How to support peer reviewers?

Christna Chap

Senior Editor, Team Manager PLOS ONE

PEERE Training School on Peer Review – Split, May 2018

Why supporting peer reviewers?

- Improving consistency and quality of feedback
- Community development
- Support for innovation

Why supporting peer reviewers?

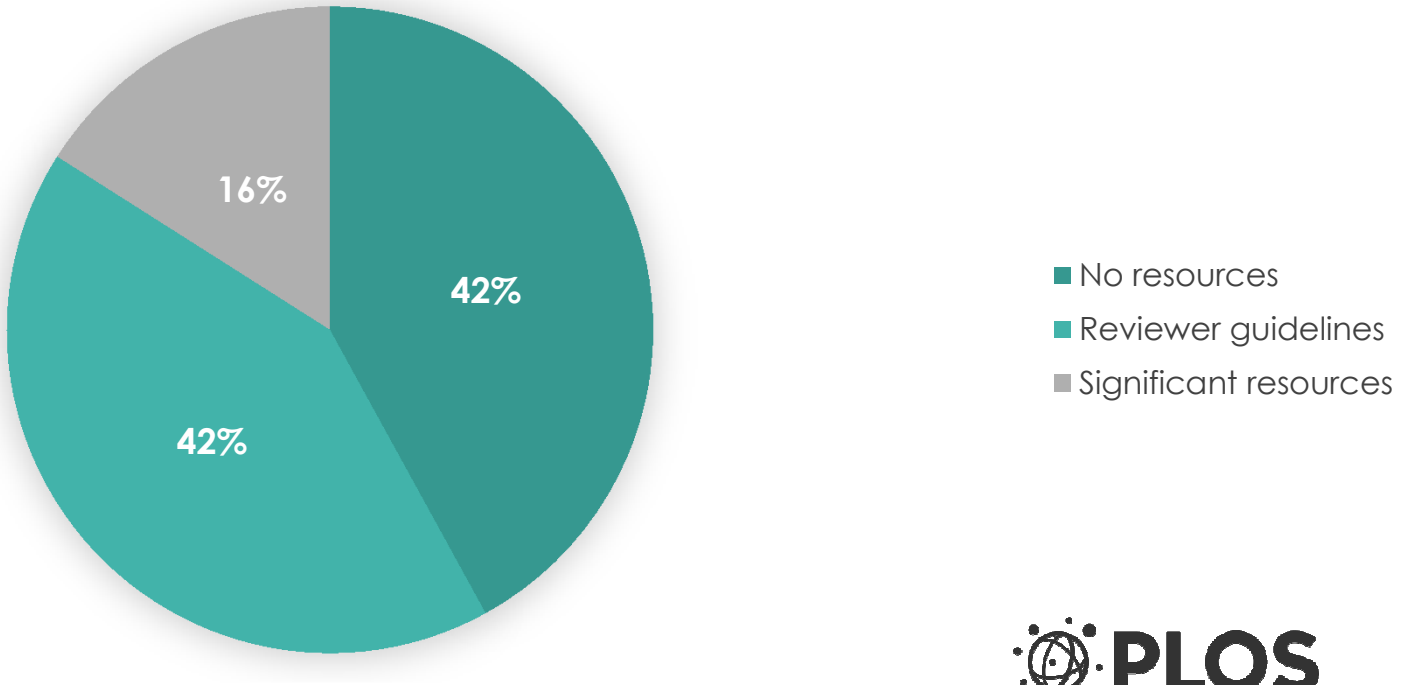
Demand for help

- 85% of PLOS reviewers report that they read existing guidelines
- 65% would be interested in additional reviewer resources
- What additional resources would be useful
    - 79% wanted tips for writing effective feedback
    - 49% reading the manuscripts
    - 49% organizing the review

PLOS survey Fall 2017 ~600 reviewers

What's out there- publishing landscape

- No reviewer-specific resources
- Reviewer guidelines
- Robust reviewer resources and outreach



Publicly available information from
38 publishers End 2017

Training and resources

- What types of training and/or resources are offered?
- What does the training look like? How is it accessed?
- What topics are covered? Is it journal-specific or general?
- Are there rewards and/or incentives for participating in training?

e-Learning modules

Tips from editors or experienced reviewers

Presentations

Articles, readings, studies

Example reviews

Review templates

Videos

In-person workshops

Reviewer recognition and credit

- How do publishers acknowledge reviewers?
- Are acknowledgments named or anonymous?
- How are reviewers given formal or informal credit for their reviews?
- What metadata is captured for reviewer recognition and/or credit?
- What strategies are used to certify reviewer performance and expertise?

Thank you acknowledgment

Review assigned a DOI

Review indexed

Metrics for report views

ORCID credit integration

Publons credit integration

Named review co-author (e.g., postdoc)

Badging/certification of expertise/experience

Rewards and incentives

- How do publishers reward reviewers for service?
- Are rewards contingent on quality or other criteria?
- What incentives are offered to encourage reviewer participation?

Certificate of performance

APC/membership discount

Discount on other product/service (e.g., published material or translation services)

Access to paywalled content

Continuing Medical Education (CME) credit

Building a reviewer community

- How do publishers engage reviewer communities?
- What are the virtual and in-person strategies for engagement?

Events & receptions

Workshops

Awareness campaigns

Newsletters

Blogs

Reviewer recruitment and targeting

- How easily can reviewers find information about reviewing?
- How do new reviewers sign up to be considered for reviews?
- To what extent do publishers encourage new reviewers to sign up?

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Trends in/ types of reviewer programs

Training and informational resources

Courses
Exercises
Presentations
Webinars
Videos
Example reviews
Tips from experts

Recognition and credit

Public thank you
Review DOI
PubMed deposit
Report metrics
ORCID
Publons
Badging/profile

Rewards and incentives

Certificates
Access
APC discount
Content discount
CME credit

Community building

Newsletters
In-person events
In-person training
Campaigns

Recruitment and targeting

Sign-up options
Locating editors
Locating reviewers

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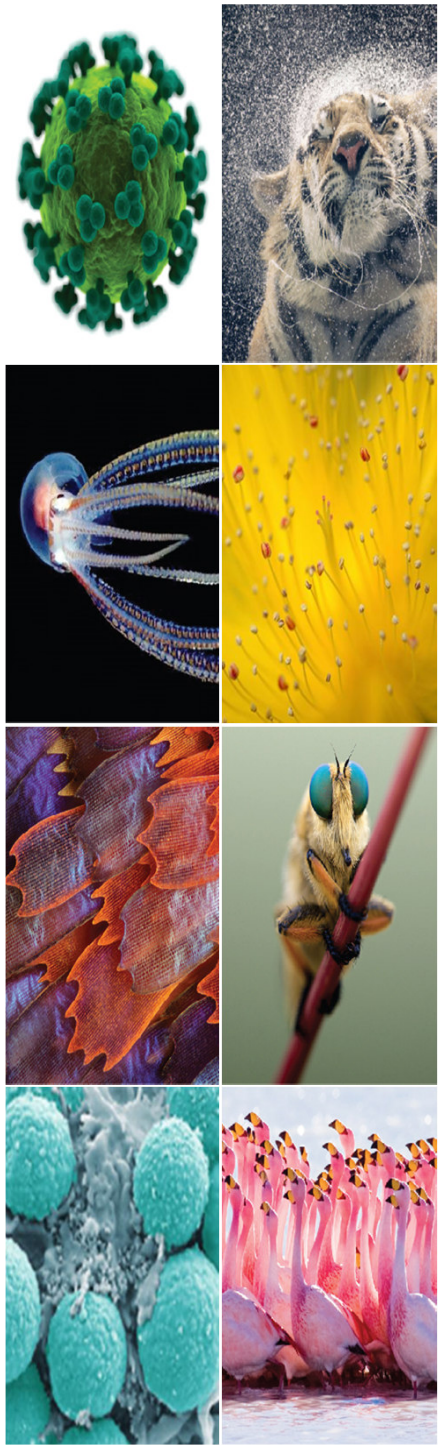

How to support peer reviewers

train
recognize
certify
incentivize
reward
engage

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Why supporting peer reviewers?

