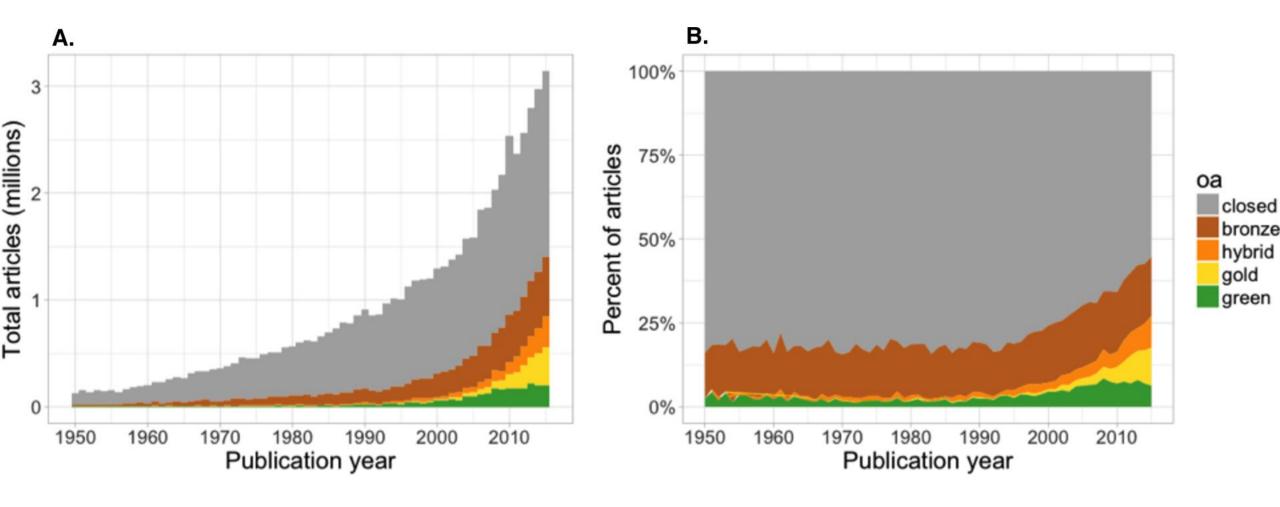


# **Evolution of OA publishing**



Haustein, Stefanie; West, Jevin; Farley, Ashley; Norlander, Bree; Matthias, Lisa; Alperin, Juan Pablo; Larivière, Vincent; Priem, Jason; Piwowar, Heather - Haustein, Stefanie (2018-02-13). "The state of OA: a large-scale analysis of the prevalence and impact of Open Access articles". *PeerJ* 6: e4375. DOI:10.7717/peerj.4375. ISSN 2167-8359.

## An editor's & (co-) author's perspective



not-for-profit, open-access international scientific journal of the European Geoscience Union part of Copernicus Publications

**1988** Copernicus as a spin-off of the Max-PlanckInstitute for Solar System Research

**2001** start of the first **open-access** society journal

2018 41 peer-reviewed open access journals and peer-reviewed proceedings and 20

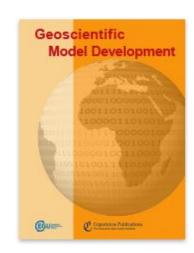
access-reviewed scientific discussion forums



open-access international scientific journal

**2007** Frontiers is launched as a not-for-profit foundation, the Frontiers Research Foundation, relying on philanthropic donations to operate.

**after 2008** Frontiers Media SA (investments by Kaltroco, the private holding company of the Koltes family, Holtzbrinck Publishing Group)



# OA journals



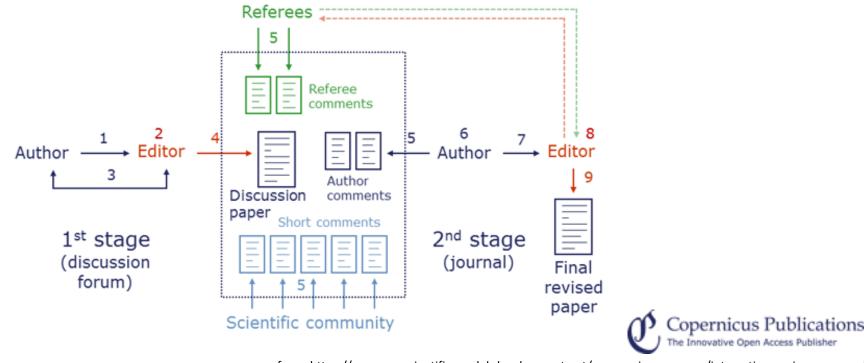
## **Review Process**

peer review and publication differs from traditional scientific journals

Copernicus and Frontiers use an **in-house Open Science technology platform** for interactive community or Collaborative Peer Review

designed to utilize the full potential of the Internet to foster scientific discussion and enable rapid publication of scientific papers.

