

# Evidence-Based Forestry Initiative

## Key stages of a systematic review

*Not applicable to all reviews and not an exhaustive list for all reviews*

- Define the question STAKEHOLDER DISCUSSION NECESSARY
- What does the review aim to answer?
- If it reviews effects of interventions:
  - What is/are the population(s) affected? P
  - What is/are the intervention(s)? I
  - What are meaningful comparisons? C
  - What are the outcomes of interest? O
  - What are the ecological/cultural contexts?
- 2. Hold stakeholder meeting
- 3. Form a review group REMUNERATED AND/OR WORKING 'IN KIND
  - 6-8 (4 minimum)
  - Lead reviewer (one throughout, or consider leads at different stages)
  - Continuous admin support
  - Library/information resource specialist
  - Statistician (if meta-analysis/statistical analysis is planned)
  - Subject expertise (consider language implications)
- 4. Form an international advisory group (from range of stakeholders) VOLUNTARY
- 5. Write protocol DISCUSS WITH ADVISORY GROUP
  - Lodge Protocol with existing Collaboration (e.g. CEE and/or Campbell-3iE)
  - And/or publicise on CIFOR website
- 6. Review protocol
  - By invited and open peer-review
    - Through auspices of Collaboration
    - via CIFOR's own communications group

*Remaining tasks are carried out as per Protocol. Non-trivial deviations from the Protocol discuss with Advisory Group and may need to go through review process*

- 7. Carry our literature search (as per Protocol)
- 8. Screen references to select potentially relevant studies
  - Assess relevant studies against inclusion/exclusion criteria (in Protocol)
- 9. Extract data
  - Relevant data as per PICO
  - All included studies described in table detailing PICOs
- 10. Critical appraisal
  - Of all included studies according to methodological 'soundness'
  - Identifying possible biases
- 11. Synthesis of primary studies
  - Integration of all included studies based on critical appraisal
  - May include meta-analysis or other statistical analysis or be a narrative synthesis
  - Considerations of biases – publication bias and internal/external biases
- 12. Write report
- 13. Peer review(as for Protocol)
- 14. Disseminate review widely

## How long do they take?

Allen & Olkin (1999) – the only systematic study of time taken for systematic reviews (with meta-analysis)

Average: 1110 hours  
Range: 216-2518 h,  
Median 1110 h

Useful formula for estimating time following pre-screening of number of studies:

$$721 + 0.243x - 0.0000123x^2$$

where  $x$  = number of retrieved references before applying inclusion/exclusion criteria

Working estimate for a review that does not include a very large amount of ‘grey’ literature or extensive translation of studies: **30 weeks full-time equivalent = 7 months**

Reviews tend not to be done full-time, but CIFOR could pay attention to scheduling the work in such a way that one of the stages is always being worked on once the project has started. Delays in reviews are almost always attributable to ‘down time’ and waiting for previous stages to be completed (pers comm Chalmers, Muir Gray)

## When to do a systematic review

*Not an exhaustive list*

- Where there is large amount of research on a topic but where key questions remain unanswered;
- When there is uncertainty about effectiveness of a policy/service AND where there is some existing research;
- In early stages of policy development to assess likely effects of interventions;
- To generally survey evidence in a topic – explore evidence gaps for future research
- To assess past methodologies as part of new method development

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