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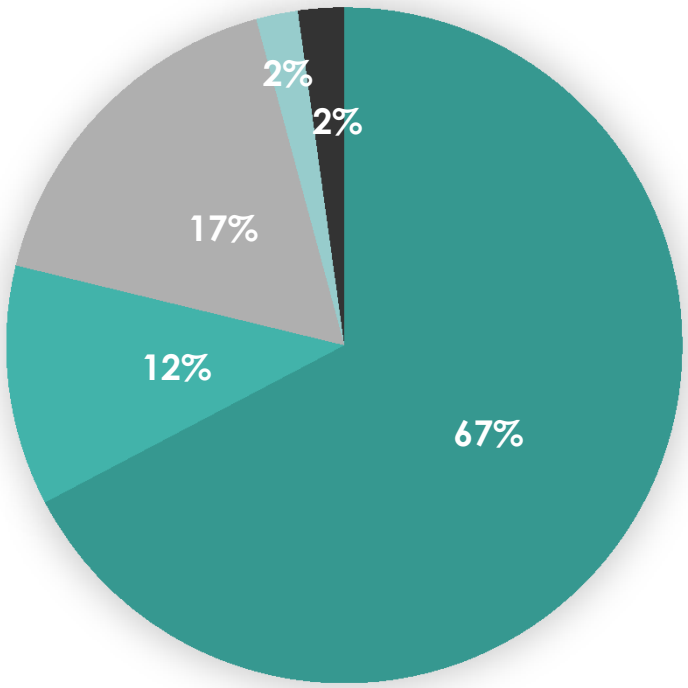
PLOS survey Fall 2017 ~600 reviewers

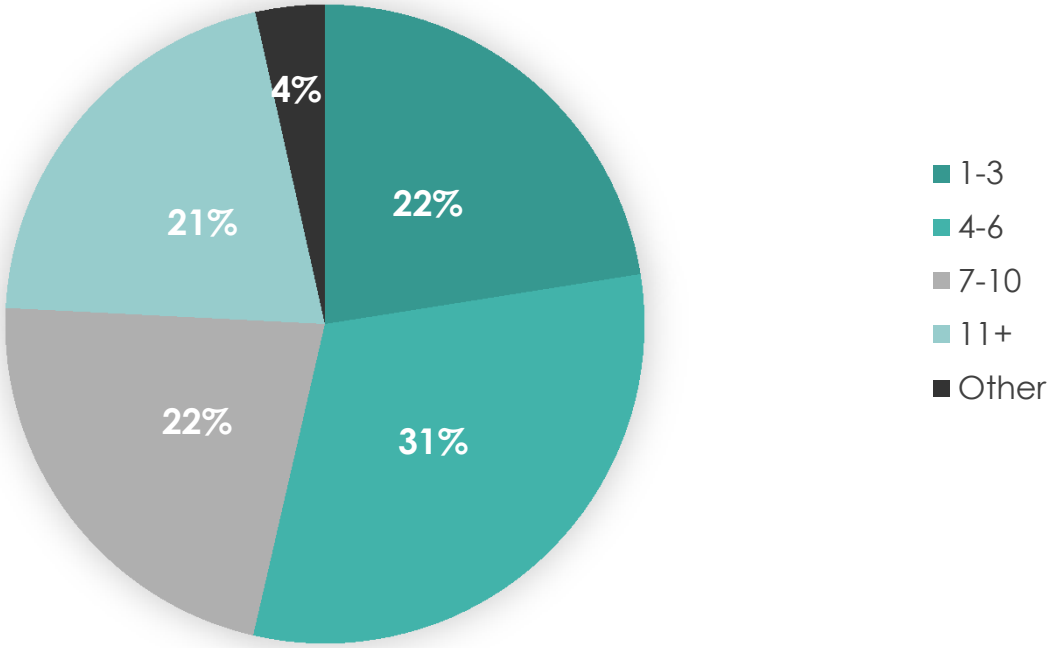
What is the primary reason that motivates you to review submitted manuscripts?



- I feel that it is my professional responsibility
- I am able to see the latest research in my field
- I want to give back to the research community
- I know the editor and/or journal who has asked me to review
- Other

PLOS survey Fall 2017 ~800 reviewers

Approximately how many reviews do you do every year (for any journal)?



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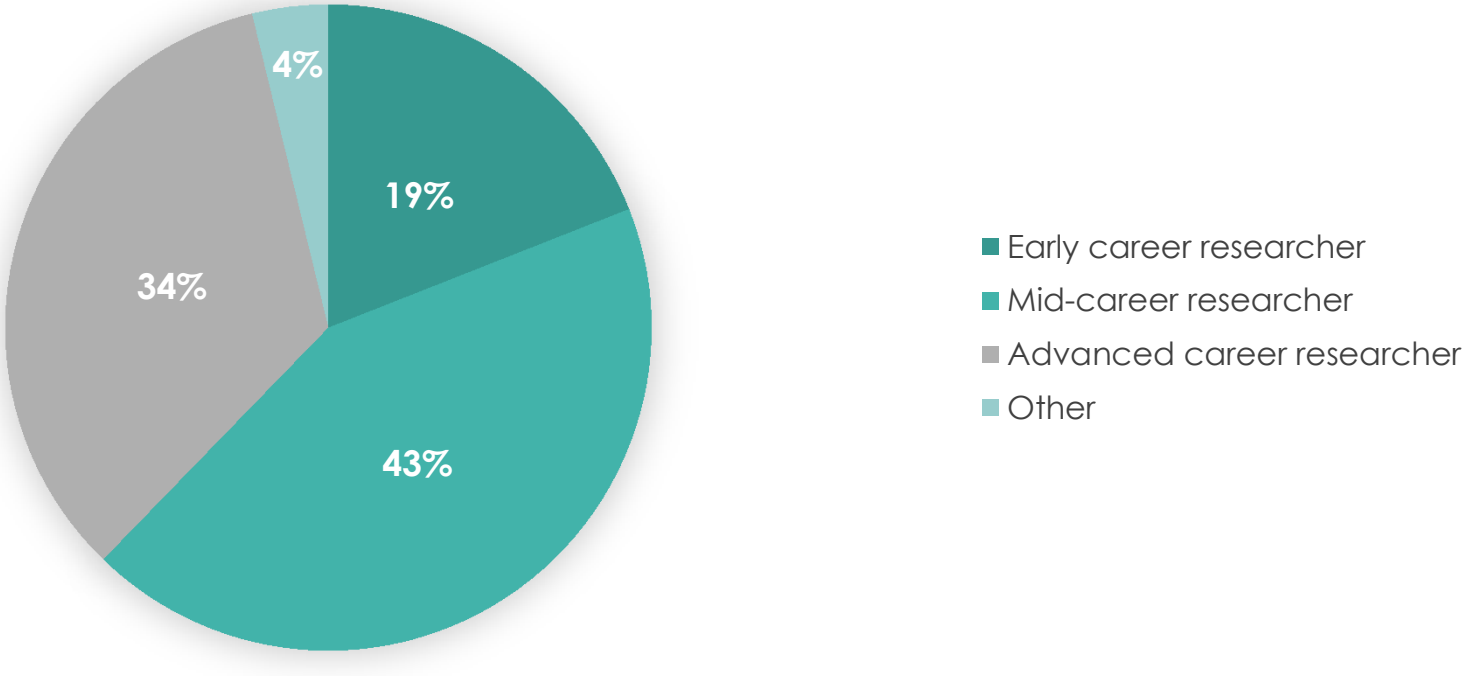
With which of the following career stages do you identify?



