Meet the editors: how to write and revise your manuscript

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My experience

Editor
2015 – 2023 Executive Editor Natural Hazards and Earth System Sciences
2019 – 2021 Editor Frontiers in Water - Water and Human Systems
2015 – 2022 Editor Hydrological Sciences Journal
2015 – 2017 Editor Journal of Flood Risk Management

Reviewer for many ISI-listed journals, including Science, Nature, Nature Climate Change, HSJ, HESS, Hydrological Processes, Water Resources Management

Author
146 publications, 9,322 citations
h-index = 53 (web-of-science)

How to write (and publish) a scientific paper in Hydrology?

https://younghs.com/how-to-write-a-paper/

How to write a paper

How to write a scientific paper in Hydrology?

Short course at EGU organised by Hydrological Sciences (HS) Division:

- Slides by Nilay Dogulu, Joris Eekhout, and Jan Seibert (EGU 2022)
- Slides by Wouter Berghuijs, Manuela Brunner, and Tim van Emmerik (EGU 2021)
- Slides by András Bárdossy (STAHY 2019)
- Slides by Günter Blöschl (IUGG 2019)
- Slides by Jeff McDonnell (IUGG 2019)
- Tips on how to write a paper (EGU 2018)
- Slides by Dominic Mazvimavi (IAHS 2017)
- Slides by Ross Woods (EGU 2017)
- Slides by András Bárdossy (EGU 2016)
- Slides by Erwin Zehe (EGU 2016)
- Slides by Keith Beven (EGU 2015)
- Slides by Bettina Schaefli (EGU 2014)
- Slides by Niko Verhoest (EGU 2013)
- Slides by Guenter Bloeschl (EGU 2011)
- Slides by Demetris Koutsoyiannis (EGU 2010)
- Slides by Jeff McDonnell (EGU 2009)

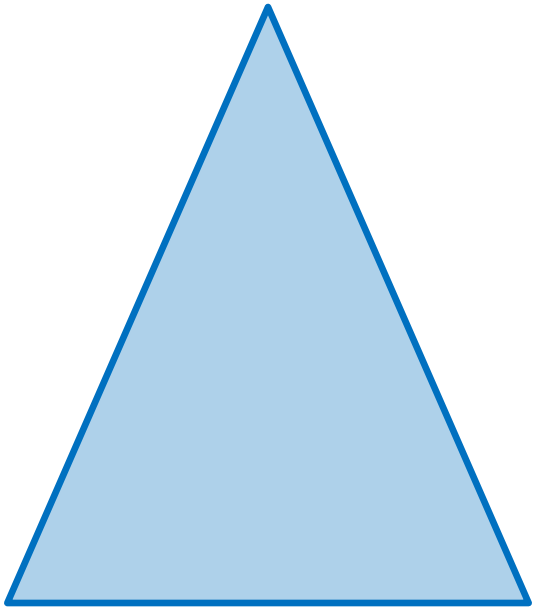
The editorial team of Water Resources Research published a short instruction about how to prepare a really lousy paper.

Why do we publish?

- **Formal goal:** In fulfilment of doing a PhD, proof for project results and cooperation
- **Idealistic goal:** To contribute to the international body of knowledge, to assist others so they can build on your work, to help solve water problems for the benefit of society
- **Career goal:** Get a job, succeed in academia, become influential, ..

Günter Blöschl: *"Doing research in hydrology is an art, but writing a paper is a skill (i.e. simple but needs some practice)"*

Publication strategy

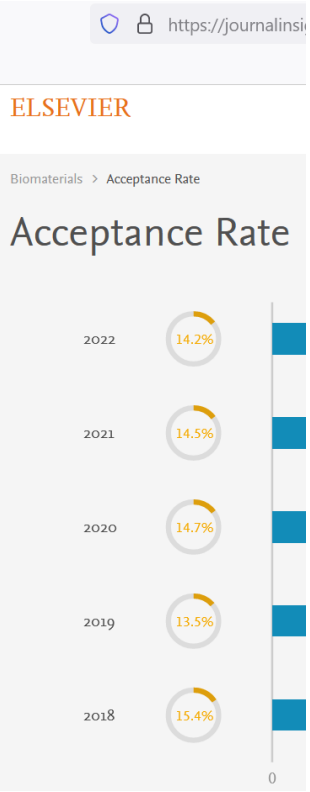


Particularly interesting studies, large scale/global scope, societal/policy relevance, published in nature/science journals

