

## Reporting systematic review processes conducted within the study

### Step 1: Formulating research questions

Part II	Part III	Part IV
What are the prevailing barriers and enablers to engaging communities in risk-sensitive urban planning & development?	Which participatory methods would be effective for community engagement in risk-sensitive urban planning & development?	What are relevant theories influencing transformational community engagement in risk-sensitive urban planning & development?

### Step 2: Developing the search strategy

Initially, the four PICO terms: (1) population, (2) intervention, (3) comparison, and (4) outcome were identified within each of the above research questions.

	Part II	Part III	Part IV
Population (P)	risk-sensitive urban development	risk-sensitive urban development	Risk-sensitive urban development
Intervention (I)	Community engagement	community engagement	transformational community engagement
Comparator (C)	-	participatory	-
Outcome (O)	barriers enablers	methods	theories

The comparator element was excluded in part II and IV reviews as the study intends to systematically explore the concept of community engagement where it is not necessary to consider an alternative to the identified intervention, i.e., community engagement (Cooke et al., 2012).

Following the PICO approach, an initial logic grid was formulated, and an initial search was conducted in one of the bibliographic databases: Scopus. Alternative terms or synonyms for the identified PICO terms were then determined by scanning the titles and abstracts of retrieved articles in each initial search to populate a comprehensive logic grid. As the final step in developing key terms for the search, search-field descriptors and wildcard characters were applied to the identified keywords and index terms in the logic grid (i.e., wildcards are indicated by the “\*” and “?” signs).

Once all the search terms were collected and finalised, the final search strategy for each research question was developed. Initially, the key terms and synonyms in the logic grid were combined using Boolean operators: ‘OR’ to combine words/phrases within a column; ‘AND’ to combine words/phrases in different columns. Subsequently,

three systematic searches were undertaken across all the selected citation databases using the finalised search strategies presented below.

<b>Part II</b>	( barrier OR challenge OR constraint OR obstacle OR enabler OR driver OR opportunit* OR incentive ) AND ( "community engagement" OR "civic engagement" OR "community involvement" OR "human involvement" OR "community participation" OR "local participation" OR "urban population" OR "civil society" OR "community?based" OR "community?driven" OR participatory OR inclusive ) AND ( "risk?sensitive urban development" OR "risk?sensitive urban planning" OR "risk?responsive urban development" OR "risk?responsive urban planning" OR "risk?integrated urban development" OR "risk?integrated urban planning" OR "urban development" OR "urban planning" OR "urban project" OR "urban area" OR "sustainable development" OR "land use planning" OR cit* OR urbanisation OR "risk reduction" OR "risk management" OR DRR OR DRM OR "climate change adaptation" OR CCA OR "city building" OR "city?making" OR "urban governance" OR "infrastructure development" OR "infrastructure planning" )
<b>Part III</b>	( method OR tool OR concept OR theor* OR philosoph* OR model OR system OR approach OR procedure OR technique OR process OR "best practice" OR policy* ) AND ( "community engagement" OR "civic engagement" OR "community involvement" OR "human involvement" OR "community participation" OR "local participation" OR "urban population" OR "civil society" OR "community?based" OR "community?driven" OR participatory OR inclusive ) AND ( "risk?sensitive urban development" OR "risk?sensitive urban planning" OR "risk?responsive urban development" OR "risk?responsive urban planning" OR "risk?integrated urban development" OR "risk?integrated urban planning" OR "urban development" OR "urban planning" OR "urban project" OR "urban area" OR "sustainable development" OR "land use planning" OR cit* OR urbanisation OR "risk reduction" OR "risk management" OR DRR OR DRM OR "climate change adaptation" OR CCA OR "city building" OR "city?making" OR "urban governance" OR "infrastructure development" OR "infrastructure planning" )
<b>Part IV</b>	( theor* OR model OR framework OR principle OR poli* OR method OR tool OR approach OR procedure OR technique OR process OR practice ) AND ( "community transformation" OR "civic transformation" OR "public transformation" OR "society transformation" OR "social transformation" OR "neighbourhood transformation" OR "local transformation" OR "citizen transformation" OR "community transfiguration" OR "civic transfiguration" OR "public transfiguration" OR "society transfiguration" OR "social transfiguration" OR "neighbourhood transfiguration" OR "local transfiguration" OR "citizen transfiguration" OR "community change" OR "civic change" OR "public change" OR "society change" OR "social change" OR "neighbourhood change" OR "local change" OR "citizen change" OR "community conversion" OR "civic conversion" OR "public conversion" OR "society conversion" OR "social conversion" OR "neighbourhood conversion" OR "local conversion" OR "citizen conversion" OR "community evolution" OR "civic evolution" OR "public evolution" OR "society evolution" OR "social evolution" OR "neighbourhood evolution" OR "local evolution" OR "citizen evolution" OR "community reshape" OR "civic reshape" OR "public reshape" OR "society reshape" OR "social reshape" OR "neighbourhood reshape" OR "local reshape" OR "citizen reshape" OR "community revolution" OR "civic revolution" OR "public revolution" OR "society revolution" OR "social revolution" OR "neighbourhood revolution" OR "local revolution" OR "citizen revolution" ) AND ( "community engagement" OR "civic engagement" OR "community involvement" OR "human involvement" OR "community participation" OR "local participation" OR "urban population" OR "civil society" OR "community?based" OR "community?driven" OR participatory OR inclusive ) AND ( "risk?sensitive urban development" OR "risk?sensitive urban planning" OR "risk?responsive urban