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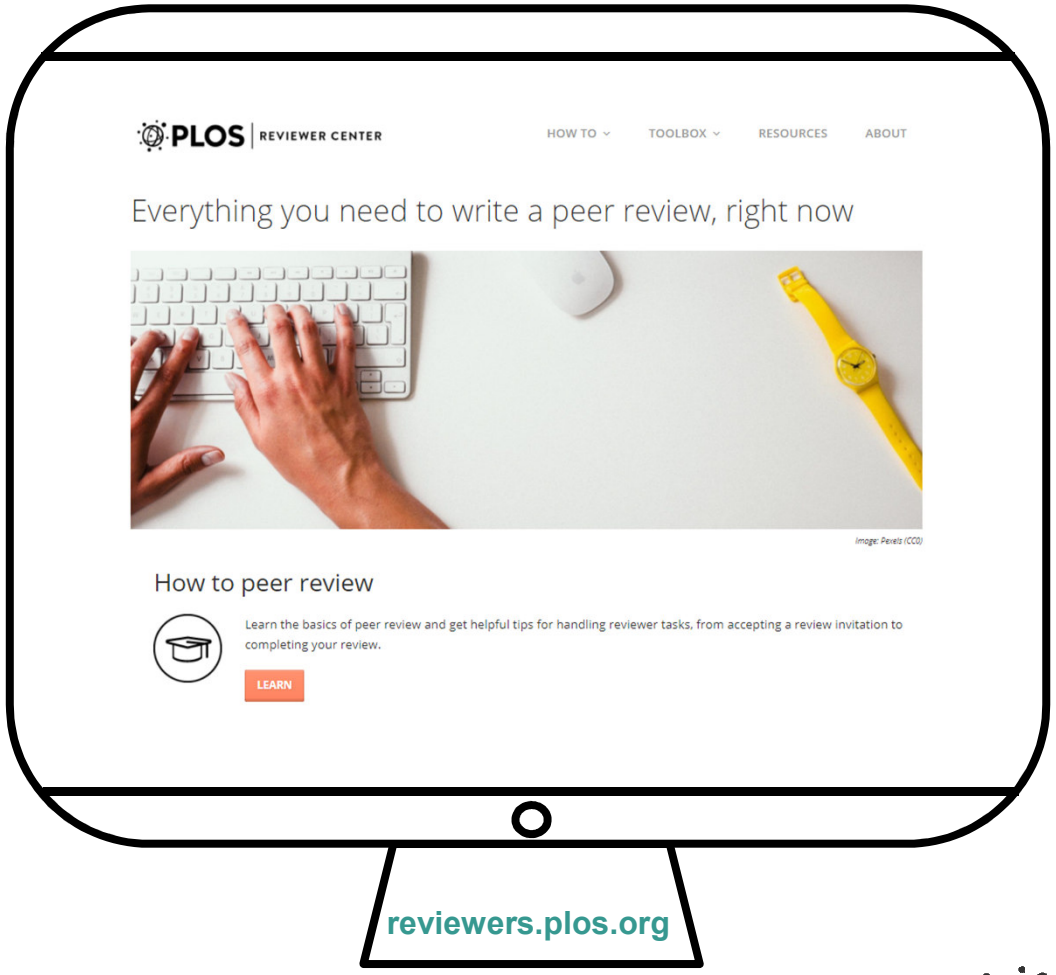
How to train reviewers- Reviewer centre



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Reviewer centre

How to peer review

Image: Pexels (CC0)

→ 10 tips for getting started as a reviewer *(est. read time 1:30 min.)*
→ You've been invited to review. Now what? *(est. read time 3:45 min.)*
→ How to read a manuscript as a peer reviewer *(est. read time 6:00 min.)*
→ How to write a peer review *(est. read time 6:00 min.)*

Peer review toolbox


Image: Pexels (CC0)

→ How to review a manuscript *(video, 5:16 min.)*
→ Peer review checklist *(toolbox activity)*
→ Peer review template *(toolbox activity)*
→ Competing interests for peer reviewers *(est. read time 4:00 min.)*
→ Ethics for reviewers *(est. read time 1:30 min.)*

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Reviewer centre

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Peer Review Checklist

Tips for new reviewers

When you're invited to review a manuscript

- ❑ Confirm the manuscript is in your area of expertise
- ❑ Make sure you have enough time
- ❑ Check for competing interests

When you're reading the manuscript

- ❑ Identify the research question and key claims
- ❑ Think about context and related literature
- ❑ Look at the figures and tables. Are they clear? Do they represent what the study is about?
- ❑ Examine the results. Are they supported by the data?
- ❑ Read the conclusions. Do they make sense?
- ❑ Check the methods. Are they appropriate and reproducible?
- ❑ Review the journal guidelines and publication criteria
- ❑ Keep everything confidential!

When you're writing the review

- ❑ Start with a summary of the research
- ❑ State your overall impression
- ❑ Number your comments and separate them into "major" and "minor" issues
- ❑ Give concrete examples
- ❑ Refer to specific sections and page numbers
- ❑ Don't focus on spelling and grammar
- ❑ Be professional and respectful
- ❑ Indicate if you're available to look at the revised version
- ❑ Include positive feedback too!
- ❑ Finish on time

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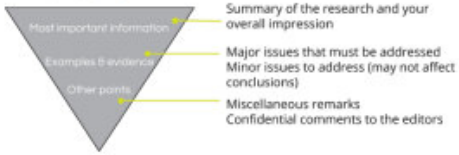
Peer Review Template

A quick guide for new reviewers

Organizational structure

Think about structuring your report like an upside-down pyramid. The most important information goes at the top, followed by supporting details.



