

## Discussion Summary

### Panel Session: Voices in the Storm: Science Advisers in a Turbulent World

Friday, February 13, 2026, 10:00 AM - 11:00 AM

AAAS Annual Meeting 2026 in Phoenix, USA



#### Moderator:

- Tateo Arimoto, Visiting Professor, National Graduate Institute for Policy Studies (GRIPS), Japan and Fellow of International Science Council (ISC)

#### Panelists:

- Kei Koizumi, Former Principal Deputy Director for Science, Society, and Policy, OSTP
- Amanda Corcos, Former Assistant Director for International Science and Technology, OSTP
- Kana Asano, Director, Office for International Science and Technology Policy, Japan Science and Technology Agency (JST)

*Note: A panelist from South Africa was originally scheduled, but was replaced by Dr. Corcos.*

#### Overview:

At the outset, Prof. Arimoto positioned this session around the central question: How should scientific advice, science and technology advisors, and institutions fulfill their roles in an era marked by heightened geopolitical tensions, wavering trust in scientific knowledge within democratic societies, and intersecting security concerns surrounding emerging technologies? Following this, the three panelists—Ms. Asano, Mr. Koizumi, and Dr. Corcos—each presented case studies from Japan, the United States, and international frameworks (such as the G20). The overview is as follows.

#### The Case of Japan by Kana Asano

One starting point for Japan's science advisory system was the 2011 Great East Japan Earthquake and the Fukushima Daiichi Nuclear Power Plant accident. This event highlighted various challenges, including the fragility of the scientific advisory framework within government decision-making. At the time, mechanisms for policymakers and politicians to quickly access reliable scientific evidence were insufficient, and this was identified as a contributing factor to the confusion. Conversely, it was recognized that science and technology advisors had functioned effectively in crisis response in the United States and the United Kingdom. This led to serious discussions in Japan about establishing an institutionalized scientific advisory system.

The next significant milestone was the establishment of the first Science and Technology Advisor position within the Ministry of Foreign Affairs in 2015. This move was prompted by the growing number of issues within the Ministry where diplomacy and science and technology were closely intertwined, such as climate change, global health, space, emerging technologies, and "STI for SDGs." An even greater turning point came in September 2022 with the appointment of Kazuhito Hashimoto as Science and Technology Advisor to the

Cabinet Secretariat. This appointment likely symbolizes the central position science and technology now hold within national strategy. Emerging technologies like AI, semiconductors, quantum computing, and biotechnology directly impact industrial policy, security policy, and foreign policy, making them core national strategic issues. Within this trend, the establishment of science and technology advisors has expanded to other ministries and agencies, with appointments made at the Ministry of Education, Culture, Sports, Science and Technology (MEXT), the Ministry of Economy, Trade and Industry (METI), and the Ministry of Defense (MOD). Japan's science advisor system is broadening its role to become a cross-governmental coordinator.

One example of the science and technology advisor's initiatives is research security. Addressing the difficult challenge of protecting research while promoting it requires collaboration not only within science and technology administration but also across multiple ministries. Furthermore, themes like "AI for Science" involve complex intersections of science policy, industrial policy, international standardization, and security. This cross-disciplinary and cross-ministerial coordination represents a new core function that science advisors should undertake. However, coordination requires time, experience, and advanced communication skills; it is not something that functions naturally or without cost. Moreover, the role of science and technology advisors extends beyond domestic borders. Innovation driven by science and technology policy must inevitably proceed within a global context. Therefore, it is essential to deeply understand the perspectives of the United States, Europe, and Global South nations, and to build trust through direct dialogue with key figures. Here, the role of the science and technology advisor becomes crucial as a pillar of science diplomacy, functioning as a bridge connecting diplomacy and science.

Finally, future challenges include the dual requirements of institutional strengthening and ensuring independence. The Science and Technology Advisor cannot be sustainable unless institutionalized and supported by a robust back office and financial foundation. Simultaneously, the independence of their advice must be safeguarded. This delicate balance determines the institution's credibility. Furthermore, developing not only the Science and Technology Advisor but also supporting staff and the next generation of talent is indispensable.

