Opening up

From January 2021, authors will now have the option to publish their research open access.

This year marks the beginning of a change in the way articles in *Nature Geoscience* are published and read. Alongside *Nature* and the other Nature-branded journals, authors whose primary research manuscripts are submitted from 1 January 2021 onward will have the choice to publish open access (OA) once their manuscript is formally accepted for publication. These studies will be made freely accessible to everyone via a Creative Commons Attribution license that allows authors to retain copyright to their work while also maximizing sharing and reuse, provided that appropriate credit is given.

The option to publish traditional subscriber-only primary research content will continue to be available to all authors for the time being, and our opinion and comment content (which includes Reviews and Perspectives) will remain wholly subscription-based.

It's clear from developments within the geoscience community that openness at all stages of the research process is becoming the norm. The rise of public repositories like PANGAEA and GEOROC, open data sharing by organizations such as NASA, and the recent launch of preprint servers[1] make this clear, and align well with our recent mandate that all data associated with research articles be findable, accessible, interoperable and reusable (FAIR)[2]. Growth in the Earth and environmental sciences content in our sister title Nature Communications since switching from a hybrid to a fully OA model in 2014, and the launch of new OA titles like Communications Earth & Environment, also supports the notion that there is demand more broadly for open publishing options.

Beyond issues of reproducibility and data access, the geosciences also have a potentially major role to play in tackling grand societal challenges, from climate change to water security[3]. Here too, OA may be beneficial. A recent White Paper that includes an analysis of some 360,000 documents, and a survey of nearly 6,000 readers on Springer Nature websites, shows that research articles related to the United Nations Sustainable Development Goals that are published OA are able to reach a substantially greater number of readers outside of academia compared to subscription-based content.

Articles published OA are downloaded more, garner more online attention, and receive more citations than subscription-based content, according to another White Paper published by Springer Nature analysing data from more than 70,000 articles in hybrid journals.

However, unlike hybrid journals that offer both options in perpetuity, the addition of OA publication among the Nature journals represents the start of a transition towards all primary research content eventually being published openly, following the payment of an article processing charge (APC). This is part of a broader suite of changes among the Nature portfolio to adopt a transformative approach that also includes greater transparency regarding which aspects of the publishing process are covered by the APC.

We acknowledge that different communities within the geosciences may be making this transition at different rates, and the gradual transformative approach in part reflects that. With an increasing number of funding agencies recognizing the importance of open science to the research they fund, now is the right time to make the option of OA available to our authors, especially those who need to comply with immediate OA mandates. In the interim period, authors who publish under our traditional subscription model will still be able to take advantage of initiatives like SharedIt, which allows read-only versions of articles to be shared freely via a link after online publication, and our partnership with ResearchGate, in which final versions of articles are automatically made accessible on the authors' accounts on publication.

> "Now is the right time to make the option of open access available to our authors"

This is not to say that such a transition will be without obstacles for some researchers. Where funders mandate that research be OA immediately upon publication, financial support may be made available by them to cover the APC. Under transformative agreements such as those recently agreed to cover more than 700 research institutes in Germany, this would mean full support for authors wishing to publish in Nature journals.

Although this new development represents one of the biggest changes to *Nature Geoscience* in the 13 years since it launched, it should be emphasized that little has changed editorially. All decisions made by editors remain independent from any financial considerations, and we will continue to support the publication of exceptional, timely, and robust research in all aspects of the Earth and planetary sciences. ❐

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