CLIMANOSCO
Climate Science for Everyone

Guide to writing science in non-scientific language

Help us improve this guide!

Send your feed-back to

contact@climanosco.org

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About this guide

- This guide is meant to help you write your first manuscripts for Climanosco.
- This is just a guide. Feel free to use only what you find useful and let your creativity do the rest!
- This draft is just a starting point. This guide will be improved progressively as our experience grows as a group. Don’t hesitate to comment and constructively criticize it.

Before you start

Get the right mindset:

- Readers have prior knowledge and beliefs
- In the reader's mind your Manuscript will
  - Inspire
  - Trigger a AHA
  - Plant a seed
  - Empower

General guidelines

- Read the Guidelines for Authors
- In a nutshell, your manuscript must be
  - Short (about 3 pages), clear and crispy
  - Satisfying the reader's desire to learn
  - Solidly anchored in published peer-reviewed literature and contain enough references to the primary literature to allow its critical peer-review
  - Humbly reflecting what scientific research is, namely the development of an ever-growing body of knowledge which is continuously re-assessed by the researchers

Don’t…

- Don’t follow the scientific model of articles (background, methods, results, conclusions) but use the story telling sequence provided herein
- Don’t use generic section titles like “Introduction” but use narrative titles
- Don’t assume that the facts speak for themselves, but always associate them with your interpretation using simple words
- Don’t use graphs or tables but provide the key numbers with your interpretation in the text
- Don’t use jargon but reserve the use of scientific words to the key concepts of your manuscript

Design the content

1. The subject
2. The perspective
3. The content's boundaries
4. The highlight(s)
5. The take-home message
6. The question(s) addressed
7. The title

1. The subject

- This is what you want to write about
- It should be within your area of expertise in the broad sense
- Subjects can be:
  - wide (overview manuscripts): You will take the reader by the hand and give her/him an overview of the subject
  - narrow (focus manuscripts): You will give crispy details on one aspect of a broader area

2. The perspective

- Choose one perspective from which you will write your manuscript.
- Possible perspectives include:
  - Providing an overview of a subject
  - Providing a historical perspective on a subject
  - Explaining an important concept in simple words (trigger a “AHA!”)
  - Explaining an important tool or method in simple words (e.g. their scientific basis, how they work, what they are used for, their limitations)
  - Explaining the knows and unknowns of a current controversy
  - Disentangling concepts that are often confused
  - Explaining a new discovery or observation and placing it within its context
  - Explaining what we do not know about a subject

3. The content's boundaries

- Define clearly what you will cover and what you will not cover
- Don't overload the manuscript
- Your manuscript must be self-contained:
  - Aspects that you won't cover but that are needed for an understanding of your manuscript must be explained very briefly
  - If an existing manuscript already covers these aspects, link to it
  - If not, propose it in the Forum on "Ideas for New Manuscripts"

4. The highlight(s)

- Determine the highlight(s) (max. 3) of your manuscript
- Highlights are:
  - The salient features you want to highlight in your manuscript
  - The aspects you will explain in more details
  - The things you want the reader to get an understanding on
  - They can be concepts, methods, new discoveries, historical periods,…
- Place scientific words on your highlight(s)

5. The take-home message

- If there was only one thing the reader would remember from reading your manuscript, what should it be?
- Phrase it in 1-2 crispy sentence(s).

6. The question(s) addressed

- What are main questions addressed overall by your manuscript?
- If a reader had these questions, would she/he find a satisfying answer in your manuscript?
- Phrase the most important ones (max. 3) from the perspective of a reader looking for an answer
- Make minimal use of scientific words.
- These questions will link the article within the questions repertory.

7. The title

- The title will determine if the reader will read the manuscript or not, depending on her/his interest and curiosity
- The title must trigger the curiosity in the reader's mind
- The title must reflect the content of the manuscript
- It can be based on the take-home message, it can be phrased as a question (question(s) addressed), it can be descriptive of the highlight(s)

Write the story

Structure your narrative along the following sequence. Use simple words and simple sentences. Make it colourful! Use headings to make your red line apparent and to foster curiosity.

1. Start from familiar, say why this is relevant
2. Bring the take-home message
3. Explain the highlight(s) in simple words
4. Give a look into the future

Explain the highlight(s) in simple words

Construct a narrative line for each highlight:

- Connect to familiar, everyday life
- Make it crispy
- Limit yourself to what is really necessary
- Minimize use of scientific words
- Use metaphors and analogies to explain complex concepts
- Give examples

Use of metaphors and analogies

- State it when you are using a metaphor or an analogy.
- Metaphors and analogies work within limits, do not use them to extrapolate.
- Examples:
  - Normal distributions: Analogy with the distribution of colours of the leaves on a tree in autumn
  - Greenhouse effect: Analogy with a blanket
  - More examples on Idea forums of Climanosco
- When you find a great analogy or metaphor, post it on an Idea forum at Climanosco so that others can use it too!

Use of headings and sub-headings

- Use headings to make the red line of your manuscript apparent to the reader.
- Use headings and sub-headings to foster curiosity.
- Generic headings like Introduction, Methods, Results, Conclusion may not be used.
- The headings and sub-headings can be written in the form of questions, challenges, or highlights, for instance.

Examples of what different sections may address:

- Why is it important, what are the impacts, what part of the world is impacted most, since when, at what frequency and how?
- Short history of scientific research in the topic.
- Provide an overview of the basic research tools and methods used in this topic: What observations and models are available? What observations and models are used in this study? What are their uncertainties and limitations?
- Provide the current status of knowledge: What do we know today? What don't we know? What are the current controversies? Why?
- Explain in simple words a key concept, physical process, method or tool. Use metaphors, analogies, examples.
- What is the focus of current/future research?
- Authors opinion: The Manuscript must be based on published scientific literature. However, in case of open debates or controversies, the authors may wish to mention their opinion as experts in the topic. In this case, they may do so in a distinct section entitled "Authors opinion".
- Concluding punchlines: Repeat the punchlines of the Manuscript, why this topic matters, what we know, what are the remaining, hot open questions and how they could be addressed.
- Acknowledgements.

Write the abstract

- The abstract is a punchy summary of the Manuscript.
- It must be self-contained, without reference to the manuscript.
- It can not contain any citation nor any abbreviation.
- It typically includes:
  - Context: Start from the familiar. Why is this relevant?
  - Take-home message of the Manuscript.
  - Scope of the Manuscript: How focused/general is the Manuscript? What does it mean to cover? What are the highlights?

Last details and submission

- Check out the following documents to make sure you have everything in hands before submission:
- Guidelines for Authors
- Textual and visual conventions
- How to handle references and citations

- Submit!

Your first manuscript is done?

Congratulation!

Your second manuscript
will be much easier
to write!

And your third will be almost a piece of cake!