### **The Case of U.S. by Mr. Kei Koizumi**

I wish to systematically discuss the current state and challenges of "Science for Policy" in the United States, drawing on my own experience (Mr. Koizumi). Here, "Science for Policy" is a concept that complements "Policy for Science," which deals with research funding allocation and science and technology promotion, and refers to the function of providing scientific and technical advice to policy-making. A distinctive feature of the U.S. is that these two functions are institutionally integrated. The White House Office of Science and Technology Policy (OSTP) serves both roles: advancing research policy and providing scientific advice to the President. I myself simultaneously held the responsibilities of Acting Presidential Science Advisor and Director for Research Policy. Drawing from that experience, I identify five key characteristics.

First, the traditional characteristics of U.S. science advice include "openness" and "trust." Science and technology advisors engage in continuous, two-way dialogue with policymakers, and this process has been made as open as possible. Bodies like the President's Council of Advisors on Science and Technology (PCAST) operate through public meetings and reports, making the interactions between the President and experts visible to the public. This transparency is a crucial element underpinning the credibility of the U.S. model of science advice.

Second, it emphasizes that scientific advice is not merely the provision of scientific knowledge, but rather a "technique" or "skill." Advice is a practical ability, possessing even an artistic dimension. While Europe is developing systematic educational programs on scientific advice, the United States, despite its wealth of accumulated practice, lacks sufficient formal training systems. This raises the issue that its 80-year history should now be systematized.

Third, it highlights the indispensability of the social sciences. Scientific advice functions within interactions involving people, society, and institutions, making natural sciences alone insufficient. Under the Biden administration, insights from the social sciences were central to policy areas like AI.

Fourth, the importance of science communication is emphasized. To enhance the effectiveness of advice, scientists themselves must become excellent communicators. Addressing global challenges like AI and climate change requires not only domestic but also international dialogue and collaboration.

Fifth, building a global community for scientific advice is emphasized. Sharing insights through international conferences, multilateral frameworks, and bilateral exchanges underpins high-quality advice. Science diplomacy plays a crucial role here.

### **The Case of International Framework by Dr. Amanda Corcos**

In today's world where global risks are interconnected, the importance of integrating scientific expertise into the G20, a forum of major economies, grows annually. Mechanisms embedding scientific advice at the core of political decision-making are indispensable for addressing cross-cutting challenges like emerging technologies, climate change, pandemics, and information reliability.

First, it is crucial to highlight the structural difference between the "Science Minister" and the "Science and Technology Advisor" within the G20. The Minister of Science is a policy decision-maker responsible for research portfolios and funding allocation, coordinating long-term research and innovation policies. Within the G20, they shape consensus documents through the Research and Innovation Ministers' Meetings. Conversely, the Science and Technology Advisor typically does not hold an administrative management position and provides direct, cross-cutting, evidence-based advice to the President or Prime Minister. While the former focuses on "building scientific capacity," the latter concentrates on "how to incorporate science into

administrative decision-making." Both roles are complementary but functionally distinct. Furthermore, not all G20 countries have a formal Chief Science Advisor, and this institutional heterogeneity influences participation patterns and advisory structures within the multilateral forum.

