

Elsevier's response: NASA's Public Access Plan, Increasing Access to the Results of Scientific Research

In the following document, Elsevier addresses the five questions posed in NASA's request for information. We welcome the opportunity to work alongside the OSTP, NASA, and the broader research community, to advance open science. We support NASA's commitments to equity and open science which align with Elsevier's own ambitions. We believe these commitments will benefit research and society, and drive research performance. Elsevier seeks to advance the recommendations of the Public Access Memo issued by OSTP via mechanisms that are durable and sustainable for the entire research community. We endorse approaches that realize the clear benefits of widening public access while avoiding unintended consequences, including for equity. We appreciate your consideration of our comments at this critical juncture, and we look forward to working together to pursue models that safeguard the impact, quality, discoverability, and accessibility of research.

1. How to best ensure equity in publication opportunities for NASA-supported investigators.

Elsevier shares OSTP's and NASA's goals of ensuring the wide availability of trustworthy and impactful research findings, as well as equity in publication opportunities for all.

Consistent with these principles, we agree that publicly funded research outputs should be publicly accessible. We fully support and enable researchers to freely and immediately share research outputs that have not benefitted from publishers' investments – for example, datasets, software and preprints.

Where NASA requires its researchers to make their peer-reviewed article output immediately available, at Elsevier we will enable this through the gold open access model, available for almost all of Elsevier's journals. This is a well-established and sustainable mechanism that ensures publishers are recompensed for the substantial investments they make in these versions, which are [valued by researchers](#). These cover publisher services including ensuring the quality, discoverability, and accessibility of research in perpetuity; safeguarding the integrity of published research by effectively managing editorial and peer review processes; and applying innovative technology towards continually expanding and enhancing all these services, as well as tackling emerging issues, including misinformation and fraud. All stakeholders should work together to develop equitable and sustainable solutions to enable gold open access.

Availability and take up of funding will support researchers' freedom to choose where to publish, and enable them to select the journal that will provide the best visibility for their research. Without funding, researchers seeking to comply with immediacy policies would only be able to publish in the [limited number of journals](#) that allow researchers to immediately share research published under the subscription model, or that offer free open access publishing, which may be lower quality or regionally/institutionally focused titles. We applaud NASA's pragmatism and flexibility in recognizing there may be extenuating circumstances necessitating policy requirements to be waived so that individual researchers have the freedom to make decisions over where/ how to publish to ensure they are not disadvantaged.

We welcome that NASA's draft policy enables researchers to charge reasonable costs for publishing gold open access against their awards. By providing all grantees with clear and consistent guidance on budgeting for the full cost of disseminating their research gold open access in fully gold open access and hybrid journals, with funding for publication to remain available after the end of the grant period, all grantees will be afforded the same benefits of gold open access.

At Elsevier, we will draw on our experience of co-creating equitable and sustainable transformative agreements that already enable gold open access publishing for nearly 2,000 institutions. The gold open access model is already widely adopted by the research community and implemented across various countries, with transformative agreements with publishers demonstrated to be key to this success. We are committed to working with institutions who wish to establish such agreements. We also co-create innovative commercial models, such as our [pilot with California Digital Library, which](#) works to meet gaps in funding for publication fees in an equitable manner. Additionally, we are engaged in ongoing work to mitigate the new inequities that unfortunately emerge in an open access world. We have vast programs of waivers/discounts on publishing, [which are automatically granted as appropriate](#), and we are in the process of developing a geo-pricing solution.

Like the [vast majority of journals and publishers](#), we will be unable to support approaches which rely on subscription-funded content being made freely and immediately accessible, including those which require authors to retain copyright via 'rights-retention'-like strategies. This is because such approaches will prove unsustainable in the long-term given they do not provide a mechanism to recompense publisher investments. By publishing gold open access, researchers can make their work immediately and publicly available and retain their copyright in that work, while ensuring a sustainable funding model which is vital if publishers are to continue providing publishing services, and reinvesting and innovating, to safeguard trust in science and advance knowledge for society in the long term.

Finding a solution that meets all OSTP's policy objectives, including equity, requires a collaborative and cooperative approach. We are committed to working with the research community, including NASA, towards finding workable solutions to achieve these objectives for all.

2. Steps for improving equity in access and accessibility of publications.

We have a proven track record of working to increase equity in access to research. The gold open access model provides a sustainable and scalable route for equity in access by ensuring readers globally can access research output immediately, freely and in perpetuity. Over many years we have improved equity of access in the subscription model through: participation in [Research4Life](#) where we provide free or discounted reading and publishing to researchers in over 120 low- and middle-income countries; dedicated [emergency resource and information centers](#) which enable public access; offering a [Patient Access](#) initiative; supporting authors with [peer-to-peer sharing](#); and supporting interlibrary loans. These initiatives are all made possible in part through revenue generated from sustainable publishing models.

Looking beyond individual works we offer a license-based approach to automatically enable researchers to undertake [text and data mining](#) (TDM) for non-commercial research purposes, and to gain access to full text content in XML for this purpose. This enables us to balance academic TDM needs, while preserving revenue streams from non-academic TDM. We welcome a dialogue with NASA to collaborate on any additional academic TDM needs that we are not already addressing through our policy.