## Interactive Public Peer Review<sup>TM</sup>



from: https://www.geoscientific-model-development.net/peer-review process/interactive review process.html

### **Two-step process:**

1 Initial access peer review assures the basic scientific and technical quality of manuscript

2 Interactive discussion and public commenting by the referees, authors, and other members of the scientific community is expected to enhance quality control for papers published in GMD beyond the limits of the traditional closed peer review



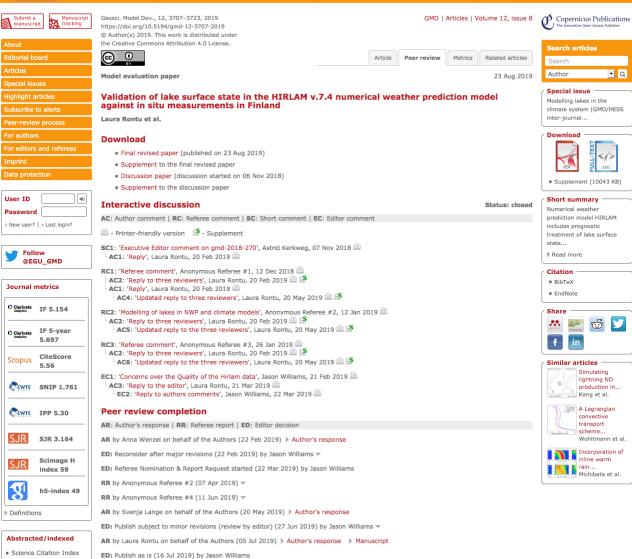
Expanded Current Contents/PCE Scopus ADS Chemical Abstracts CLOCKSS

#### Geoscientific Model Development

An interactive open-access journal of the European Geosciences Union







### **-** Q Author

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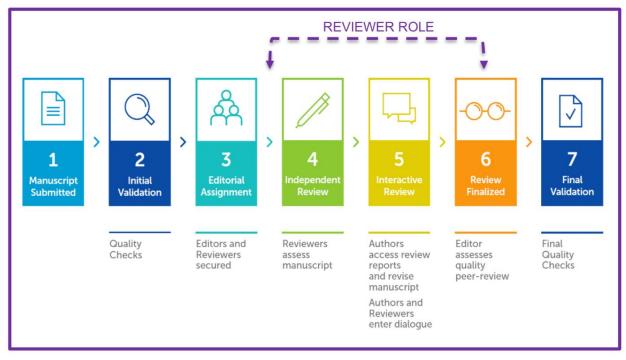


Wohltmann et al.



rain... Michibata et al.

### Collaborative Peer Review



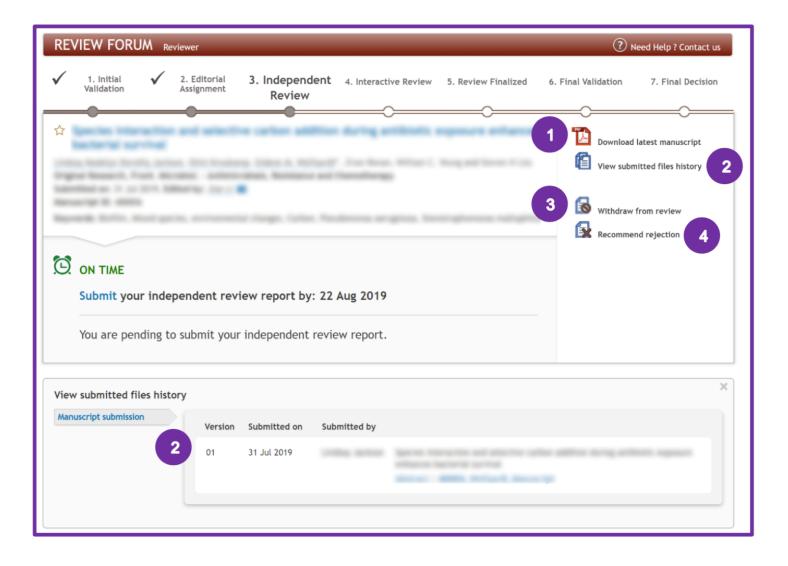
https://www.frontiersin.org/Design/pdf/RE\_Guidelines.pdf