Sample outline

1. Summary of the research

In your own words, summarize the main research question, claims, and conclusions of the study. Provide context for how this research fits within the existing literature.

Discuss the manuscript's strengths and weaknesses and your overall recommendation.

2. Examples and evidence

Major issues

Major issues must be addressed in order for the manuscript to proceed. Focus on what is essential for the current study, not the next step in the research. Put these items in a list and be as specific as possible.

Minor issues

Mention additional things the authors should do to improve the manuscript. Typically these will be changes that would not affect the overall conclusions.

3. Other points (optional)

If applicable, add confidential comments for the editors. Raise any concerns about the manuscript that the editors may need to consider further, such as concerns about ethics. Do not use this section for your overall critique. Also mention whether you might be available to look at a revised version.

Want more reviewing tips? Visit reviewers.plos.org

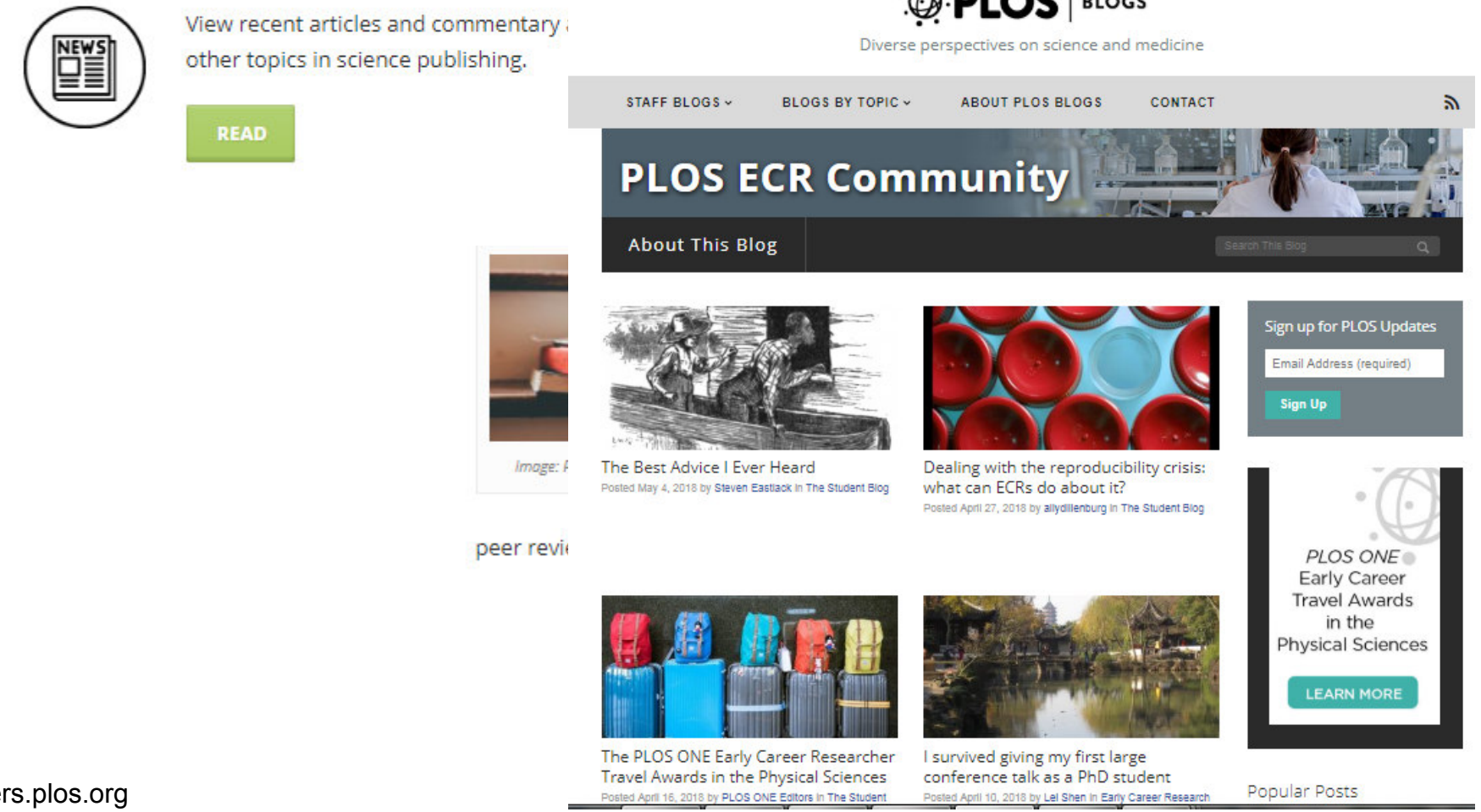
reviewers.plos.org

Reviewer centre

Read more about peer review

View recent articles and commentary
other topics in science publishing.

