

Event Report: Open Seminar

Emerging Trends in Science, Technology, and Innovation Policies by the OECD

~Towards the Formulation of the 7th Science, Technology and Innovation Basic Plan~

Dialogue with Dr. Sheehan, the Director of the OECD Directorate for STI and

Dr. Colecchia, Head of the Science and Technology Policy Division

Wednesday, January 22, 2025

Venue: Japan Science and Technology Agency (JST) Tokyo Headquarters Annex

Format: Open to the public, Hybrid meeting (In-person and On-line).

Organizer: Japan Science and Technology Agency (JST)

In cooperate with the Cabinet Office and

Ministry of Education, Culture, Sports, Science and Technology (MEXT)



Program

Hours.	Contents
14:00-14:05	Introduction by JST
14:05-14:15	Opening Remarks by Kazuhito Hashimoto , President of the JST/ Science and Technology Advisor to the Cabinet, Cabinet Secretariat of Japan
Session 1 Keynote Session	
14:15-15:00	Keynote Lecture "Global co-operation and competition in science, technology and innovation in times of uncertainty" <ul style="list-style-type: none"> ● Jerry Sheehan, Director for Science, Technology and Innovation, OECD
15:00-15:20	Policy Messages for the Formulation of the 7th STI Basic Plan <ul style="list-style-type: none"> ● Yasuyoshi Kakita, Director General for Science, Technology and Innovation Policy Cabinet Office ● Yuichi Inoue, Director-General, Science and Technology Policy Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT) ● Jingo Kikukawa, Director-General, Innovation and Environment Policy Bureau, Ministry of Economy, Trade and Industry (METI)
15:20-15:35	Break
Session 2 Panel Discussion "Expectations for STI Outlook 2025 and Japan's 7th STI Basic Plan"	
15:35-15:40	Introduction by JST
15:40-16:05	Keynote Speech "OECD STI Outlook 2025 (work in progress): international cooperation and competition in science and technology and the geopolitical context" <ul style="list-style-type: none"> ● Alessandra Colecchia, Head, Science and Technology Policy Division, Directorate for Science, Technology and Innovation, OECD
16:05-17:25	Discussion [Panelists, Order of Presentation] <ul style="list-style-type: none"> ● Takeshi Nagasawa, Director for Integrated Strategy, Secretariat of Science, Technology and Innovation Policy, Cabinet Office, Government of Japan ● Kanae Kurata, Director, International Science and Technology Affairs Division, Science and Technology Policy Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT) ● Shunsuke Yagi, Associate Professor, Institute of Industrial Science, The University of Tokyo/ JST Science & Technology Policy Fellow ● Yutaka Sata, Corporate Officer, Corporate Senior Vice President/ Chief Technology Officer, TOSHIBA Corporation ● Jerry Sheehan, Director for Science, Technology and Innovation, OECD ● Alessandra Colecchia, Head, Science and Technology Policy Division, Directorate for Science, Technology and Innovation, OECD [Moderator] <ul style="list-style-type: none"> ● Kana Asano, Fellow, Center for Research and Development Strategy (CRDS), Manager, Office for International Science and Technology Policy and Information Study, JST
17:25-17:30	Summary and Closing Remarks by Akira Tsugita , Vice President, JST

Master of Ceremony: **Tateo Arimoto**, Senior Advisor to the President, JST

On January 22, 2025, Japan Science and Technology Agency (JST) held the *“Emerging Trends in Science, Technology, and Innovation Policies by the OECD ~Towards the Formulation of the 7th Science, Technology and Innovation Basic Plan ~Dialogue with Dr. Sheehan, the Director of the OECD Directorate for STI and Dr. Colecchia, Head of the Science and Technology Policy Division”* in Tokyo, in cooperation with the Cabinet Office and the Ministry of Education, Culture, Sports, Science and Technology.

In April 2024, the OECD Committee for Scientific and Technological Policy (CSTP) held its ministerial-level meeting¹, the first in nine years under the theme of **“Transformative Science, Technology and Innovation Policies for a Sustainable and Inclusive Future.”** Additionally, various important initiatives and discussions are underway regarding STI policy, with a view to publishing the biennial flagship publication, "OECD Science, Technology and Innovation Outlook 2025," in the coming months. In Japan, consideration of its Seventh Science, Technology and Innovation (STI) Basic Plan (2026-2030) has begun, during a period of great change and a need to address broad and complex challenges.

In this context, JST invited Dr. Jerry Sheehan, Director for Science, Technology and Innovation, OECD and Dr. Alessandra Colecchia, Head, Science and Technology Policy Division, Directorate for Science, Technology and Innovation, OECD, to introduce the latest trends in the global STI policy and to hold in-depth discussions with key figures in Japan's STI policy towards the formulation of the 7th STI Basic Plan. This time, the Director-Generals in charge of STI policy from the Cabinet Office, the Ministry of Education, Culture, Sports, Science and Technology, and the Ministry of Economy, Trade and Industry spoke about their aspirations for the formulation of the 7th STI Basic Plan. Discussions with people active in the industry, academia, and government sectors are held. As a result, it was acknowledged that there is a great deal of synergy between the OECD's discussions and insights regarding STI policy and the formulation of Japan's 7th STI Strategic Plan, and that going forward, the OECD and Japanese STI policymakers will work together even more than ever before. As a result of the discussions, the following suggestions were drawn:

Overview:

In Japan, discussions towards the formation of the 7th STI Basic Plan have just begun. Compared to the formulation of the 6th Basic Plan, which was only five years ago, the impact and speed of changes in the geopolitical situation and rapid advances in science and technology on society and politics has become much greater. The research results of emerging technologies such as AI, quantum technology, and biotechnology can be implemented in society in a very short time, making a huge impact. As information science develops rapidly and becomes more important, it is becoming necessary to reconsider the classification of science and technology, which has so far been broadly divided into physical science and life science. We have entered an era in which science and technology are no longer merely a means of solving traditional social issues and the economy; they are also deeply connected to politics and national power. While responding to these major changes, Japan needs to strategically formulate the 7th STI Basic Plan in line with international trends, including those highlighted by the OECD, through collaboration between industry, academia, government, relevant ministries and agencies, and related stakeholders.

