

# What is the effect of ley or perennial fallow on the flux of greenhouse gases from arable organic soils? A systematic review.

Alena Holzknrecht <sup>1</sup>, Örjan Berglund<sup>1</sup>, Jacynthe Dessureault-Rompré<sup>2</sup>, Lars Elsgaard<sup>3</sup>, Magnus Land<sup>4</sup>, and Kristiina Lång<sup>5</sup>

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<https://environmentalevidence.org/>

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## Guidelines and Standards for Evidence Synthesis in Environmental Management

VERSION 5.1

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**Editors: Andrew S Pullin, Geoff K Frampton, Barbara Livoreil & Gillian Petrokofsky**

**[Read the guidelines online here](#)**

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### Resources for Authors

#### Guidelines for Authors

- Aims and Scope
- Table of Contents
- Updates and Corrections

1. Process Summary
2. Need for Evidence, Synthesis Type and Review Team
3. Planning the conduct of an Evidence Synthesis
4. Conducting a Search
5. Eligibility screening
6. Data Coding and Data Extraction
7. Critical appraisal of study validity
8. Data synthesis
9. Interpreting findings and reporting conduct

# Search records

Database	Search fields	Publisher and URL	Total records	Deduplicated records
Scopus	title, abstract and keywords	<a href="https://www.scopus.com/">Elsevier, https://www.scopus.com/</a>	4012	4005
Web of Science Core Collection	topic	<a href="https://clarivate.com/products/web-of-science/">Clarivate Analytics, https://clarivate.com/products/web-of-science/</a>	5578	3253
CAB Abstracts	topic	<a href="https://clarivate.com/products/web-of-science/">Clarivate Analytics, https://clarivate.com/products/web-of-science/</a>	3783	907
ProQuest Natural Science Collection <sup>1)</sup>	abstract and summary text	<a href="https://www.proquest.com/">Proquest, https://www.proquest.com/</a>	3013	337
Directory of Open Access Journals (DOAJ)	all fields	<a href="https://doaj.org/">https://doaj.org/</a>	330	in progress
<sup>1)</sup> Including AGRICOLA, Agricultural Science database, Environmental Science database, Environmental Science index, Biological Science database, Biological Science index, Earth, atmosphere & Aquatic Science database.			16716	8502 (in progress)

# Critical appraisal

## Potential sources of bias

### Criterion 1. Risk of confounding biases

1.1. Are there any confounding variables that affect the effectiveness of the intervention (= ley or fallow) on the emissions of greenhouse gas emissions?

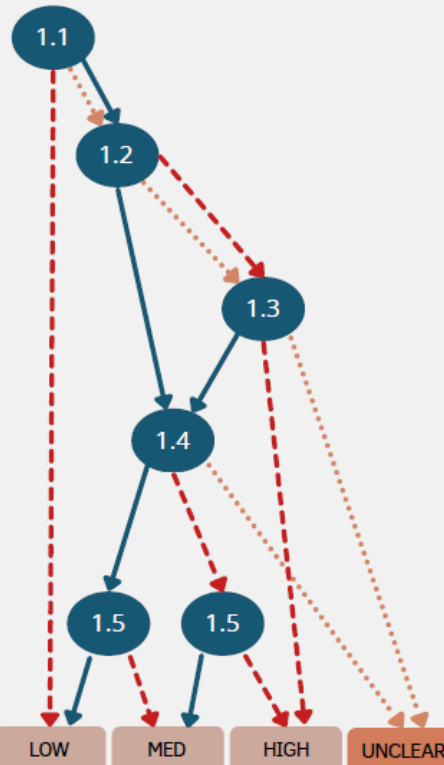
1.2. Did the author(s) control for all the potential confounders?

1.3. Is there any justifiable reason for not controlling for all the potential confounders (so that omission of some of the potential confounders is unlikely to influence the assessment of the effectiveness or impact)?

1.4. Were the potential confounders, that were controlled for, (and/or the instrumental variable used if applicable) likely to be measured accurately and precisely enough?