	development" OR "risk?responsive urban planning" OR "risk?integrated urban development" OR "risk?integrated urban planning" OR "urban development" OR "urban planning" OR "urban project" OR "urban area" OR "sustainable development" OR "land use planning" OR cit* OR urbanisation OR "risk reduction" OR "risk management" OR DRR OR DRM OR "climate change adaptation" OR CCA OR "city building" OR "city?making" OR "urban governance" OR "infrastructure development" OR "infrastructure planning" )
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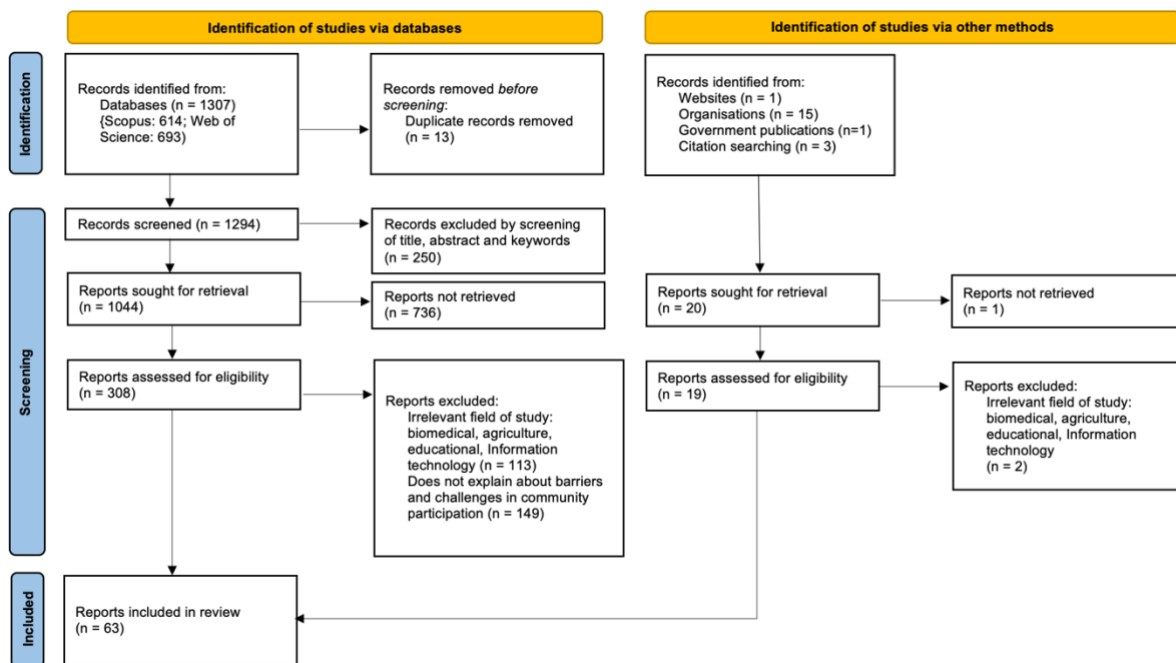
### Step 3: Setting inclusion and exclusion criteria

