

Strategic foundations of science diplomacy

MARIA H. IVANOVA, PAUL ARTHUR BERKMAN, ZAKRI ABDUL HAMID, SALEEM H. ALI, AND LAWRENCE E. SUSSKIND [Authors Info & Affiliations](#)

SCIENCE 9 Oct 2025 Vol 390, Issue 6769 pp. 138-139 DOI: 10.1126/science.aec1419



RELATED LETTER

Science diplomacy is a tool, not a currency

BY KIMBERLY MONTGOMERY, IAN WIGGINS • SCIENCE • 9 OCT 2025

RELATED EDITORIAL

Rewiring science diplomacy

BY VAUGHAN C. TUREKIAN, PETER GLUCKMAN • SCIENCE • 21 AUG 2025

In their Editorial “Rewiring science diplomacy” (21 August, 10.1126/science.aeb4815), V. C. Turekian and P. Gluckman offer a timely framework for rethinking science diplomacy in an era of renewed geopolitical competition. However, describing earlier efforts as merely “aspirational” risks underestimating their strategic value, and overemphasizing transactionalism could undermine the foundations of international cooperation.

The science diplomacy that took place after World War II and during the Cold War was not simply aspirational but highly strategic. It established notable and durable institutions, including the Antarctic Treaty System (1), the International Institute for Applied Systems Analysis (2), and the Montreal Protocol, that enabled science to effectively bridge political divides (3). These were important strategic achievements, grounded in efforts to build trust, institutions, and peace. Pragmatically, those efforts have focused on shared problem-solving and have reinforced institutions that translate scientific collaboration into informed decisions, which operate in the short to long term (4)—from climate action to biodiversity protection—even when political relations are strained.

A shift to a transactional approach is understandable in today’s geopolitical environment, but it carries substantial risks. If science is reduced to a bargaining chip, cooperation becomes fragile, and countries with less leverage—particularly those in the Global South—will be marginalized. To be effective, transactional agreements must be anchored in frameworks that preserve open science (5) and sustain science as a global public good (6). Ultimately, science diplomacy must be grounded in the principles of transparency, inclusivity, and equity to sustain cooperation and adapt agreements, even in periods of geopolitical rivalry.

SIGN UP FOR THE AWARD-WINNING SCIENCEADVISER NEWSLETTER

The latest news, commentary, and research, free to your inbox daily

SIGN UP >

Small states provide vital lessons about building common interests. In the negotiations for a plastics treaty, Rwanda, Peru, and small island states advanced ambitious, equity-driven proposals. Their leadership helped build a coalition of more than 100 countries, demonstrating that principled, inclusive coalitions can counterbalance narrow, economic transactionalism and drive both national and global innovation (7).

Science diplomacy must remain a bridge, not only between rival powers but also across regions, disciplines, and generations. Effective transdisciplinary frameworks that incorporate science, including natural sciences, social sciences, humanities, and Indigenous knowledge, will balance near-term national interests with shared, long-term responsibilities (4). Transactional approaches have a place, but only when they reinforce, rather than replace, the trust on which science diplomacy depends.

The future of science diplomacy will depend on practitioners who can not only solve problems as they arise but also think strategically and build frameworks that endure. Science diplomats who are trained to move comfortably across these dimensions and who act with a strong sense of ethics will help facilitate the multilateral cooperation on which a globally interconnected civilization depends. With capacities to build common interests (8–10), science diplomacy as a “language of hope” [(4), p. viii] will continue to steady relations in difficult times and to inspire new forms of collective action.

References and Notes

1

P. A. Berkman, *Science into Policy: Global Lessons from Antarctica* (Academic Press, 2001).

↶ GO TO REFERENCE

•

GOOGLE SCHOLAR

2

K. M. Lord, V. C. Turekian, *Science* **315**, 769 (2007).

↶ GO TO REFERENCE

•

CROSSREF

•

PUBMED

•

WEB OF SCIENCE

•

GOOGLE SCHOLAR

3

L. E. Susskind, S. H. Ali, *Environmental Diplomacy: Negotiating More Effective global Agreements* (Oxford Univ. Press, 2014).

↶ GO TO REFERENCE

•

CROSSREF

•

GOOGLE SCHOLAR

4

P. A. Berkman, A. N. Vylegzhanin, O. R. Young, D. Balton, O. Øvretveit, *Building Common Interests in the Arctic Ocean with Global Inclusion*, vol. 2 of *Informed Decisionmaking for Sustainability*, P. A. Berkman, A. N. Vylegzhanin, Eds. (Springer 2022).

+ SEE ALL REFERENCES

•

GOOGLE SCHOLAR

5

UNESCO, “UNESCO Recommendation on Open Science” (2023); <https://www.unesco.org/en/open-science/about>.

↶ GO TO REFERENCE

•

GOOGLE SCHOLAR

6

International Science Council, “Science as a global public good” (2021); <https://council.science/publications/science-as-a-global-public-good/>.

↶ GO TO REFERENCE

•

GOOGLE SCHOLAR

7

M. Hillsdon, “Analysis: What can break the global deadlock over plastics?” *Reuters*, 20 August 2025.

↶ GO TO REFERENCE

•

GOOGLE SCHOLAR

8

G. H. Brundtland, “Report of the World Commission on Environment and Development: Our common future” (UN Document A/42/427, 1987); <https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf>.

↶ GO TO REFERENCE

•

GOOGLE SCHOLAR

9

E. Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge Univ. Press, 2015).

CROSSREF

•

GOOGLE SCHOLAR

10

UNESCO, “UNESCO hosts global gathering to advance science diplomacy for peace” (2025); <https://www.unesco.org/en/articles/unesco-hosts-global-gathering-advance-science-diplomacy-peace>.

↶ GO TO REFERENCE

•

GOOGLE SCHOLAR