### Two phases:

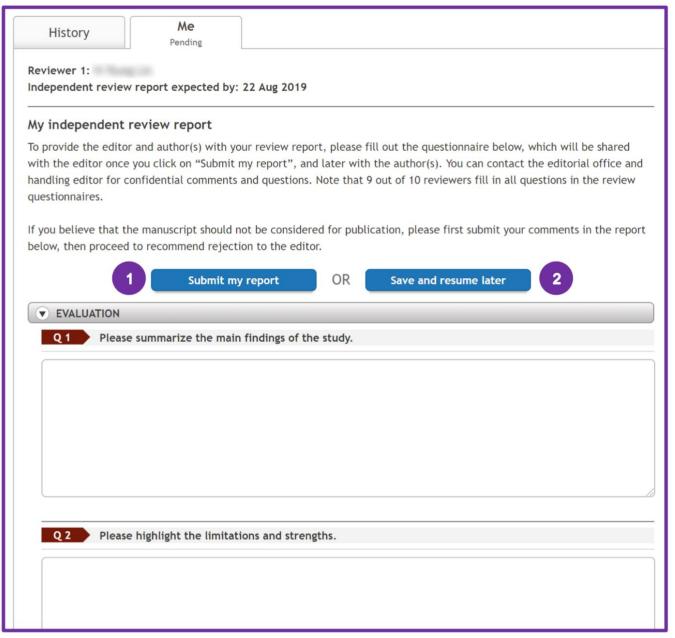
- 1 independent review
- 2 interactive, collaborative review; real-time interaction between all authors, reviewers, editor

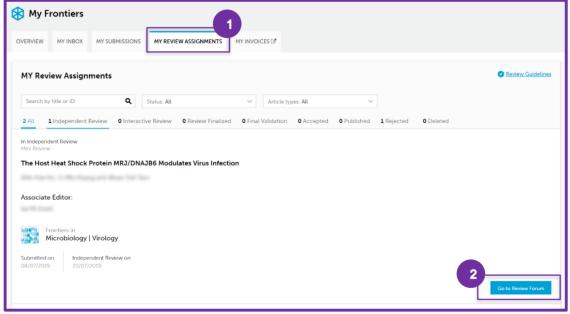
reviews follow a standardized, rigorous questionnaire with free text elements; all reviewers and editors named on final article

## Collaborative Peer Review

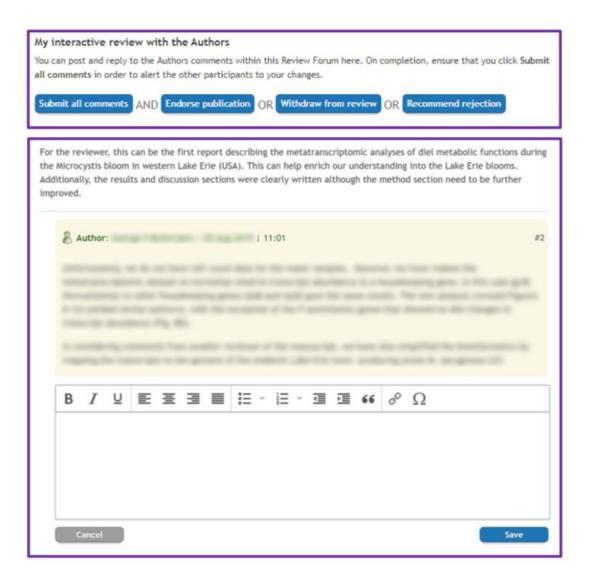


## Collaborative Peer Review - Questionaire

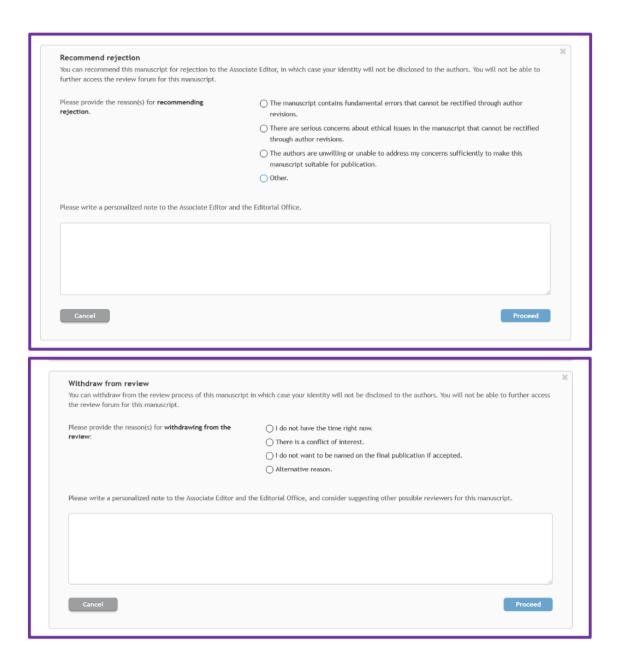




## Collaborative Peer Review – Interactive Review



## Collaborative Peer Review – Decission





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Acknowledgments

Supplementary Material

References

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dissolved black carbon export by arctic rivers