Some/few excellent studies on new ideas, new method, „done for the first time“ published in very good (preferably) open access journals

Several/many good, solid studies published in open access ISI-listed journals

Acceptance rates study by Elsevier



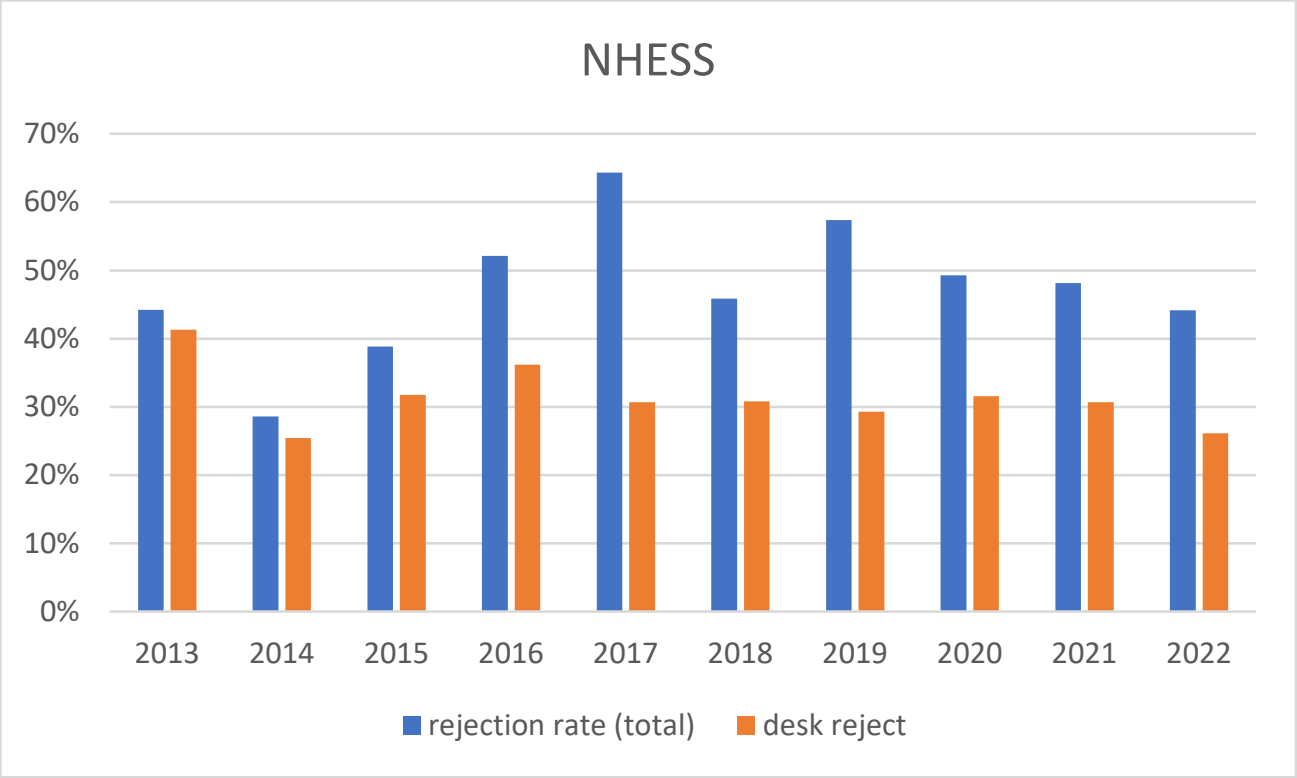
2,371 journals analysed: acceptance rates ranging from 1.1 per cent to 93.2 per cent with an average of 32 per cent.

- Larger journals have lower acceptance, between 10-60%
- Older journals have lower acceptance rates, but not by much
- High-impact journals have relatively low acceptance rates, but there's much variation (5-50% acceptance)
- Gold open access journals had higher acceptance rates (newer journals tend to Gold open access)