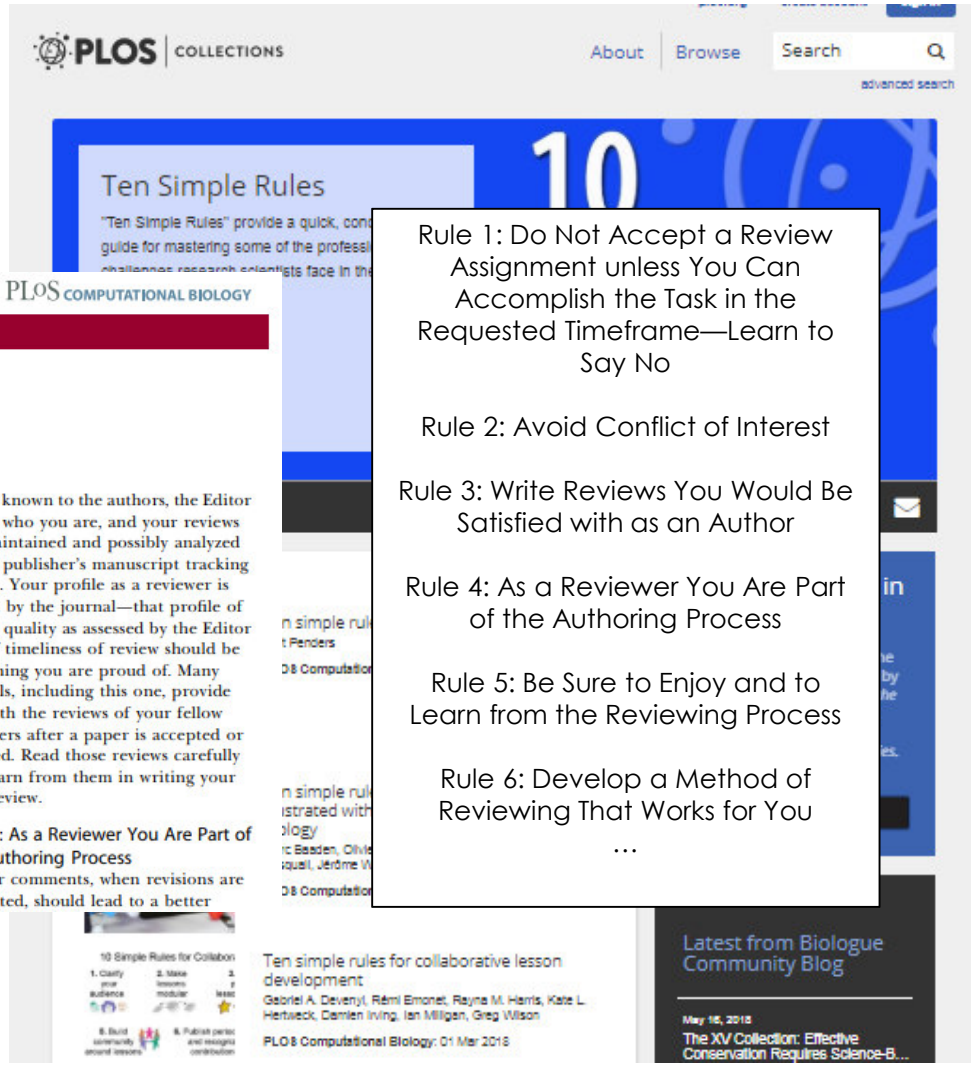
READ



reviewers.plos.org

http://blogs.plos.org/thestudentblog/about-this-blog/

How to train reviewers-
Article collection: Ten Simple Rules



Rule 1: Do Not Accept a Review Assignment unless You Can Accomplish the Task in the Requested Timeframe—Learn to Say No

Rule 2: Avoid Conflict of Interest

Rule 3: Write Reviews You Would Be Satisfied with as an Author

Rule 4: As a Reviewer You Are Part of the Authoring Process

Rule 5: Be Sure to Enjoy and to Learn from the Reviewing Process

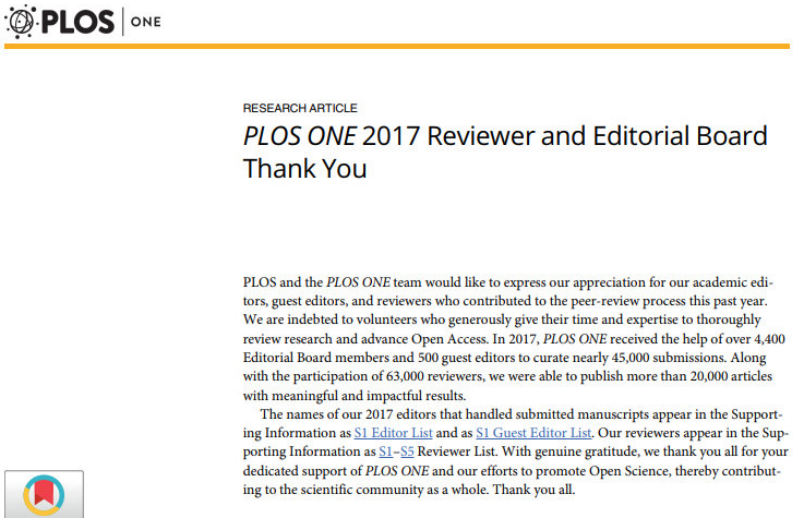
Rule 6: Develop a Method of Reviewing That Works for You

…

Bourne PE, Korngreen A (2006) PLoS Comput Biol 2(9): e110

http://collections.plos.org/ten-simple-rules

How to recognize reviewers- Thank you article



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RESEARCH ARTICLE

PLOS ONE 2017 Reviewer and Editorial Board Thank You

PLOS and the *PLOS ONE* team would like to express our appreciation for our academic editors, guest editors, and reviewers who contributed to the peer-review process this past year. We are indebted to volunteers who generously give their time and expertise to thoroughly review research and advance Open Access. In 2017, *PLOS ONE* received the help of over 4,400 Editorial Board members and 500 guest editors to curate nearly 45,000 submissions. Along with the participation of 63,000 reviewers, we were able to publish more than 20,000 articles with meaningful and impactful results.

The names of our 2017 editors that handled submitted manuscripts appear in the Supporting Information as S1 Editor List and as S1 Guest Editor List. Our reviewers appear in the Supporting Information as S1–S5 Reviewer List. With genuine gratitude, we thank you all for your dedicated support of *PLOS ONE* and our efforts to promote Open Science, thereby contributing to the scientific community as a whole. Thank you all.

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PLOS ONE would like to thank all those who reviewed on behalf of the journal in 2017:

Jerome A.
Farhan Aadil
Eivind Aadland
Jens Aagaard-Hansen
Anna-Mari Aalto
Juha Aalto
Lauri Aaltonen
Mikko Aaltonen
Maria Aamelfot
Aase Aamland
Zach Aanderud
Carolien Aantjes
Hilde Aardema
Andre Aarnink
Roy Aaron
Shawn Aaron
Ulrika Aasa
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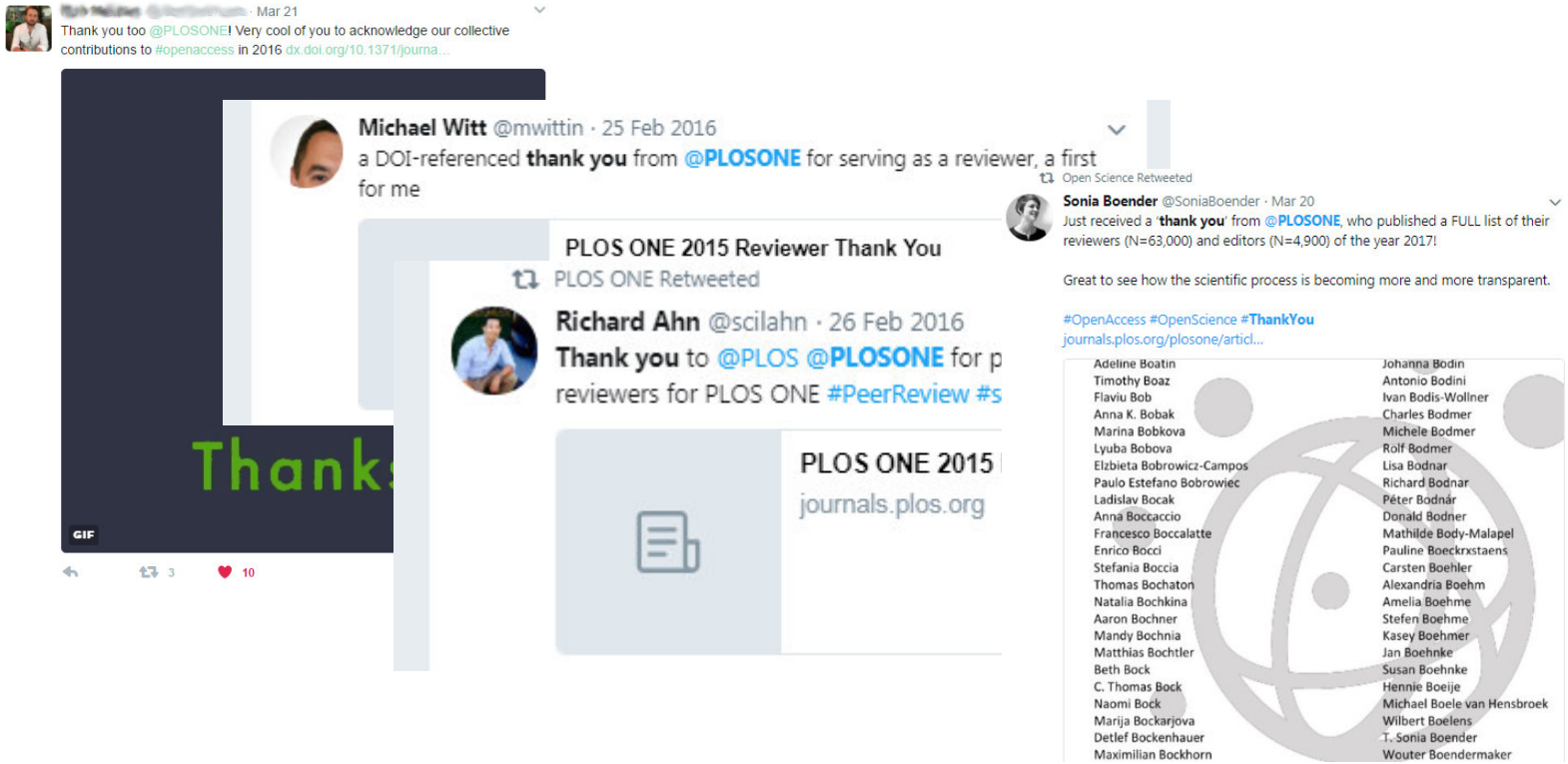
Naeem Abbas
Syed Abbas
Amir Abbasi
Jessica Abbate
Giovanni Abbate-Daga
Wissem Abbes
Kirsten Abbot-Smith
Carla Abbott
Catherine Abbott

