

Statement of Principles: Open Science

Preamble^{1,2}

Policy discussions regarding Open Science (OS) have evolved beyond questions of access and ethics (responsible OS) to interrogate whose knowledge counts, who sets agendas, who is resourced, and who benefits. To avoid reproducing inequities, OS should actively support the co-creation and stewardship of knowledge across diverse knowledge systems, including Indigenous, local, and practice-based traditions.

OS is essential for addressing global challenges and may contribute to strengthening trust in science. By opening up the entire research life cycle, OS can foster transparency, accessibility, collaboration, and public engagement to accelerate scientific discovery and amplify societal impact. However, OS is not a one-size-fits-all technical solution. To be transformative, OS should be accessible to all: multilingual, transdisciplinary, and open to groups beyond the traditional scientific community who engage in the research cycle and represent diverse knowledge systems, while respecting the principle of being “as open as possible and as secure as necessary”.

As the global forum of public research funders, the Global Research Council (GRC) participants play a critical role in shaping how OS is interpreted, implemented, and governed across regions and disciplines. The 2021 UNESCO Recommendation on OS provides a globally endorsed normative framework that informs this Statement of Principles for GRC participating organizations. Its four pillars are helpful in framing areas for action: (i) open scientific knowledge, (ii) open science infrastructures, (iii) open engagement of social actors, and (iv) open dialogue with other knowledge systems. Research funders have mostly concentrated their efforts on the first two pillars and are now turning attention to how they can better engage with other actors and knowledge systems, thus supporting bibliodiversity, multilingualism, data privacy and governance, and care.

Open Science should be implemented in ways that are accessible, context-sensitive, and ethically governed, ensuring broad access to knowledge while respecting community rights and addressing power asymmetries. Challenges such as linguistic domination and colonial legacies require attention.

In alignment with the 2021 UNESCO Recommendation on OS and the 2026 GRC [Statement of Principles on Research for Sustainable Communities](#), the following principles articulate how GRC

¹ The Global Research Council is a voluntary, participant-based organization that recognizes the different missions, mandates and remits of its participant organizations within their respective national research eco-systems. Its positions, decisions or statements are non-binding on participant organizations. Endorsement of such reflects that participant organizations may adopt statements in ways that are consistent with national policies and priorities.

² While the U.S. National Science Foundation remains committed to the GRC as an organization dedicated to collaboration and cooperation among research funding agencies, NSF is not in a position to endorse the 2026 Statements of Principles and Call to Action, as their content is not consistent with agency and U.S. administration priorities.

participating organizations understand and seek to advance OS in diverse national, regional, and disciplinary contexts, while designing strategies that consider local needs and conditions.

Principles

Regional and community-led governance

Advancing open science that genuinely promotes benefit and opportunity for all requires regional and community-led governance and culturally sensitive policy design, as well as equitable funding and policy mechanisms that ensure participation from, and empowerment of all regions and groups.

Regional and community-led governance requires support through capacity-strengthening efforts and shared infrastructure such as open repositories and interoperable data systems. Effective governance and funding processes should be grounded in shared principles and supported by monitoring mechanisms and organizations that serve as platforms for knowledge exchange and policy dialogue. Frameworks such as required data management plans and FAIR (Findability, Accessibility, Interoperability, and Reuse of digital assets), TRUST (Transparency, Responsibility, User Focus, Sustainability, and Technology), and POSI (Principles of Open Scholarly Infrastructure) are essential guides for open science governance.

Well-designed governance plans demonstrate meaningful community participation, equitable resource allocation, and transparent decision-making structures. Funding programs should consider allocation of resources for capacity-strengthening, shared infrastructure, and long-term stewardship of open repositories and data systems.

Data privacy, governance, ownership, and self-determination

Data ownership, self-determination, and informed consent, including community-engaged input on data privacy and governance, should be required as a best practice for scientific research. Indigenous and local knowledge should be recognized and protected. Research funders should require that projects involving Indigenous or local knowledge demonstrate appropriate governance, informed consent processes, and benefit-sharing arrangements. Furthermore, research awards involving Indigenous or local knowledge may include clear governance frameworks, documented consent processes, and equitable benefit-sharing arrangements.