Criteria	Inclusion criteria	Exclusion criteria	Rationale
Publication year	From 2001 to May 2022	Before 2001	To exclude outdated content
Subject/ research area	Social Science, Social Work, Sociology, Social Issues, Psychology, Arts and Humanities, Urban Studies, Development Studies, Decision-making	Medical science, Engineering science	To exclude studies irrelevant to the chosen subject area
Document type	Journal article	Grey literature, Conference proceedings, Books, Book chapters	To consider only the credible peer-reviewed source of academic information
Language	English	Other languages	The majority of quality publications are in English

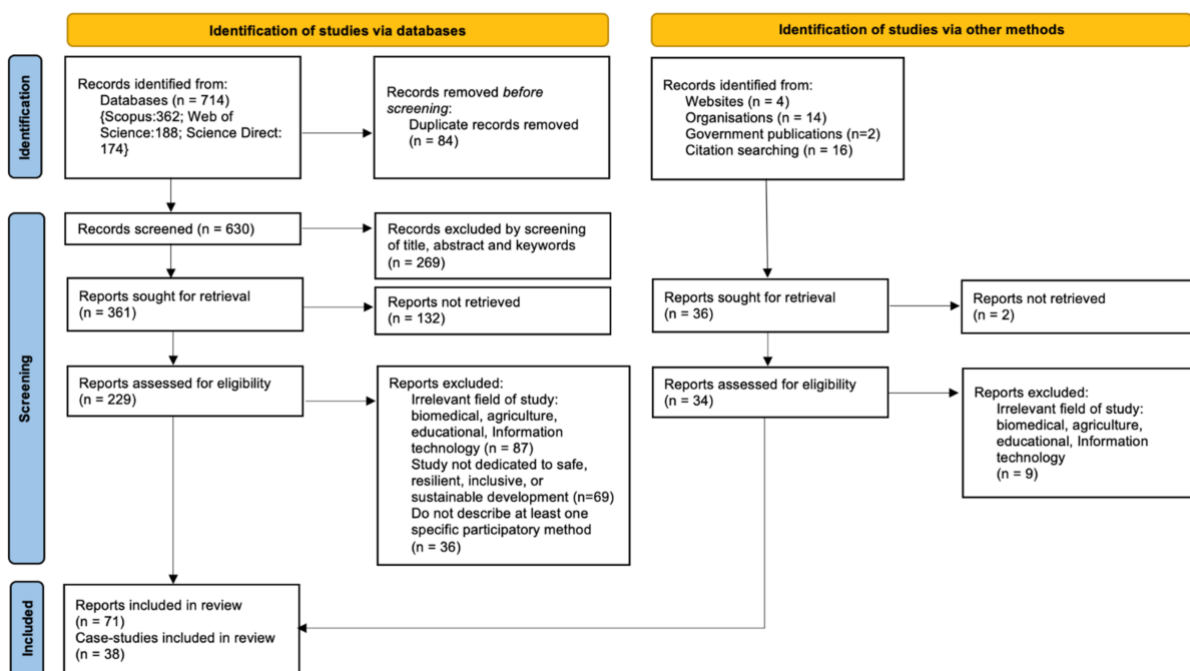
### Step 4: Results of the systematised literature searches