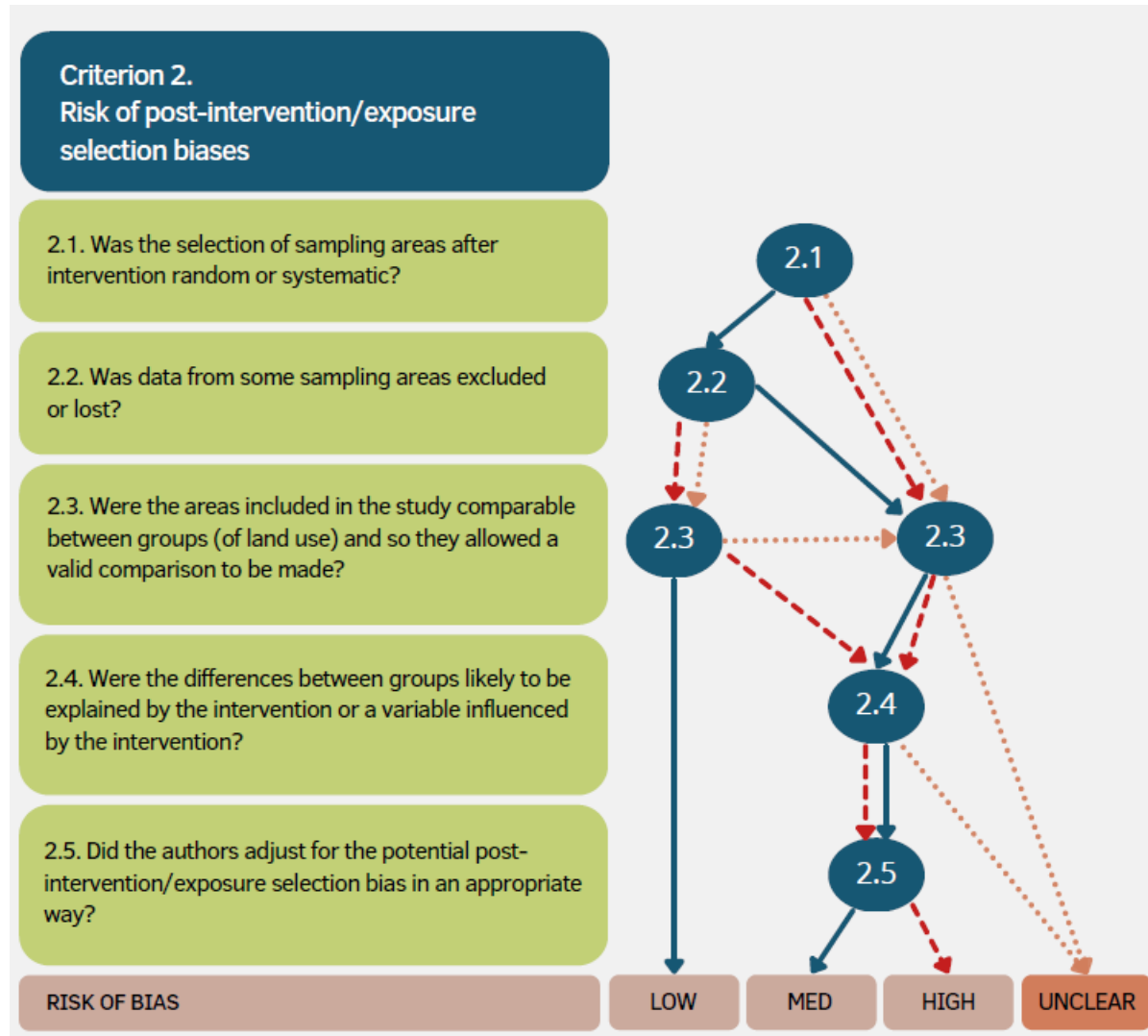
1.5. Did the author(s) analyse the effect appropriately by taking into account the potential confounders, as well as the issue of accuracy and precision of the measurements of the potential confounders (and the instrumental variable if applicable)?