¹ <https://www.oecd-events.org/mm24/content/test>

The OECD noted “A key challenges for multilateralism will be to reconcile growing strategic competition with the need for global action to tackle grand challenges, like climate change, and to effectively govern new and emerging technologies.” It was also emphasized that the OECD STI Outlook 2025, which is currently being drafted, will expand the theme on securitization of STI, which was introduced in the 2023 edition, strengthen analysis of international collaboration, and provide detailed descriptions of international collaboration on emerging technologies, the development and practice of research security, science diplomacy in international STI collaboration, and strategic intelligence for evidence-based policies. Furthermore, based on their data analysis, the OECD underlined the role of international mobility in international collaboration and encouraged Japan to increase the number of young researchers sent overseas, support those returning to Japan, promote efforts to attract researchers from overseas to Japan, and demonstrate leadership in ASEAN. Given that Indonesia and Thailand are in the accession process of becoming an OECD Member, the OECD also emphasized the importance of their role in encouraging other countries to engage more actively with the OECD.

[Click here to view the presentation materials](#)

Specifics:

Strengthening international cooperation

International cooperation on STI is an important means of addressing global issues such as climate change, infectious diseases, and food security. The OECD emphasizes that international cooperation can accelerate innovation and improve economic efficiency and investment incentives. However, against the backdrop of intensifying geopolitical tensions and strategic competition, securing resilient supply chains have become challenges. The OECD highlighted China's expanding influence in the field of frontier technology, leading to a discussion on the importance of Japan not only deepening its cooperation with Europe and the United States, but also strengthening its partnerships with Global South countries such as India and the Asian ASEAN countries. In order to effectively promote diverse collaboration, it is necessary to improve strategic intelligence and capabilities to anticipate.

Promoting international talent mobility and improving the research environment

According to an OECD data analysis, Japan's lack of international research cooperation is contributing to a decline in its research capabilities and international reputation. Japan needs to encourage researchers to go abroad, and at the same time, support Japanese researchers returning from abroad. It is also important to attract talented people from abroad and strengthen international research networks, build upon an internationally competitive research environment.

Developing the next generation of human resources

In Japan, the number of people with doctoral degrees per capita is low compared to Western countries. As we enter an era of intense competition and cooperation, it is essential to develop and secure human resources for the next generation. In particular, it is necessary to promote the development and utilization of diverse doctoral candidates with an international perspective.

Ensuring research integrity and security and international cooperation

The OECD points out the need to strengthen global research integrity and security policies. Research security is about protecting a free research environment, and responsibilities for it are distributed across multiple actors rather than being centralized. It is important to take a step-by-step, risk-based approach while building understanding among the relevant institutions, and care must be taken to avoid discrimination on the basis of nationality, etc. Furthermore, research security rules need to be harmonized internationally so as not to impede international collaboration.

Securing international collaboration on emerging technologies and anticipatory governance

Amid rising international tensions, emerging technologies such as AI, quantum, and information and communication technologies hold great potential benefits but also risks for the economy and society. Anticipatory governance is required to manage these. The OECD is conducting studies on the implementation and risk management of AI, quantum technology and synthetic biology, and is supporting member states in coordinating and implementing these initiatives through the Agenda for Transformative STI Policies² and the Framework for Anticipatory Governance of Emerging Technologies³, which are two main deliverables of the CSTP Ministerial Meeting in April 2024.

Strengthening the role of industry and policy support

The world is entering an era in which industry is making huge investments in basic science. As raised during the session, "capitalized STI" is underway, requiring the design and implementation of new policy tools and corresponding policies, covering innovation ecosystems, material and technology supply chains, tax systems, and regulations. The R&D investment in Japanese industry has stagnated, and there is a need for more active involvement of industry in basic research. The government needs to strengthen policies to support R&D in industry.

Raising awareness of the importance of diverse collaboration

In formulating STI policy, various collaborations and dialogues between government ministries and agencies, between industry and government, between the research community and government, etc. are important. It is particularly effective to appropriately reflect the diverse opinions of researchers in the field of STI policy.

² https://www.oecd.org/en/publications/2024/04/oecd-agenda-for-transformative-science-technology-and-innovation-policies_5ced463a.html

³ https://www.oecd.org/en/publications/2024/04/framework-for-anticipatory-governance-of-emerging-technologies_14bf0402.html

Speaker Profile

Jerry SHEEHAN



Director of the OECD's Directorate for Science, Technology and Innovation (STI)

Jerry Sheehan is Director of the Directorate for Science, Technology, and Innovation. He joined the OECD in 2023 with 30 years of experience in developing and implementing policies for innovation, scientific data and information technology in the United States.

<<https://www.oecd.org/en/about/directorates/directorate-for-sciencetechnology-and-innovation/jerry-sheehan.html>>

Alessandra COLECCHIA Head of the Science and Technology Policy Division of the OECD Directorate for STI



Alessandra Colecchia is Head of the Science and Technology Policy Division of the OECD Directorate for STI. She oversees the work on STI policy, including work on emerging and converging technologies, the Global Science Forum, the Space and Ocean programmes, as well as measurement standards and empirical analysis in the S&T area. <<https://www.oecd-events.org/ai-wips-2021/speaker/91b36a51-f654-eb11-b9ed-000d3a20e9aa/alessandra-colecchia>>