- But also large differences between affiliated country of corresponding author

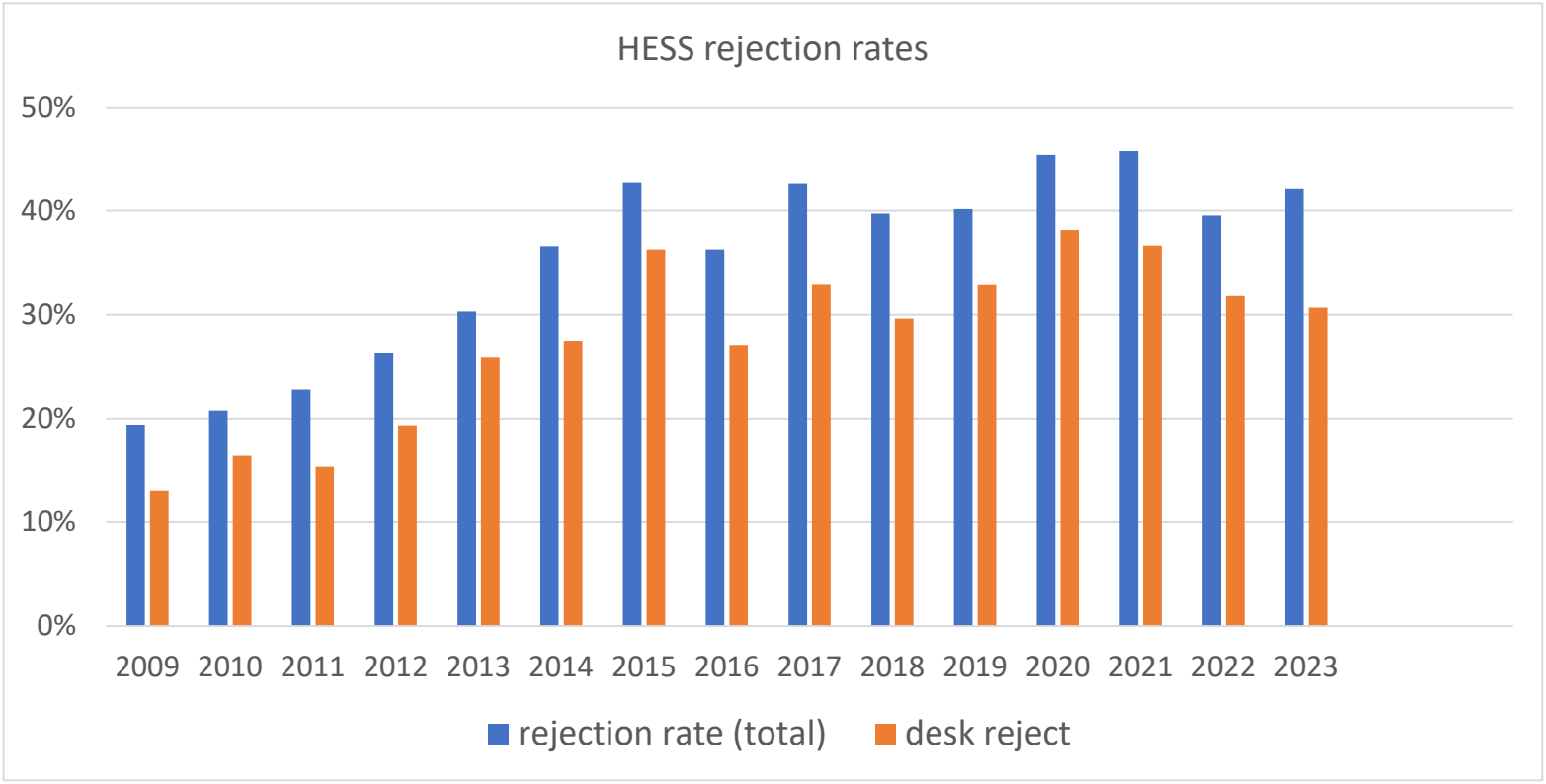
https://scientific-publishing.webshop.elsevier.com/publication-process/journal-acceptance-rates/

