

SYSTEMATIC REVIEWS IN ENVIRONMENTAL MANAGEMENT

The overall aim of our training workshops is to provide skills and capacity to develop evidence-based practice in the environmental sector.

Participants should leave with the idea that, in spite of the apparent complexity of the process, they can indeed run a Systematic Review themselves and that it is a rigorous, structured and transparent means to obtain the most reliable assessment of evidence pertaining to a question of interest.



Collaboration for
Environmental
Evidence

Centre for Evidence-
Based Conservation



Training workshop programme and content

The training events aim to be enjoyable and interactive, involving the use of examples and counter examples, and demonstration by exercises.

Completion of methodological training in Systematic Review will be a significant asset in the professional skills base of any person working in the field of environmental management and related disciplines.

All training events will be capped at 25 participants in order to deliver a high standard of quality in delivery

Training workshop delivery options

The venues for the training will be decided in relationship with a local organizer and availability/cost of facilities.

- *CEBC Bangor*– delivery cost (can be lowered by attending as a team) and participant accommodation cost
- *Client Venue* – delivery and travel/subsistence for CEBC

A main objective of the programme delivery is to provide opportunities for potential participants that are geographically spread. The first events in Bangor, London and Edinburgh provide face-to-face training workshops at regional centres across the UK. Other events can be organized in Europe and across the globe...

If you host a workshop, get free admission for some members of your team

Training options offered by CEBC

1 Day - INTRODUCTION to Systematic Reviews and Evidence-Based Conservation

Learning outcome: to understand the principles behind a Systematic Review process

Target audience: SR commissioners, stakeholders, potential SR authors, scientific media..

Content: A theoretical introduction covering history and basics, Why a SR?, introduction to SR process

4 Day - METHODOLOGY package

Learning outcome: to be able to produce a SR

Target audience: SR authors (incl.PhD students, statutory bodies, NGOs)

Content: Modules 1 to 5- consisting of theory + exercises
the modules can also be delivered as 2 x 2 days events

1 Day - Various topics (upon request)

Target audience: SR authors and any team interested in developing specific skills

Content: Learning outcomes: topics include question setting, composing a SR team, statistics, involving stakeholders, writing policy briefs and technical notes...

Module 1- Introduction to SR

Target audience: SR authors and funders

Learning outcomes: To know when to commission an SR and how quality can be assured (Funders) + To understand the principles behind SR process and be able to plan a SR (Authors)

This module introduces the theoretical aspects of SR, including the history of SR and an introduction to the rationale behind evidence-based practice. The workshop will address the question of 'when is a SR appropriate?', will provide an introduction to the stages of a SR and use exercises to demonstrate how the principles of SR are employed during the SR process. For the latter part of the day funders and authors will separate.

Sessions for funders will cover: How to manage the planning stages to get the right product, How does the CEE process provide quality assurance?

Sessions for authors will focus on question formulation and the support role played by CEE will also be explained.

Module 2: Protocol development and scoping

Target audience: SR authors, Review Teams

Learning ourcomes: To be able to establish a Systematic Reveiw Protocol as defined by the CEE Guidelines + To be able to run a Scoping protocol to plan the full Reveiw

The role of a SR protocol as a plan for the full SR will be covered in this module. The stages of a protocol will be detailed, using examples from the CEE library. The advantages of a scoping study before commencing the SR are discussed and ways to incorporate the results of scoping exercises into the protocol are demonstrated. The PICO (Population, Intervention, Comparator, Outcome) approach to defining question elements is introduced in relation to question setting for SR. Guidance in the production of a protocol will be provided

Module 3: Searching and inclusion criteria

Target audience: SR authors and funders

Learning outcomes: develop a search strategy and refine the results using inclusion/exclusion criteria to ensure transparency

This module will demonstrate to participants the importance of prior planning and scoping in the construction of an efficient search strategy. The use of PICO terms, Boolean operators and the need to consider the different searching algorithms of search operators will be discussed. Participants will become familiar with the design of appropriate inclusion criteria and the factors to consider when selecting inclusion criteria (transparency, repeatability, reviewer bias etc.). Throughout this module examples and exercises will be used to demonstrate the principles covered.