The priorities of the G20 Chief Science Advisors Roundtable (CSAR) have evolved to reflect the prevailing international context. In 2023, under India's G20 presidency, the One Health approach was emphasized in the post-COVID-19 context, alongside disease control, public access to scientific knowledge, and building inclusive science ecosystems. In 2024, under the leadership of India and UNESCO (separate from G20), open science, bridging the knowledge divide, and building advisory capacity became central themes. The need for resilient advisory systems capable of responding to uncertainty was confirmed in addressing complexly intertwined challenges like climate, health, and information reliability. In 2025, under South Africa's G20 chairmanship, CSAR delegates highlighted the need to ensure that science and technological advances are accessible and beneficial to all countries, emphasizing approaches that reduce disparities and respect diverse knowledge. The United States opted out of CSAR participation in 2025 and has continued withdrawing from some international organizations, increasing instability in the multilateral framework for scientific advice. Nevertheless, the most valuable aspect of CSAR likely lies not only in its official statements but in the candid, off-the-record dialogue. How to explain when evidence shifts, how to communicate uncertainty, how to address the disconnect between political demands and scientific advice—it is the sharing of these practical questions that matures advisory systems. For countries still building their systems, such exchanges provide crucial opportunities for gaining practical insights.

Furthermore, CSAR complements other international initiatives like the International Network for Government Science Advice (INGSA) and the Geneva Science and Diplomacy Anticipator (GESDA), specializing in building advice capacity globally. Consequently, scientific advice is strengthened through institutionalization and transparency, while international networks supplement where institutional frameworks are underdeveloped. To address transboundary risks, advisory systems should also collaborate across borders. Above all, humility strengthens credibility in science and technology advisors. Trust is built not by false certainty, but by explicitly acknowledging structured uncertainty and trade-offs. In this era of accelerating climate change, technological diffusion, and geopolitical fragmentation, the strength of scientific advice depends on the rigor and integrity of science itself, and on the willingness to engage constructively with policy. Strengthening this foundation, both domestically and internationally, is the most practical contribution to the governance of an accelerating world.

## **Q&A Session Overview**

Following this, a Q&A session with the audience took place, with the main points being as follows:

### **Non-state actor involvement**

Discussions took place on the trend of states and non-governmental actors stepping in where federal governments retreat. It was acknowledged that within frameworks like the G20, designed for national governments, it is difficult for states or non-governmental actors to fully replace the official role of a nation-state. However, it was also pointed out that in situations demanding immediate action, such involvement holds significant importance as a "second-best solution." As the G20 is a flexible framework without a permanent secretariat, operated under the leadership of the chair country, the roles of peripheral actors such as the B20, S20, and national academies also become important. It was also noted that the future actions of the G7 and the United States will be factors influencing future developments.

### **Research Security**

Research security remains fundamentally a policy issue. While science and technology advisors are not policy decision-makers, they play a crucial role in ensuring policymakers understand the essence of research activities. Modern science is inherently international. Introducing blanket regulations without understanding these characteristic risks undermining research itself. Japan's experience involves establishing broad frameworks while making case-by-case judgments, though it was shared that this approach entails significant costs and effort. Furthermore, the term "security" was noted as problematic for giving researchers the impression of excessive management or control. It was deemed essential to share the understanding that research security is not meant to restrict research, but to protect researchers and research activities. Dialogue and awareness-raising for this purpose were identified as key roles for science advisors. Furthermore, the need for education and training for researchers themselves was pointed out, calling for the development of practical capabilities to reconcile open science and security.

### **Gap Between Science and Politics/Society**

The "evolutionary speed gap" between the rapid advancement of science and the pace of political and societal response was discussed. While science advances rapidly, policy and civil society often struggle to keep up. In response, it was noted that scientific advice is not merely about communicating one's own knowledge, but about conveying the information the recipient needs, tailored to their level of understanding. Improving science communication skills and fellowship programs that place scientists within government agencies are seen as effective means to bridge this gap. Furthermore, the importance of incorporating social scientists, ethicists, and humanities scholars into science advisory systems was emphasized. Since most policy issues impact human society, integrating ethical and historical perspectives alongside technical expertise is essential.

### **Wrap-up**

The panel discussion highlighted the ongoing challenge of institutionalizing, strengthening, and building

trust in scientific advice at the national, multilateral, and societal levels. While institutional designs vary by country, the common goal is ensuring critical policy decisions are always based on the best scientific and technical evidence. Dialogue and collaboration remain indispensable for achieving this.