY without year, language or document-type limits; the limits that appear in the authors' working search plan (PUBYEAR, LANGUAGE, DOCTYPE) were not applied at export, which is why the corpus retains all document types, languages and years from 1977 (Section 3.1). Each string was checked against its export: every record of every export satisfies the phrase conditions of its string in title, abstract or keywords (coverage 99–100%). Q8 is a country query (Ukrainian tourism) and Q9 a topic query (post-conflict tourism); their union defines the conflict domain C, and Section 4.4 reports all results with Q8 removed. Re-running a string with the limit "added to Scopus before 18 April 2026" should return the raw record count in column 3.

Table S1.2. Thesaurus of 51 normalisation rules applied in VOSviewer (label → replace by).

label	replace by
augmented reality (ar)	augmented reality
virtual reality (vr)	virtual reality
artificial intelligence (ai)	artificial intelligence
internet of things (iot)	internet of things
mobile applications	mobile application
museums	museum
smart destinations	smart tourism destination
smart destination	smart tourism destination
smart tourism destinations	smart tourism destination
smart cities	smart city
covid-19 pandemic	covid-19
covid19	covid-19
coronavirus	covid-19
sars-cov-2	covid-19
digitalisation	digitalization
digital technologies	digital technology
cultural heritage preservation	heritage preservation

cultural-heritage	cultural heritage
intangible heritage	intangible cultural heritage
e-tourism	etourism
e tourism	e-tourism
tourist destination	tourism destination
tourist destinations	tourism destination
tourism destinations	tourism destination
sustainable tourism development	sustainable tourism
cultural tourism development	cultural tourism
heritage tourism development	heritage tourism
carpathians	carpathian region
carpathian mountains	carpathian region
user experiences	user experience
tourist experiences	tourist experience
visitor experience	tourist experience
3d model	3d modelling
3d models	3d modelling
3d modeling	3d modelling
3d reconstruction	3d modelling
unmanned aerial vehicle	uav
machine-learning	machine learning
deep-learning	deep learning
post conflict	post-conflict
postconflict	post-conflict
post-war	post-conflict
postwar	post-conflict
thanatourism	dark tourism
generative artificial intelligence	generative ai
chatgpt	generative ai
large language models	generative ai
community involvement	community participation
community engagement	community participation
service robots	robotics
social-media	social media

VOSviewer parameters

VOSviewer version 1.6.21. Type of analysis: co-occurrence; unit of analysis: author keywords; counting method: full counting; minimum number of occurrences of a keyword: 12 (82 keywords met the threshold); clustering: VOSviewer built-in algorithm, resolution 1.0, minimum cluster size 1. Resulting network: 82 nodes, 842 links, total link strength 1,870, four clusters. Network metrics (density, average path length, weighted Newman modularity on the VOSviewer partition, betweenness centrality, cross-cluster matrix) were computed in Python (networkx 3.6) from the exported map and network files.

Table S1.3. Lens.org replication of the queries (run September 2026; exports capped at 1,000 records).

Scopus query	Lens export	Records	Truncated at 1,000
Q1	lens-export_4	834	no
Q2	lens-export_11	498	no
Q3	lens-export_5	365	no
Q4	lens-export_12	133	no
Q5	lens-export_6	1,000	yes
Q7	lens-export_13	1,000	yes
Q8	lens-export_10	1,000	yes
Q9	lens-export_7	1,000	yes
Q10	lens-export_8	362	no
Q11	lens-export_9	1,000	yes
Unique records (all ten)		5,371	