Module 4: Critical appraisal

Target audience: SR authors and funders

Learning outcomes: Assess the quality of methodology and the existence of biases to take this into account in subsequent analysis and interpretation

Participants will become familiar with the methods to measure study quality and the concept of internal and external validity. Aspects of quality discussed in the module include sources of bias, study design, the 'hierarchy of evidence' and reporting quality. Options for dealing with studies of differing quality will be explored. Exercises in the process of critical appraisal will be included in the module so that participants can gain the practical skills to produce a well-designed critical appraisal on an individual basis.

Module 5: Data handling, evidence synthesis and consolidation

Target audience: SR authors and funders

Learning outcomes: Learn how to analyse and report your results depending on the data available + learn about the publication and dissemination of your Review.

The final module in the series discusses the options for synthesis of the studies that have passed all the SR stages. Methods for synthesising quantitative and qualitative data will be explored, including an overview of the application of meta-analysis techniques illustrated with examples. The tools that are available for authors of SRs to ensure transparency, standardisation and quality, including the CEE SR checklist will be presented. The process by which SRs are submitted for inclusion in the CEE library will be described and the potential for publication of the outcomes of SRs in peer-reviewed journals will be discussed. The use of policy briefs to communicate the outcomes of SRs to policymakers will be demonstrated.

Mentoring Programme

Modules 2-5 will be supported by an optional mentorship programme. This will provide support to review teams as they undertake their SRs, by giving them the opportunity to team-up with a mentor (currently one CEBC staff member). Costs for mentorship are not requested in this proposal and will be covered by a charge to Review Teams according to the amount of hours required.



The Collaboration for Environmental Evidence (CEE) is a partnership between scientists and managers working towards a sustainable global environment and the conservation of biodiversity. CEE has formal charitable status
www.environmentalevidence.org



The Centre for Evidence-Based Conservation (CEBC) was established in 2003 with the goal of supporting decision making in conservation and environmental management. CEBC promotes evidence-based practice through the production and dissemination of systematic reviews on both the effectiveness of management and policy interventions and on the impact of human activities on the natural environment. The CEBC is currently based at Bangor University, UK.
www.cebc.bangor.ac.uk

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Provisional timetable 2010 - 2012

Month	Year	Training Module	Module title	Length	Venue
June 22	2010	1	Special workshop for DFID Reveiw Teams	1 day	Bangor
July 14	2010	1	Introduction to SR (Day 1: Funders and authors)	1 day	Bangor
Sept 14	2010	1	Introduction to SR (Day 1: Funders and authors)	1 day	Reading
Mar	2011	1, 2 + 3	Introduction to SR (Day 1: Funders and authors) Protocol development and scoping Searching and Inclusion criteria	2 days	Bangor
Apr	2011	4 + 5	Critical appraisal Data handling, evidence synthesis and consolidation	2 days	Bangor
Sep	2011	1, 2 + 3	Introduction to SR (Day 1: Funders and authors) Protocol development and scoping Searching and Inclusion criteria	2 days	London
Oct	2011	4 + 5	Critical appraisal Data handling, evidence synthesis and consolidation	2 days	London
Jan	2012	1, 2 + 3	Introduction to SR (Day 1: Funders and authors) Protocol development and scoping Searching and Inclusion criteria	2 days	Edinburgh
Feb	2012	4 + 5	Critical appraisal Data handling, evidence synthesis and consolidation	2 days	Edinburgh
May	2012	1, 2 + 3	Introduction to SR (Day 1: funders and authors) Protocol development and scoping Searching and Inclusion criteria	2 days	London
June	2012	4 + 5	Critical appraisal Data handling, evidence synthesis and consolidation	2 days	London

Please note that a minimum number of paying participants is required for a workshop to run. This timetable is regularly updated, see www.cebc.bangor.ac.uk/training.php