(2018) PLOS ONE 2017 Reviewer and Editorial Board Thank You. PLoS ONE 13(3): e0194158. https://doi.org/10.1371/journal.pone.0194158

Thank you article



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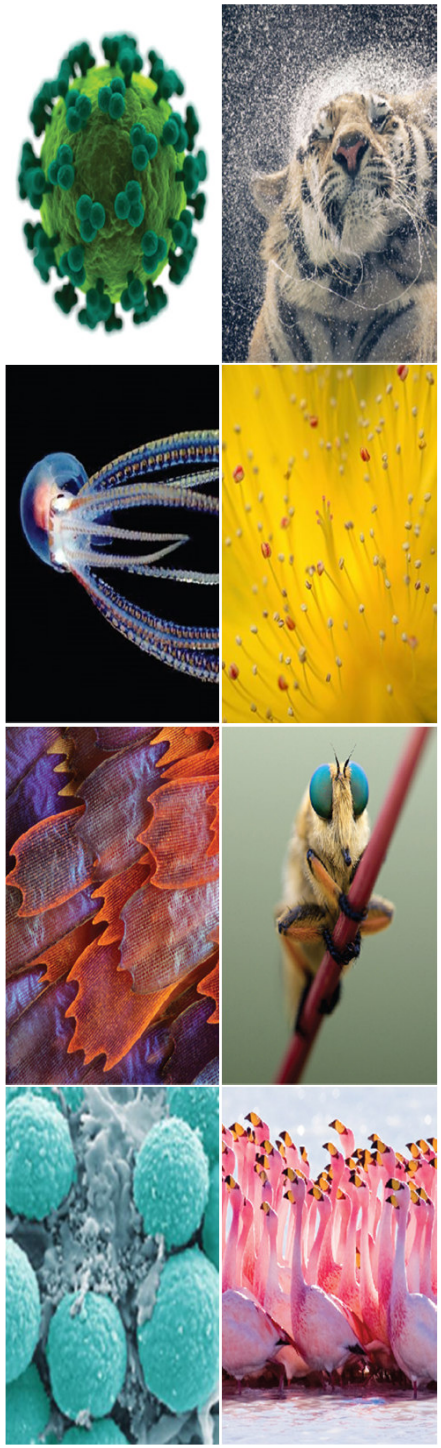

How to support peer reviewers?

A PLOS ONE perspective

It's complicated

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Challenges: how to support consistency

Size of journal

Scope of journal

Journal editorial structure

Field differences

Journal Differences

Human factor

Challenges: how to support consistency and quality

Defined publication criteria

1. Study presents primary research that contributes knowledge to the field
2. Results have not been published elsewhere
3. Experiments are performed to a high technical standard and described in sufficient detail
4. Conclusions are supported by the data
5. Article is intelligibly written in standard English
6. Meets all applicable standards of research and publication ethics
7. Adheres to reporting guidelines and meets data availability requirements

Challenges: how to support consistency and quality

Structured reviewer form/template

- Technical soundness of the work
- Rigor of the analysis
- Adherence to our data availability policy
- Clear use of English language
- Publications ethics
- Research ethics
- COI

Challenges: specific publication criteria

1. Study presents primary research that contributes knowledge to the field

PLOS ONE publication criteria focus on rigor rather than subjective significance

"The results are negative"

"The work is not significant enough/ has limited impact"

"I have problems with the PLOS ONE policy that the interest of the paper, scientifically or other, should not be taken into account"

"It's not a priority area/ space is limited"

"I suggest to submit to a more specialized journal"

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Challenges: specific publication criteria

2. Results have not been published elsewhere

- pre-prints, institutional site, conference abstracts, blogs

- publishing systems/platforms

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Challenges: specific publication criteria

6. Meets all applicable standards of research and publication ethics

PLOS ONE upholds the highest international standards…

Animal and field studies:

- IACUC approval required for all vertebrate animal studies, including collection of tissues and cells
- Assess use of humane endpoints for survival experiments
- Ensure appropriate methods of anesthesia and euthanasia
- Require applicable permissions and permits for field studies

Human studies:

- IRB approval required for all studies involving information, including collection of tissues a
- Ensure participants provide informed conse
- Protection of participant privacy and vulner
- We reserve the right to reject any study whi the highest ethical standards

Challenges: specific publication criteria

7. Adheres to reporting guidelines and meets data availability requirements

Reporting Guidelines for Specific Study Types

Authors are expected to comply with standard reporting guidelines for study designs. Check the EQUATOR Network for reporting instructions and supporting documentation. Documentation for specific studies should be uploaded as supporting information during manuscript submission. Read the submission guidelines.

Clinical trials	Clinical trial reports must adhere to the relevant reporting guidelines for their study design, such as CONSORT for randomized controlled trials, TREND for non-randomized trials, and other specialized guidelines as appropriate. Read more about our policy on clinical trials.
Systematic reviews and meta-analyses	Reports of systematic reviews and meta-analyses must adhere to the PRISMA statement as a guide, and include a completed PRISMA checklist and flow diagram to accompany the main text. Blank templates of the checklist and flow diagram can be downloaded from the PRISMA web site. Authors must also state within their Methods section whether a protocol exists for their systematic review, and if so, provide a copy of the protocol as Supporting Information. We support the prospective registration of systematic reviews. Authors whose systematic review was prospectively registered (e.g., in a registry such as PROSPERO) should also provide the registry number in their abstract. Registry details and protocols will be made available to editors and reviewers, and included alongside the paper for readers if the report is ultimately published.
Diagnostic studies	Reports of studies of diagnostic accuracy should conform to the STARD requirements.
Observational studies in epidemiology	For reports of epidemiological studies, authors should consult the STROBE initiative.
Microarray experiments	Reports of microarray experiments should conform to the MIAME guidelines published by the Functional Genomics Data Society (FGED), and the data from the experiments must be deposited in a publicly accessible database.