Rejection rates – Example NHESS



Rejection rate (total) includes desk reject

HESS rejection rates

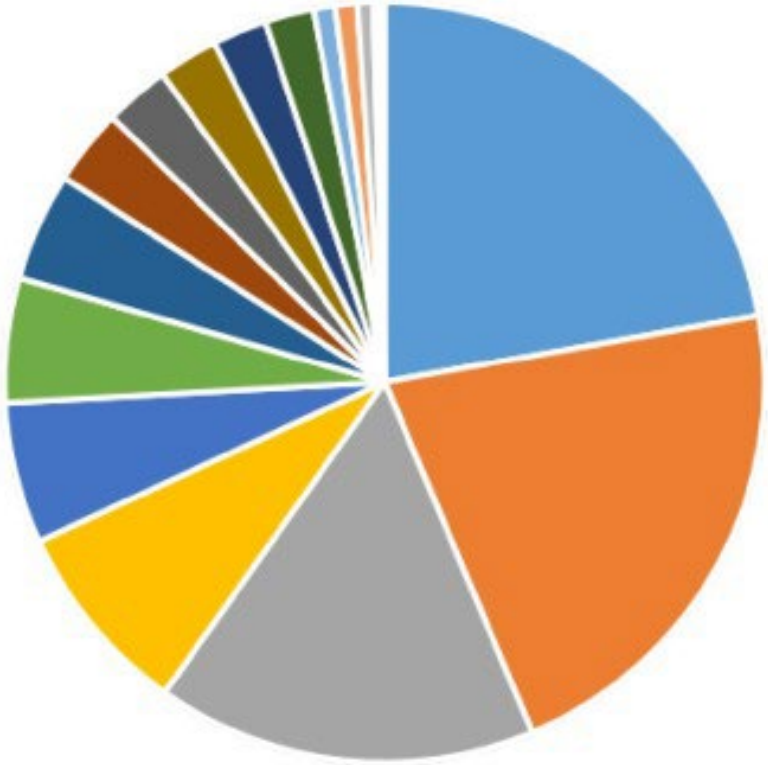


Acceptance rate – Top journals

Science :	6.1% (desk reject 84%)
Nature:	8%
Nature Climate Change:	13.6%
PNAS (Proceedings of the National Academy of Sciences):	17% (desk reject 54%)

Why Do Research Papers Get Rejected?

(doi: 10.1007/s13224-018-1153-1)



- Poor methodology
- No new information
- Poor scientific content
- Case report of low priority
- Similar papers
- Out of scope for journal
- Poor language
- Incomplete data
- Case report not rare
- Ethical issues
- Poor references
- Revision not good
- Plagiarism
- Poor statistics
- Tall claims
- Author issues
- Conflict of interest

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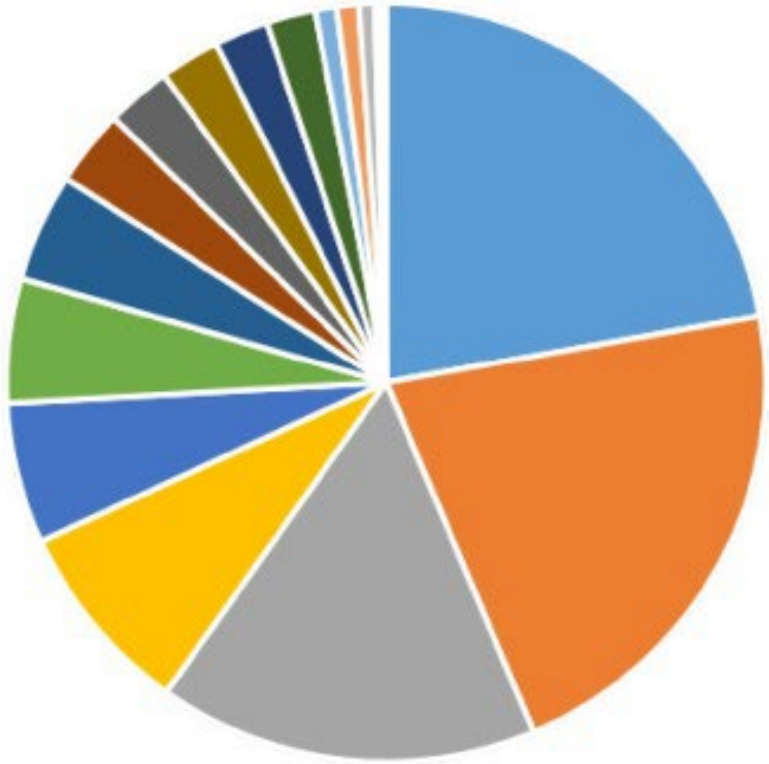

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Which journal to choose?

Other considerations than ISI impact factor often more important for journal choice

- Open access
- Scope of journal

Read description of scope of journal; quite broadly:

Earths Future – global change, sustainability

NHESS – hydrological extreme events, risk of droughts, floods, etc.

