

Knowledge Synthesis Methods

6. Scoping review¹

Summary of method

A structured, step-wise methodology, preferably following an *a priori* protocol to collate and describe existing research evidence (traditional academic and grey literature) in a broad topic area, following a systematic map methodology but with components of the process simplified or omitted to produce information in a short period of time.

This is not the same as the scoping stage of a systematic review.

The method has been called ‘Quick Scoping Review’ (Collins *et al.* 2015). The exact set of methods used, or the components of systematic map that are left out is flexible, and the method itself is not standardised internationally.

A standardised version of Quick Scoping Review has been defined by the UK Government (Collins *et al.* 2014), and this is used for the time and costs estimates below.

Reporting requirements in Collins *et al.* (2014) include: protocol of methods, fates of all articles screened at full text, transparent documenting of all methods used. For more general scoping review, there are no strict reporting requirements, as there are no internationally agreed method guidelines.

Scoping reviews are not usually endorsed by a co-ordinating or certifying body. This leads to a wide range in method details, reporting and overall review quality.

Key references

Collins, A., Miller, J., Coughlin, D., Kirk, S., (2014). *The Production of Quick Scoping Reviews and Rapid Evidence Assessments: A How to Guide*. Joint Water Evidence Group, UK.

Tricco, A.C., Lillie, E., Zarin, W., O’Brien, K., Colquhoun, H., Kastner, M., Levac, D., Ng, C., Sharpe, J.P., Wilson, K., Kenny, M., Warren, R., Wilson, C., Stelfox, H.T., Straus, S.E. (2016). *A scoping review on the conduct and reporting of scoping reviews*. BMC Medical Research Methodology 16, 15.

¹ A guidance note from Dicks LV, Haddaway N, Hernández-Morcillo M, Mattsson B, Randall N, Failler P, Ferretti J, Livoreil B, Saarikoski H, Santamaria L, Rodela R, Velizarova E, and Wittmer H. (2017). *Knowledge synthesis for environmental decisions: an evaluation of existing methods, and guidance for their selection, use and development – a report from the EKLIPSE project*.

Examples of application

UK Department of Environment Food and Rural Affairs (Defra) has commissioned scoping reviews to inform policy on pesticide regulation (James *et al.* 2014) and to explore the scope for systematic review or summaries to inform policy on sustainable intensification of agriculture (part of this programme: www.siplatform.org.uk; report not currently available).

James K, Randall N and Millington A (2014). *The impact of Pesticides Used in Amenity on Controlled Waters in the UK. A Quick Scoping Review.*

Scoping review

Cost ²	Staff (1-6 months FTE), subscriptions (database access, article access), software (reference/specialist review management), travel and subsistence, expert (informatician, visualization/database specialist) Affected by: size of the evidence, existence of previous reviews, need for specialist expertise, complexity of the question, required level of rigour
Time required	1-6 months Affected by: quantity of literature, availability of staff, response time
Repeatability	Moderate
Transparency	High (if conducted well, i.e. endorsing organisations), protocol is important
Risk of bias	Medium (if conducted well). Should acknowledge risk of bias transparently in evidence base and review method
Scale (or level of detail)	Independent of scale (any)
Capacity for participation	Potential consultation throughout
Data demand	High
Types of knowledge	Scientific/technical, explicit
Types of output	Written report plus other communication materials (e.g. policy brief), identification of knowledge gap/knowledge cluster, possible interactive database of existing evidence
Specific expertise required	Topic expert

² Assumes Collins *et al.* (2014) guidelines followed exactly.

Strengths

Follows methodological principles of systematic maps

Often include searches for grey literature

Potentially upgradable into a full systematic review/systematic map without complete repetition

Suitable for broad topics

Weaknesses

Not as reliable as a full systematic map

Protocol typically not externally peer-reviewed

Does not usually provide detailed analysis of the content/findings of evidence. Often just shows *what* evidence exists