RISK OF BIAS



—> yes, or seemingly yes  
- - -> no, or seemingly no  
...> unclear

# Critical appraisal



# Critical appraisal

## Criterion 3. Risk of performance biases

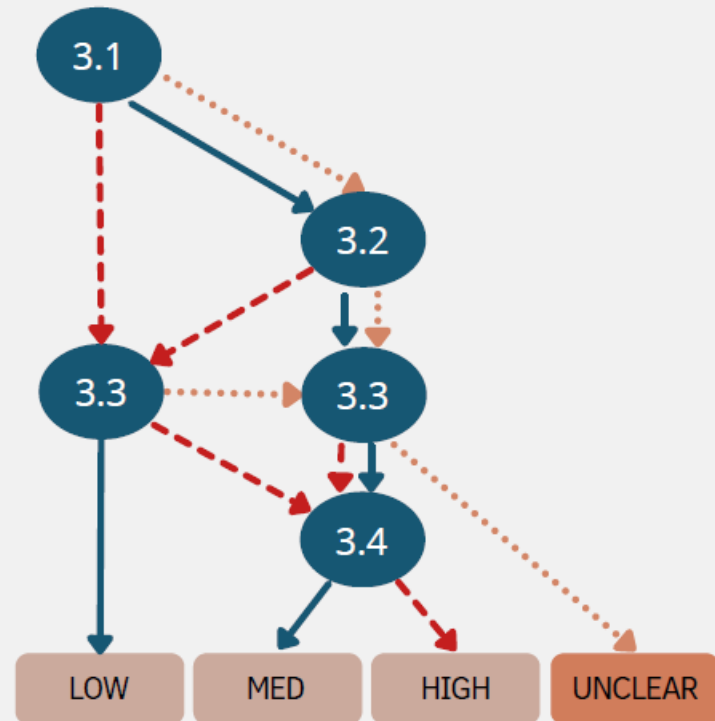
3.1 Were there any temporal alterations of intervention or control treatments that might have an impact on the effectiveness of the intervention?

3.2 Were these deviated treatments unbalanced between intervention and control groups?

3.3. Was the intervention and control, respectively, spatially consistent across all sampling areas?

3.4 Was the uneven intervention considered in analyses?

RISK OF BIAS



# Critical appraisal

## Criterion 4. Risk of measurement biases

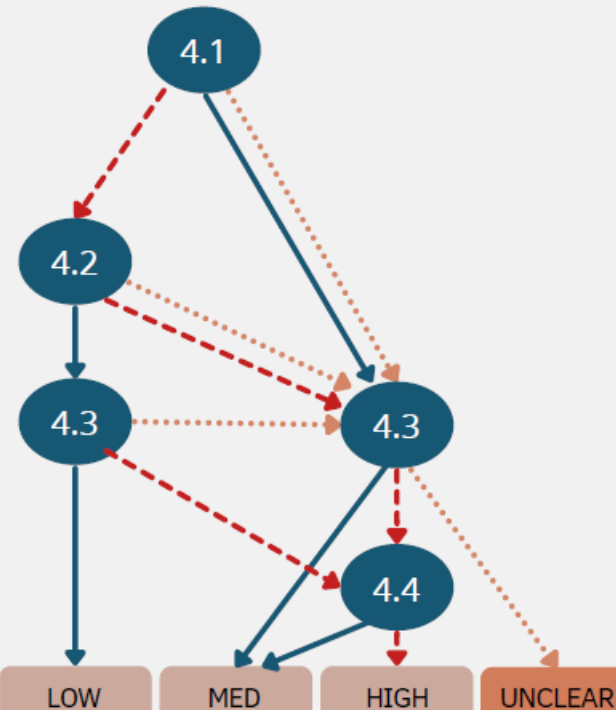
4.1 Can the awareness of the study question and design bias the measurement of the response variable (= GHG emissions) (un-)intentionally?

4.2 Was the response variable (= GHG emissions) measured appropriately to assess the impact of land use?

4.3 Were the methods for measuring GHG emissions the same across groups?

4.4 Were the potential differences in measured outcomes between groups adjusted?

RISK OF BIAS



# Critical appraisal

