

Designing Next-Generation Science-Policy Interfaces: Models, Challenges and Opportunities

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LOCATION

Japan Society, 333 East 47th St. New York, NY, 10017

Convened by the **United Nations University Centre for Policy Research (UNU-CPR)** with support from the **Federal Ministry for Economic Cooperation and Development (BMZ) of Germany** and the **British Academy**.

Summary report on discussions

Policymakers across multilateral organizations are eager to develop new science-policy interfaces, and have made considerable progress in 2025. In recent months, this has included the creation of the United Nations Independent International Scientific Panel on AI and the Intergovernmental Science Policy Panel on Chemical Waste and Pollution. This workshop's discussion surfaced the diversity and promise of existing and emerging science-policy interfaces. This report summarizes the discussion.

Over the course of the workshop, four key questions emerged. Participants provided reflections, expert insights and unique perspectives on the following:

- (1) Under what conditions and with what design features do scientific assessments and evidence effectively inform policy?
- (2) How do we manage the differing timelines of policymaking, scientific knowledge generation and real-world crises?
- (3) How do we best design institutions that are inclusive, multidisciplinary and collaborative?
- (4) Have we reached peak science-policy interface, or will the interface model persist?

Participants emphasized the importance of learning from existing interfaces when building new ones, as well as the need to tailor interfaces to their respective field of science. They also discussed the relationship between institutional design and policy impact, and the types of relationships that interfaces can facilitate between different actors, such as scientists, policymakers, civil society experts and industry stakeholders.

Learning across interfaces

While there is variation across fields of science and areas of policymaking, there are common challenges where lessons can be learned for future science policy interfaces. First, each field – and interface – must respond to questions of equity across the Global North and South. This is important both for the scientific inputs into assessments (i.e. representation of scientists) but also the outputs and the type of policy they inform. Second, the role of industry stakeholders and their influence must be clearly delineated. Conflict of interest rules are necessary, and mechanisms must be in place for regulating the role of corporations in knowledge production and synthesis. Third, every interface faces trade-offs. For example, some interfaces have a higher-level of Member State engagement with the scientific synthesis process. This can generate increased credibility and legitimacy but may come at the expense of speed. These trade-offs must be considered in the design process to ensure that the appropriate decisions are made. Each of these challenges are areas where lessons can be synthesized from previous panels. However, as participants noted, a particular design choice that is successful in one issue area does not mean it will be effective in another issue area. The lessons of a particular interface's experience must be understood in context, both political and scientific.

Learning across interfaces also includes collaboration between interfaces and between experts. This was a notable shortcoming referenced by many experts. Many issue areas in environmental and climate sciences, as well as global public health, overlap or may contribute to different areas of the same problem. The issues for which they are designed are often multifaceted and require multidisciplinary approaches. There are opportunities to learn across interfaces but this potential is unrealized. Multidisciplinary collaboration within interfaces is also important for many issues. Representation of multiple disciplines, including the social sciences, is important in addition to global representation. Similarly, meaningful inclusion of relevant Indigenous and local knowledges is essential.

Designing for impact

Designing new science policy interfaces requires attention to mandate, audience and stakeholders. Mandates must be clear, processes must be transparent and communication must be tailored to specific audiences. Resources must also be in place to support this work. Some cycles of assessment and synthesis are very long, and some interfaces may have mandates for long-term challenges such as biodiversity. It is therefore critical that they have dedicated resources to sustain operations over those periods. There must also be a clear understanding of existing policies both multilaterally and at the national level so that scientific synthesis can be directed to the most relevant policymaker or process.

Policy uptake of scientific knowledge is rarely linear. Impact is also rarely obvious and there are multiple pathways to both impact and uptake. Some forms of uptake are formal and institutional, and others are more informal. Designing for maximizing both impact and uptake therefore means thinking about these multiple paths, including thinking about who participates in the panel, how knowledge is disseminated, how roles and responsibilities are divided, and how Member States engage with the interface. Engagement with Member States, either directly within an interface or through associated multilateral bodies, is essential for shaping policies. Therefore, it is critical that interfaces are built with attention to trust, credibility, legitimacy and transparency.

Lastly, equity is a key consideration. Global crises in environmental and health realms do not affect states or communities equally. Designing science-policy interfaces to provide outputs that support equity in the policy process is critical. Interfaces must be context-sensitive and consider equity in all their work. This means that there must be a balance in how scientists engage with the social world. To some degree, it is important to ensure the independence of experts, but it is also important to ensure that they are not siloed or isolated from the social and political domains.

Considerations for the future

Looking forward, there are many paths that future science-policy interfaces can take. Those designing future science-policy interfaces must grapple with questions such as:

- (1) How can we build interfaces that are flexible and adaptable in a changing world?
- (2) How do we speak constructively across different knowledge systems?
- (3) How do we synthesize knowledge in a manner that is solutions-oriented and policy-driven without being policy prescriptive?

The insights generated at this workshop provide a path to answering these difficult questions. They also underlie more pragmatic decisions for policymakers designing science policy interfaces. For example, the question of whether an interface should be independent or intergovernmental is not simply a question of organization. It is a complex political question, and the answer may change over time. For the new Independent International Scientific Panel on AI, its architects sought explicitly to make it independent, allowing the panel to move quickly and insulating its work from the political consideration of its findings. On the other hand, interfaces such as that of the United Nations Convention to Combat Desertification (UNCCD) derive significant value from their intergovernmental structure. In the UNCCD's case, it is designed to have policymakers serve directly with scientists in the scientific assessment and information product process. This design is fit for purpose for the issue of desertification and facilitates adaptability and impact in that context. Neither design choice is right nor wrong, but rather each one suits the challenge and scientific field at hand.

The question of speaking constructively across different knowledge systems translates directly to the design questions of (a) which disciplines and knowledge systems are represented; (b) how experts are selected; and (c) how experts and policymakers interact within the structure of the interface. Similarly, achieving policy relevance and solutions-orientation without prescription can take many forms. This has been a strength for the Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services, as it responds to and has a formal memorandum of understanding with five different environmental agreements, allowing for a clear sense of the different policy communities it serves and the questions its assessments are to answer. Moreover, it developed a formal conceptual framework on biodiversity that is structured by the Sustainable Development Goals, allowing its work to be shaped by the policy needs of the global goals.

Conclusions

This workshop affirmed the complexity of designing science-policy interfaces. There is currently an appetite for more interfaces, but critical questions exist about how to maximize their effectiveness and best translate scientific knowledge for policymakers. It is therefore important to reflect on what already exists and identify which design choices are effective, why they are effective and to which contexts they are best suited. This analysis is crucial for assessing whether a new interface will be valuable and how its value can be maximized.

In summary, this discussion explored existing and future science-policy interfaces across three areas: learning across interfaces, designing for impact and considerations for the future. Across these areas, experts discussed different institutional design features, time horizons of outputs, interdisciplinarity and inclusivity, and the future of the science-policy interface model.

As part of its larger event series in collaboration with the British Academy and the Federal Ministry for Economic Cooperation and Development (BMZ) of Germany, the GGI Platform convened experts from academia, UN bodies, civil society organizations and Member States. The GGI Platform's research identifies both (a) areas of international cooperation in need of innovation; and (b) innovative governance features with the potential for use elsewhere. The GGI Platform will continue to engage on issues of science-policy interfaces and science and technology in global governance through future events, reports and publications.