Useful starting points regarding Indigenous knowledge systems and Indigenous data sovereignty include ethical governance frameworks developed by and with Indigenous communities, such as the [Ownership, Control, Access, and Possession \(OCAP®\) principles](#) developed by First Nations in Canada and the Global Indigenous Data Alliance's [Collective Benefit, Authority to Control, Responsibility, and Ethics \(CARE\) Principles for Indigenous Data Governance](#).

As open as possible, as secure as necessary

Openness should be designed not only as a technical objective but also as an ethical and relational practice, attentive to context, responsibility, and consequence. Openness should be guided by the

principle “as open as possible, as secure as necessary,” recognizing legitimate considerations related to privacy and data governance, Indigenous data sovereignty, ecological stewardship, cultural protocols, intellectual property, research security, and other economic and national interests. Accordingly, openness and security are complementary and mutually reinforcing forces that should be considered in unison.

In this context, decisions about sharing and access are best understood as conditional, consultative, and responsive to evolving circumstances and community perspectives, while giving consideration to potential disparate impacts on different groups of people. Respecting Indigenous and community protocols strengthens the foundations for a plural, equitable, and sustainable global knowledge ecosystem that respects the security, sensitivities, and integrity of its participants. This principle extends to data management policies and to review processes that consider both openness and responsible safeguards, such as controlled access management for research data, as legitimate dimensions of quality and impact.

Ecological and social sustainability

GRC participating organizations should work together to identify effective ways to ease the bibliometric burden on academics both financial and in terms of publication metrics. This includes encouraging funding approaches that strengthen community-led initiatives and ensure that public investments support a broad range of open and equitable publishing options, thereby reducing the burden of article processing and other author-facing charges.

Open science efforts should also recognize the environmental dimensions of data-intensive research and artificial intelligence (AI), which often disproportionately affect certain regions and communities, and promote practices that responsibly manage energy, water, land, and e-waste footprints while enabling continued innovation.

Regional and structural inequities

Open Science has the opportunity to address persistent regional and structural inequities across the global research ecosystem. Disparities in infrastructure, funding capacity, authorship, data ownership, language, and visibility risk reinforcing existing gaps and challenges if not deliberately mitigated. No region or country should function primarily as a data provider without equitable participation in agenda-setting, governance, ownership, authorship, infrastructure development, and benefit-sharing. The importance of local ownership of data and knowledge should be recognized, and public research funders have a responsibility to embed access and opportunities for all within funding policies, partnership models, and evaluation systems. The GRC has a pivotal role to play in bridging global, regional and local divides and fostering responsible, accessible, and trustworthy knowledge ecosystems by exchanging best practices.

Infrastructure as a public good

Open Science risks reinforcing existing hierarchies without explicit attention to power, structural inequities, infrastructure gaps, and language. Diamond open-access models, repositories owned by universities and public institutions, and support for multiple languages are key levers for

equitable access and may be complemented by investments dedicated to infrastructure maintenance and long-term sustainability.

Research funding councils should prioritize stewardship of Open Science platforms and repositories, with public, private or non-profit institutions, and be guided by multi-stakeholder oversight, including representation from research communities, data stewards, and relevant societal and knowledge-holding groups, from all regions.

Responsible research assessment

Further to the GRC's 2021 [Call to Action on Responsible Research Assessment](#) and the 2024 [Dimensions of Responsible Research Assessment](#), it is recognized that a shift away from biased metrics and narrow journal-based indicators toward responsible research assessment is essential to valuing work that is locally relevant and societally impactful. GRC participating organizations seek to align Open Science policies with reforms in research assessment, ensuring that open practices, diverse outputs, and societal engagement are recognized and rewarded.

Funders should align evaluation criteria, reviewer guidance, and reporting frameworks with responsible research assessment principles, ensuring that open practices, diverse research outputs, community engagement, and societal contributions are formally recognized and rewarded in funding decisions.