

# Peer-Review Checklist

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## Review structure:

- R0. Review details
- R1. Introduction (3 paragraphs)
- R2. Major issues (numbered items)
- R3. Minor issues (indicate line, figure, table numbers)
- R4. Other suggestions (optional)
- Notes (not included in final review)

## Review details:

- Title:
- Authors:
- Journal:
- Editor:
- Deadline:

## Step 1: Pre-Read – Invitation to review

- Read abstract.**
- Appropriate expertise.** Does my area of expertise and experience qualify me to critically evaluate the manuscript?
- Conflict of interest.** Can I provide a fair and unbiased review of this work?
- Time and deadline.** Do I have time to write a complete review?
- Check journal guidelines and adjust your workflow.**
- Respond as soon as possible: Accept/Decline.** Explain to editor the reason for decline, and offer, if possible, suggestions for other reviewers.

## Step 2: First Read - Gaining an overview

- Set up the structure of review.** Prepare a text file with the structure of review.
- Read the entire paper. Take notes as you go.** Get an overall impression of the paper: motivation, approach, overview of results and conclusions.
- Go through all figures and tables.** Do they complement the approach, results section and conclusions?
- Readability.** Is the English/writing so bad that you can't understand the arguments? Reply to Editor you cannot give the paper a fair review at this stage, and suggest the paper to be withdrawn until the English is improved.
- Identify goals, method, findings, and relevance**
  - What is the main question addressed by the research?
  - Is this question interesting and important to the field of study? How, specifically, will the paper contribute to the science?
    - Do the Abstract and Introduction clearly identify the need for this research, and its relevance?
    - Does the Method target the main question(s) appropriately?
      - Are the Results presented clearly and logically, and are they justified by the data provided?
      - Are the figures clear and fully described?
      - Do the Conclusions justifiably respond to the main questions posed by the author(s) in the Introduction?
        - Is the paper within the scope of the journal?
        - Is the paper potentially publishable based on its contribution to the field?

- Write introductory paragraphs (Section R1)** [*"The study investigates/uses/finds/contributes"*]

**First paragraph:** state the main question, summarize goals, approaches, and conclusions of the paper (1 sentence each).

**Second paragraph:** contribution of the paper to the journal.

- Evaluate whether the manuscript is publishable/or not (Section R1, Third paragraph)**

[*"I recommend the manuscript not/to be published in Journal X with minor/major modifications, and I provide below the reason for my decision and some comments that are necessary to address...."*]

The manuscript is/has (check only one):

- Publishable in principle** → Continue review to **Step 3: Second Read.**
- Major flaws, but addressable** → Return to authors for corrections, but document and substantiate.
- Fatally flawed/unsuitable** → Reject, but document and substantiate.

**TIP:** let the paper sit for a couple of days after **First Read**, and let your mind digest the information.

## Step 3: Second Read - The science

- Take detailed Notes indicating section, line, figure and table numbers.**
- Read the manuscript in detail from start to finish.
  - Check every section individually (my preferred order): Introduction, Methods, Results, Discussion, Conclusions, Abstract, Other (e.g., Key points, Appendices).
    - Check method (i.e., equations if necessary, setting the experiment, data collection, details needed for reproducing results, and if that is not possible, is it stated why?).
      - Check all figures and tables, so that you understand all units, axes, and symbols. Do the figures reflect the main text?
        - Check References/referencing is done correctly.
        - Check any supplementary material.
        - Remind yourself the journal's guidelines. Most importantly, does the manuscript comply with the journal's data policy and best practices?
- Identify major and minor points (Sections R2, R3)**
  - Sort all notes in 2 categories: major (Section R2) and minor (Section R3) issues.
    - Organize major points clearly and logically, using separate numbered paragraphs.
- Add Other Points (Section R4 – optional suggestions)**

## Step 4: Final Read - The writing and formulation

- Check organization and flow of arguments**
  - Was the paper hard to read because the paragraphs did not flow together? Did the authors use excessive and confusing acronyms or jargon?
- Read and polish your own review (check tone)**
- Upload your review using the link provided**
- Answer specific questions regarding the manuscript and its presentation**
- Remarks to the editors (optional)**
- Submit review to editor (Done!)**