Elsevier is committed to making our products fully accessible to all users, underpinned by our [accessibility policy](#). Consistent with this: our investments in our [ScienceDirect](#) content platform platform, have led to it being ranked the #1 most accessible homepage on the internet by the [2023 WebAIM million report](#); and Elsevier has also been designated [Globally Certified Accessible \(GCA\)](#) by the Benetech Born Accessible initiative, [with our content scoring 100% in the assessment](#).

3. Methods for monitoring evolving costs and impacts on affected communities.

We strive to offer researchers real value, including by pricing competitively, using an underlying principle of pricing lower than the market for like-for-like quality. Moreover, we follow this pricing principle even though our commitment to quality means we must invest resources to assess many more articles than we eventually publish. Elsevier journal articles account for around 18% of global research output and 28% of citations, further demonstrating our commitment to quality, significantly ahead of the industry average.

We further recognize the importance of providing the research community with transparent and straightforward information about our journals and pricing on our public-facing pages, to help them make data-led decisions. Key demonstrations of this commitment include:

- Our [pricing policy page](#), covering the components that factor into our pricing, details of our strict no double dipping policy, and links to our subscription and APC list prices.
- Sharing journal-level metrics for many of our journals, including acceptance rates, and average review and publication times, via Journal Insights pages ([example](#)) and our [Journal Finder tool](#).
- Analysis of our publishing volumes under subscription and open access business models for individual journals ([example](#)) and [the whole of Elsevier](#).

We hold ourselves accountable for continuing to build on this transparency across the more than 2,800 journals we publish. At the same time, as a responsible business we take care to ensure we work within the parameters permitted by law, and to a degree that avoids market alignment, that would otherwise risk disadvantaging customers.

We will continue to ask for feedback from the research community, and we would welcome input from partners such as NASA, as we enhance this offering, to provide helpful and meaningful insights to the communities that we serve.

4. Input on considerations to increase findability and transparency of research.

We would encourage NASA to reflect broadly on opportunities to collaborate with publishers in pursuit of its goals to increase the discoverability and transparency of research. To offer a few examples:

Persistent identifiers/ metadata: Publishers have an interfacing role with researchers in capturing persistent identifiers (PIDs) that describe their research, and with service providers in surfacing metadata. Publishers should participate in discussions on approaches that are practicable and effective to support discoverability, access, and compliance monitoring by research institutes and funders. We already open a number of metadata fields for articles and their references within Crossref. We use industry standard identifiers such as article DOI and Fundref, and where there are a range of identifiers in use across the industry, we enable interoperability, for example, users can import their Scopus profiles into ORCID or link ORCID identifiers to Scopus profiles. We are actively participating in community discussions and initiatives on these topics, such as those led by the Open Research Funders Group, and we look forward to engaging in similar discussions with NASA.

Research data sharing: We applaud NASA's long-standing and expanded commitment to effective research data management, through supporting budgeting, knowledge and capacity building, and addressing researchers' concerns and considerations with pragmatic and proportionate qualifications to

the data sharing policy. We share NASA's view that stakeholder collaboration and alignment is critical to build a positive research culture that rewards and integrates reproducibility practices, and commit to playing our role. During our submission process we encourage best practice in transparent data sharing by prompting and enabling authors to share links to their datasets, and/or to provide data availability statements that appear within their publication. We continue to innovate our workflows to promote research data sharing and would welcome collaboration with NASA and other relevant stakeholders. NASA can be assured that our [research data principles](#) specify that researchers should remain in control of how and when their research data is accessed and used – Elsevier would never impose embargoes on data. Our [research data management solutions](#) support the end-to-end research data management workflow and note alignment with NASA's policy considerations:

- i [Mendeley Data](#) is an [NIH Generalist Repository Ecosystem Initiative \(GREI\)](#)-supported open and free generalist repository, with preservation via [Data Archiving and Networked Services \(DANS\)](#) and our own digital archive. NASA may refer to Mendeley Data, where discipline-specific repositories are unavailable, thereby leveraging existing federal agency investments in GREI.
- ii Data Monitor enables institutions and funders to track and monitor compliance with data sharing policies which, as NASA notes, is key to effective policy implementation. NASA's guidelines aligning with Force11 Data and Software Citation Principles will further support monitoring. We welcome the opportunity to discuss how we can support NASA in this area.

Research integrity: We are committed to safeguarding research integrity throughout all stages of submission and publication. Directly linked to transparency, we support and enable authors to develop and share transparency statements related to authorship, funding and potentially competing interests, which are published alongside the published manuscript.

We would welcome further discussion and collaboration with NASA and others to share learnings and continue to build on this work to further improve upon the discoverability and transparency of research.

5. Suggestions on sharing and archiving of software.

We fully support NASA's pioneering approach in including software sharing as part of its policy plan, looking beyond OSTP's initial policy directive, and recognizing a key element in reproducibility of research, underpinning our shared ambitions for research impact and trust in science. At the same time we respect the pragmatic approach of permitting exceptions to ensure compliance with applicable laws and mandates, thereby preempting researchers' concerns.

At Elsevier, we define research data broadly, to encompass software and code; see also section 4 above. [Mendeley Data](#), accommodates a range of data, including software, up to 10 GB file size per dataset.

We welcome NASA's recognition of the utility, and thus impact, of sharing software depending on clear information describing its development and application. NASA's confirmation researchers are supported to budget for costs of software sharing will be instrumental in achieving this ambition. As part of our open access [Research Elements journal suite](#), [Software X](#) and [Software Impacts](#) address precisely this need.

We would be glad to explore further opportunities to collaborate with NASA to support its researchers in effective software sharing.