WRR – innovative Methods

Hydrol Process - field studies

Hydrolog Sci J - developing countries, sociohydrology

Impact factor is a measure of how often papers in that journal are cited – not necessarily how often your paper in this journal will be cited

Journal	IF March 2023
Science	63.8
Nature Climate Change	28.9
PNAS - Proceedings of the National Academy of Sciences of the United States of America	12.8
Earth Future	8.9
HESS - Hydrology and Earth System Sciences	6.6
Journal of Hydrology	6.4
WRR - Water Ressources Research (open access from 1 January 2024)	6.2
Advances in water resources	5.4
NHESS - Natural Hazards and Earth System Sciences	4.6
Hydrological Sciences Journal	3.9
Journal of Water Resources Planning and Management	3.5
Hydrological Processes	3.2

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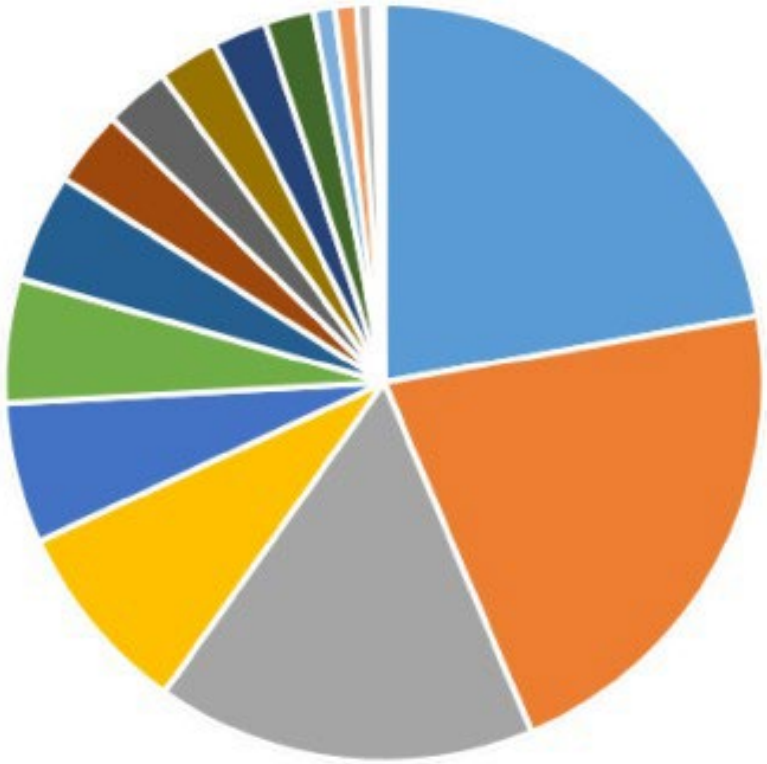

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What makes a paper interesting – likely to be published and cited?

When starting a paper: define the **novelty**, what is the **key messages** and what **research question** is being answered - it is important to make the novelty and the research question explicit (in the abstract, introduction and conclusions): "*in contrast to the state of the art damage models, the presented model is ...*", "*to the best of our knowledge, this is the first quantification of ...*".

Know the literature! To identify the research gap / novelty (-> introduction); to relate your results to the available knowledge (->discussion)

Problem: Research is part of an (applied) project and it is difficult to draw transferable/generic results (i.e. case study), or to find what is new. -> **additional analyses might be necessary**

Writing a paper

1) Identify/define what is new & write the key points -> should be reflected in the title
2) Define what research question you are answering
3) Write the abstract (may change, but it helps to define the story of the paper, you know where you are going, you don't get lost)
4) Develop the structure of the paper (according to the story), including sub-sections, bullet points and FIGURES.
5) Methods section (this is easy as you know exactly what you have done, helps to take away the fear of the blank page)
6) Results section - follow the outline and the order of the figures -> I prefer a combined results and discussion section as it avoids unnecessary repetition
7) Results - describe the outcome of your analyses, as quantitative as possible, no speculation
8) Discussion - interpret your results, combine different results (some speculation is OK if clearly stated), relate your results to available knowledge
9) Conclusions (avoid summary) - write what follows from your results
10) Introduction - do not write about the general topic, but summarise what is known about the research question (introduction and discussion should be consistent)

Some considerations and suggestions

1) Publishing is exciting, satisfying and extremely important for an academic career
2) A scientific result only "exists" when it is published
3) Always try to publish in the best possible journal (don't take a rejection personal, try to learn from it and try again)
4) Take the reader's perspective. What would you find useful to learn from your study (be as quantitative as possible)
5) Aim for a clear message
6) Take advantage of the wealth of information in this short course, which has been running successfully for many years.
7) Courses in "scientific writing" are offered almost everywhere, take advantage of them.
8) Writing a paper is a skill, so it is easy but needs some practice (Günther Blöschl 2011)

Thank you!
I'm looking forward to our discussion

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