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http://journals.plos.org/plosone/s/best-practices-in-research-reporting

Challenges: specific publication criteria

7. Adheres to reporting guidelines and meets data availability requirements

The PLOS Data policy requires authors to make all data underlying the findings described in their manuscript fully available without restriction, with rare exception (e.g. ethical restrictions). The data should be provided as part of the manuscript or its supporting information, or deposited to a public repository. For example, in addition to summary statistics, the data points behind means, medians and variance measures should be available. If there are restrictions on publicly sharing data—e.g. participant privacy or use of data from a third party—those must be specified.

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Challenges: specific publication criteria

7. Adheres to reporting guidelines and meets data availability requirements

OPEN ACCESS

Citation: Salles T, Ding X, Brocard G (2018) pyBadlands: A framework to simulate sediment transport, landscape dynamics and basin stratigraphic evolution through space and time. PLoS ONE 13(4): e0195557. https://doi.org/10.1371/journal.pone.0195557

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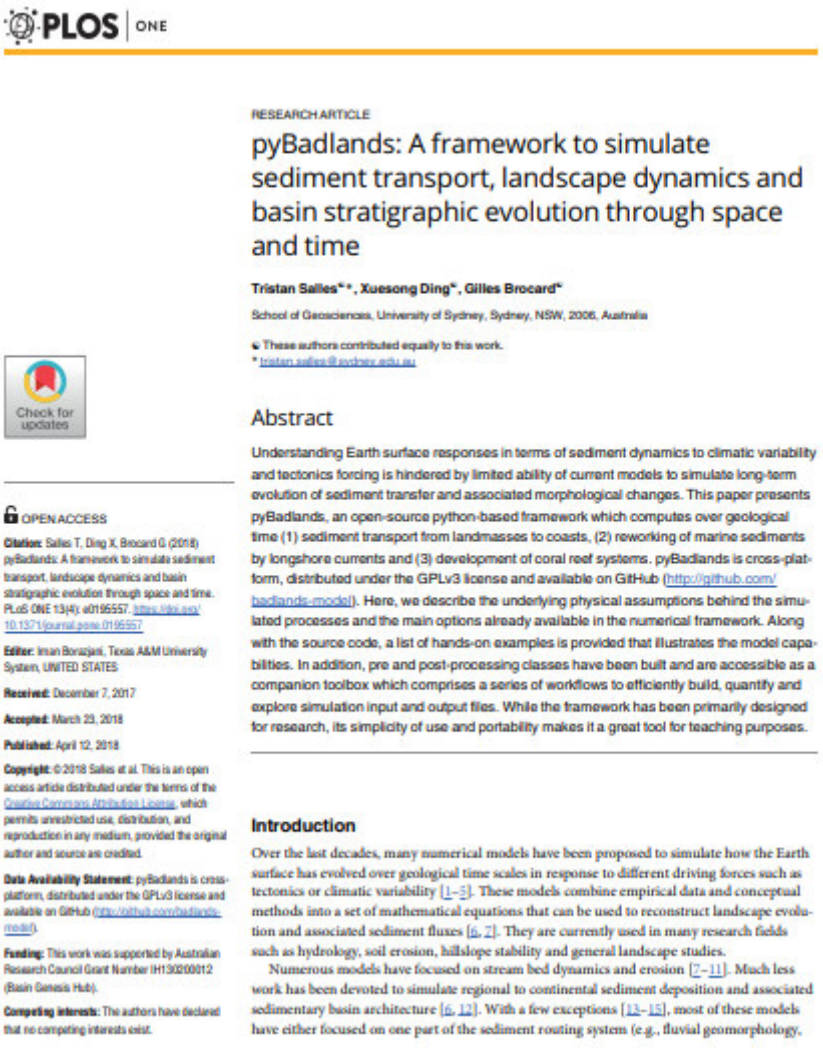
Data Availability Statement: pyBadlands is cross-platform, distributed under the GPLv3 license and available on GitHub (http://github.com/badlands-model).

Funding: This work was supported by Australian Research Council Grant Number IH130200012 (Basin Genesis Hub).

Competing interests: The authors have declared that no competing interests exist.



PLOS ONE

RESEARCH ARTICLE

pyBadlands: A framework to simulate sediment transport, landscape dynamics and basin stratigraphic evolution through space and time

Tristan Salles*, Xuesong Ding*, Gilles Brocard*

School of Geosciences, University of Sydney, Sydney, NSW, 2006, Australia

Abstract

Understanding Earth surface responses in terms of sediment dynamics to climatic variability and tectonics forcing is hindered by limited ability of current models to simulate long-term evolution of sediment transfer and associated morphological changes. This paper presents pyBadlands, an open-source python-based framework which computes over geological time (1) sediment transport from landmasses to coasts, (2) reworking of marine sediments by longshore currents and (3) development of coral reef systems. pyBadlands is cross-platform, distributed under the GPLv3 license and available on GitHub (http://github.com/badlands-model). Here, we describe the underlying physical assumptions behind the simulated processes and the main options already available in the numerical framework. Along with the source code, a list of hands-on examples is provided that illustrates the model capabilities. In addition, pre and post-processing classes have been built and are accessible as a companion toolbox which comprises a series of workflows to efficiently build, quantify and explore simulation input and output files. While the framework has been primarily designed for research, its simplicity of use and portability makes it a great tool for teaching purposes.