	Part II	Part III	Part IV
Records from publication repositories	1,307	714	249
Records from manual search	17	36	7
Total records	1,324	750	256
Duplicates	13	84	5
Subjected to initial screening	1,294	666	251
Excluded from initial screening	250	269	180
Full-text not retrieved	736	134	18
Subjected to in-depth review	337	263	53
Excluded publications	264	154	41
Included publications	63	109	12

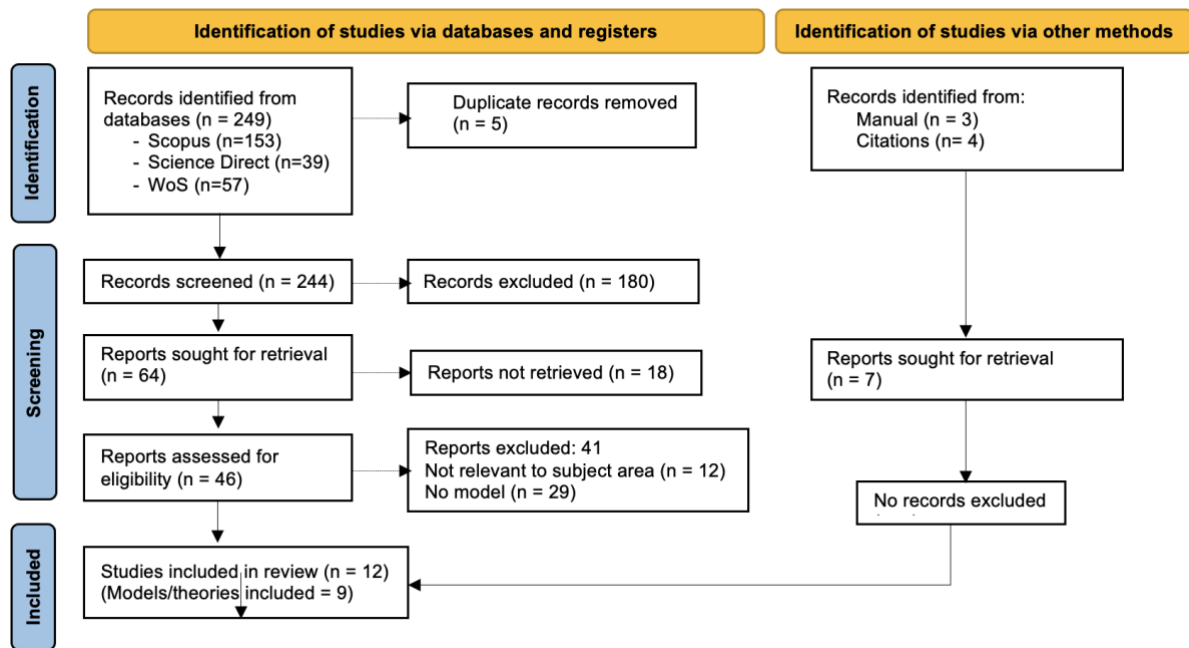
The depth of the literature searches is presented in the below figures, according to the preferred reporting of items for systematic reviews and meta-analyses (PRISMA) method proposed by Page et al. (2021).



*PART II: PRISMA 2020 flow diagram of the literature search for barriers and enablers for community-inclusive RSUPD*



*PART III: PRISMA 2020 flow diagram of the literature search for the application of participatory methods in RSUPD*



*PART IV: PRISMA 2020 flow diagram of the literature search on theories and indicators of transformational community engagement*

*Note: A “study” is an investigation, such as a case study, that includes a defined group of participants and one or more interventions and outcomes. A study might have multiple reports. A “report” could be a journal article, preprint, conference abstract, study register entry, clinical study report, dissertation, unpublished manuscript, government report or any other document providing relevant information.*