

## **Negotiating complexity: the future of science in multilateral environmental diplomacy**

At a time when multilateral environmental agreements demand more rigorous scientific input than ever, the very interface between science and diplomacy is showing unprecedented signs of strain. States are now tasked with complex reporting mechanisms, such as the UNFCCC's Global Stocktake and the CBD's National Biodiversity Strategies and Action Plans (NBSAPs), which require robust data and clear scientific guidance to track progress and ratchet up ambition. Yet, this heightened need for evidence coincides with a crisis of multilateral environmental diplomacy itself, exemplified by the collapse of plastic pollution treaty talks and the immense challenge of forging consensus in global climate, biodiversity and ocean-related negotiations.

The challenge runs deeper than simply providing more science and data. The current diplomatic context of global environmental politics is fraught with complexity, from the overt political contestation of scientific knowledge to compelling calls for the integration of diverse knowledge systems, including Indigenous and local traditions. This reality, coupled with the sheer scale of "transformative change" required to address our planetary crises, stretches traditional scientific advisory models beyond their limits. A system designed for defining problems is now being asked to guide systemic solutions, a task for which it is ill-equipped.

What is required is a fundamental reimagining of the relationship between science and environmental diplomacy. To effectively negotiate the profound systemic shifts our planet needs, we must develop new modes of providing feasible scientific advice—processes that are agile, attuned to political realities, and capable of navigating ideological divides. This involves moving beyond monolithic assessments to the co-creation of a more inclusive knowledge base that genuinely integrates diverse forms of evidence, including open, accessible, and policy-relevant data ecosystems. Reimagining the relationship between science and policy is not merely a technical challenge; it is essential for revitalizing multilateral environmental diplomacy and charting a viable course toward a sustainable future.