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Wildfires have produced black carbon (BC) since land plants emerged. Condensed aromatic compounds, a form of BC, have accumulated to become a major component of the soil carbon pool. Condensed aromatics leach from soils into rivers, where they are termed dissolved black carbon (DBC). The transport of DBC by rivers to the sea is a major term in the global carbon and BC cycles. To estimate Arctic river DBC export, 25 samples collected from the six largest Arctic rivers (Kolyma, Lena, Mackenzie, Ob', Yenisey, and Yukon) were analyzed for dissolved organic carbon (DOC), colored dissolved organic matter (CDOM), and DBC. A simple, linear regression between DOC and DBC indicated that DBC accounted for 8.9 ± 0.3% of DOC exported by Arctic rivers. To improve upon this estimate, an optical proxy for DBC was developed based upon the linear correlation between DBC concentrations and CDOM light absorption coefficients at 254 nm ( $a_{254}$ ). Relatively easy to measure  $a_{254}$  values were determined for 410 Arctic river samples between 2004 and 2010. Each of these  $a_{254}$  values was converted to a DBC concentration based upon the linear correlation, providing an extended record of DBC concentration. The extended DBC record was coupled with daily discharge data from the six rivers to estimate riverine DBC loads using the LOADEST modeling program. The six rivers studied cover 53% of the pan-Arctic watershed and exported 1.5 ± 0.1 million tons of DBC per year. Scaling up to the full area of the pan-Arctic watershed, we estimate that Arctic rivers carry 2.8 ± 0.3 million tons of DBC from land to the Arctic Ocean each year. This equates to ~8% of Arctic river DOC export, slightly less than indicated by the simpler DBC vs. DOC correlation-based estimate. Riverine discharge is predicted to increase in a warmer Arctic. DBC export was positively correlated with river runoff, suggesting that the export of soil BC to the Arctic Ocean is likely to increase as the Arctic warms.

#### Introduction

Fire occurs in nearly all terrestrial ecosystems (Bowman et al., 2009) and is on the increase in the Arctic (Higuera et al., 2008; Hu et al., 2010). Black carbon (BC) refers to thermally altered organic material and it comes in many forms (Forbes et al., 2006), ranging in chemistry from minimally charred biomolecules (Myers-Pigg et al., 2015) to condensed aromatics formed at high temperatures (Dittmar, 2008). Once formed condensed aromatics are ultra-refractory within soils, being preferentially preserved for hundreds to thousands of years (Schmidt et al., 2011). This stability, together with the ubiquity of fire, has resulted in condensed aromatics being distributed throughout the world's soils (Forbes et al., 2006; Guggenberger et al., 2008), where they have accumulated to represent approximately 10% of the global soil carbon store (Mitra et al.,



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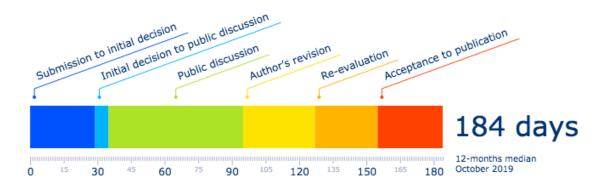
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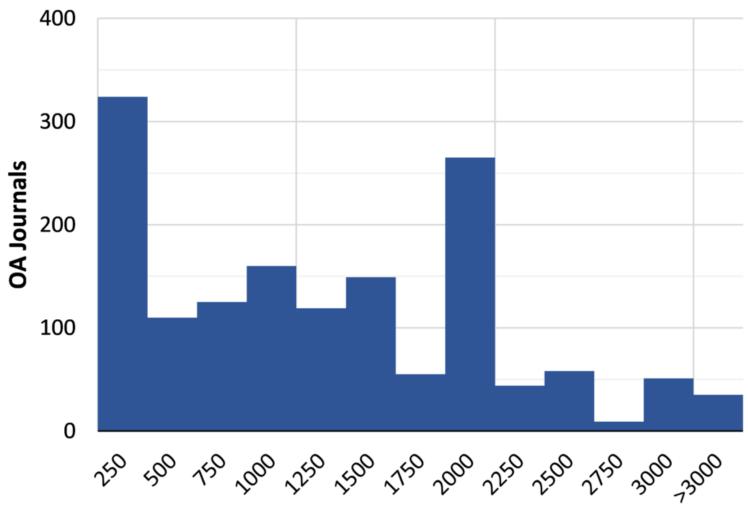
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