Introduction

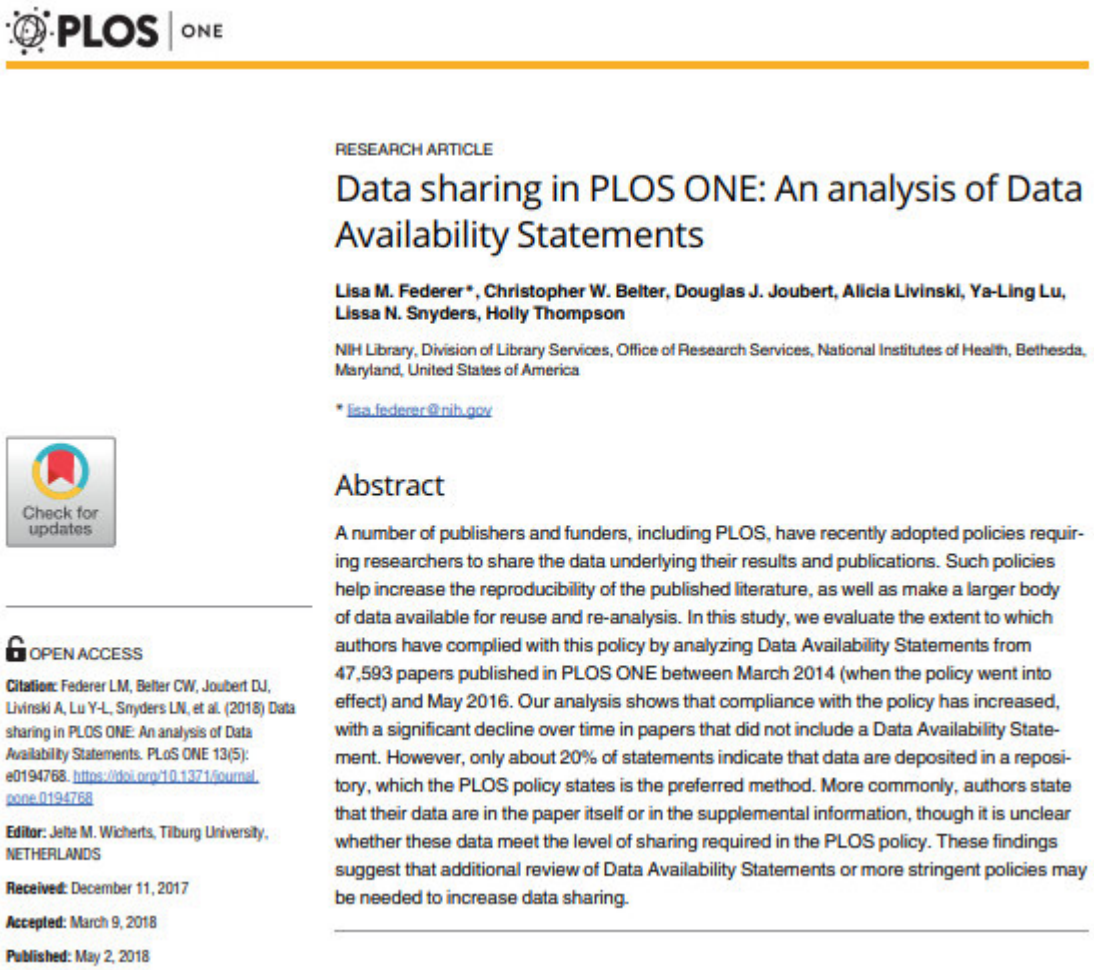
Over the last decades, many numerical models have been proposed to simulate how the Earth surface has evolved over geological time scales in response to different driving forces such as tectonics or climatic variability [1–3]. These models combine empirical data and conceptual methods into a set of mathematical equations that can be used to reconstruct landscape evolution and associated sediment fluxes [4, 7]. They are currently used in many research fields such as hydrology, soil erosion, hillslope stability and general landscape studies.

Numerous models have focused on stream bed dynamics and erosion [7–11]. Much less work has been devoted to simulate regional to continental sediment deposition and associated sedimentary basin architecture [6, 12]. With a few exceptions [13–15], most of these models have either focused on one part of the sediment routing system (e.g., fluvial geomorphology,

Salles T, Ding X, Brocard G (2018) pyBadlands: A framework to simulate sediment transport, landscape dynamics and basin stratigraphic evolution through space and time. PLoS ONE 13(4): e0195557.

Challenges: specific publication criteria

7. Adheres to reporting guidelines and meets data availability requirements



PLOS ONE

RESEARCH ARTICLE

Data sharing in PLOS ONE: An analysis of Data Availability Statements

Lisa M. Federer*, Christopher W. Belter, Douglas J. Joubert, Alicia Livinski, Ya-Ling Lu, Lissa N. Snyders, Holly Thompson

NIH Library, Division of Library Services, Office of Research Services, National Institutes of Health, Bethesda, Maryland, United States of America

* lisa.federer@nih.gov

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Citation: Federer LM, Belter CW, Joubert DJ, Livinski A, Lu Y-L, Snyders LN, et al. (2018) Data sharing in PLOS ONE: An analysis of Data Availability Statements. PLoS ONE 13(5): e0194768. https://doi.org/10.1371/journal.pone.0194768

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Abstract

A number of publishers and funders, including PLOS, have recently adopted policies requiring researchers to share the data underlying their results and publications. Such policies help increase the reproducibility of the published literature, as well as make a larger body of data available for reuse and re-analysis. In this study, we evaluate the extent to which authors have complied with this policy by analyzing Data Availability Statements from 47,593 papers published in PLOS ONE between March 2014 (when the policy went into effect) and May 2016. Our analysis shows that compliance with the policy has increased, with a significant decline over time in papers that did not include a Data Availability Statement. However, only about 20% of statements indicate that data are deposited in a repository, which the PLOS policy states is the preferred method. More commonly, authors state that their data are in the paper itself or in the supplemental information, though it is unclear whether these data meet the level of sharing required in the PLOS policy. These findings suggest that additional review of Data Availability Statements or more stringent policies may be needed to increase data sharing.

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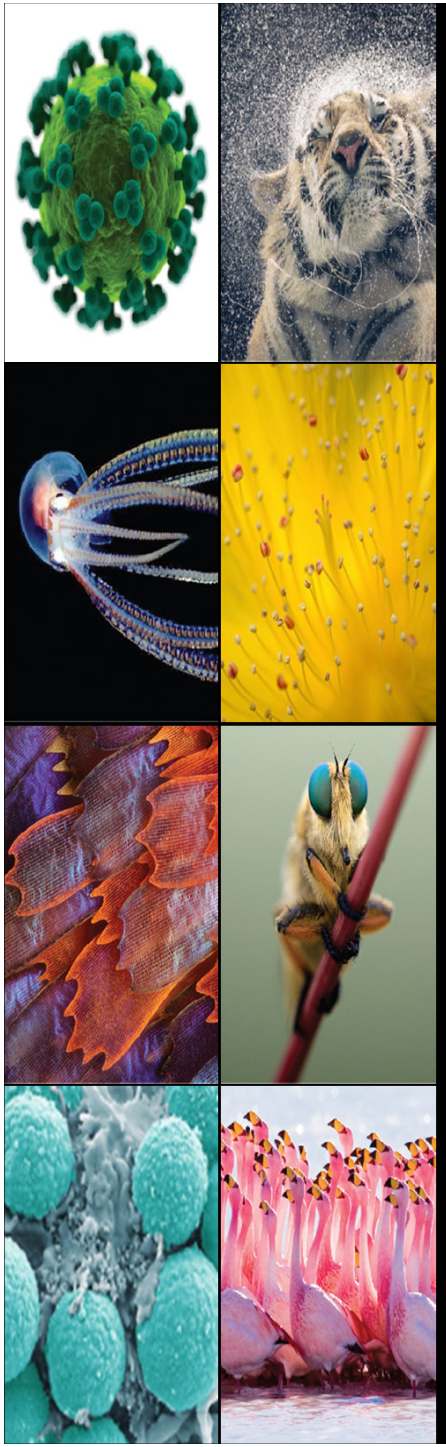
Federer LM, Belter CW, Joubert DJ, Livinski A, Lu Y-L, Snyders LN, et al. (2018) Data sharing in PLOS ONE: An analysis of Data Availability Statements. PLoS ONE 13(5): e0194768. https://doi.org/10.1371/journal.pone.0194768



Support peer reviewers
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reward
engage

Thank you

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