

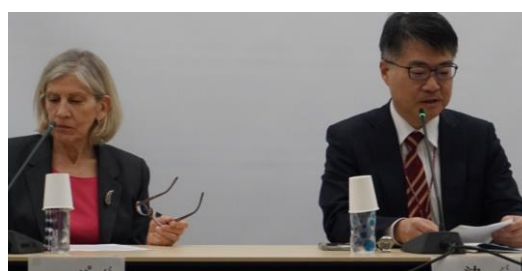
<Summary> The 3rd Symposium on Science and Technology Diplomacy ~Considering Science and Technology Diplomacy in an Era of Change~

Date: 14:00-18:00 Thursday 21, March 2024


Location: JST Tokyo Headquarters Annex, Hall

Organizer: Ministry of Foreign Affairs of Japan/ Japan Science and Technology Agency (JST)

Supporters: Cabinet Office, Ministry of Education, Culture, Sports, Science and Technology (MEXT)



外務省
Ministry of Foreign Affairs (MOFA)

 Japan Science and Technology Agency

Discussion Summary

On March 21, 2024, the Ministry of Foreign Affairs and the Japan Science and Technology Agency (JST) held the 3rd Science and Technology Diplomacy Symposium in Tokyo. Key figures from Japan and abroad gathered to discuss what science and technology diplomacy should be like in this era of change. The concept of "science and technology diplomacy" was developed around 2010 when the Royal Society of UK and the American Association for the Advancement of Science (AAAS) proposed three classifications (science in diplomacy, diplomacy for science, and science for diplomacy). In accordance with these, various initiatives have been promoted since then. However, the environment surrounding science and technology diplomacy has been changing significantly in recent years. We experienced COVID-19 and saw that a pandemic is a global challenge that can hit the world in the blink of an eye. Russia's invasion of Ukraine, the Israel-Gaza conflict, and intensifying friction between the U.S. and China have led to heightened geopolitical tensions and the emergence of security and economic security issues. Furthermore, with the rapid development of emerging technologies and their accelerating and expanding impact on society, science, technology and innovation (STI) has become increasingly linked to important national policies and strategies, such as security, diplomacy, health, energy and food though STI has long been recognized as essential for economic and industrial progress and the resolution of global issues. In addition, the Global South's expanded presence in political economy and scientific and technological activities has also increased their presence in science and technology diplomacy. Under these circumstances, science and technology diplomacy is becoming more important than ever, and the role it is expected to play is also changing. As shown in Figure 1, the international discussion network for science and technology diplomacy is rapidly expanding towards 2025. This symposium recognized the current situation and shared various practical efforts in science and technology diplomacy from Japan, the United States, and the EU, which have traditionally led activities in this field, as well as from Thailand, a good example from the Global South. As a result of the discussions, the following suggestions were drawn as the future direction of science and technology diplomacy.

1. The balance between soft and hard power

- (1) Scientific freedom and openness must be strictly protected. At the same time, we must recognize that there are now risks to research security and, in a changing world, we must simultaneously push forward the three "P"s, Promoting Science, Protecting Science, and Partnering Science. Under these circumstances, science has been a soft power in diplomacy until now, but going forward, it is important to recognize that it can sometimes become hard power. In the diplomatic arena, it is expected that the relationship will take advantage of cooperation in the field of science and technology.

- (2) Recognizing the growing importance of science and technology in diplomacy and the fact that science and technology diplomacy has come to include a wide range of political issues, it is necessary to promote science and technology diplomacy that takes into account the importance of global governance of cutting-edge science and technology and the deepening relationship between national security, economic security, and science and technology.
- (3) With the above in mind, in international collaboration in science and technology, it is necessary to promote both strategic international collaboration that contributes to national and regional interests among nations and regions that share values, and global collaboration that contributes to global interests, including nations that do not necessarily share values. The key to promoting science and technology diplomacy in the future could be to listen to the voices of researchers and various stakeholders and promote concrete efforts through discussions with countries that share values on what should be done to enable researchers to implement international collaboration with peace of mind.
- (4) The key to promoting science and technology diplomacy in the future could be to carry out concrete initiatives through discussions with countries that share values, while listening to the voices of researchers so that they can implement international collaboration with peace of mind.

2. From discussion to implementation as a national strategy towards “Actionable Science and Technology Diplomacy”

- (1) Discussions on science and technology diplomacy in the policy and strategy layer need to be linked to the implementation of policies (program layer), and then to the next stage of science and technology diplomacy. To this end, it is important to bridge the gap between policy-making bodies (relevant ministries and agencies) and policy-implementing bodies (funding agencies, universities, research institutes, etc.) and encourage them work together by sharing experiences.
- (2) The implementation of science and technology diplomacy cannot be handled by a single country, but it requires international cooperation. As a basis for this, international cooperation that contributes to human resource development, such as promotion of international talent mobility and circulation of researchers and international exchange of personnel involved in science and technology diplomacy, is extremely important. It is especially meaningful to build an international network at a young age.
- (3) Cooperation with the Global South, especially with the Indo-Pacific region including the ASEAN countries, is necessary for Japan. We acknowledged that Thailand and other ASEAN countries have a need to promote collaboration, including human resource development and exchange, with for example Japan and the United States in order to recognize and promote the importance of science and technology diplomacy as a country and region, a relatively new concept for them.
- (4) In international collaboration with the Global South, co-creation as an Equitable Partnership, rather than mere support, is important, and the above needs should be met with this in mind. In addition, recognizing that it is difficult to implement the results of research into society through

science and technology efforts alone, it is important to promote inter-disciplinary approach including social science and humanities and trans-disciplinary approach which goes beyond academia and involves society.

- (5) It is important for Japan to accumulate concrete science and diplomacy practices through the promotion of bilateral and multilateral international joint research and talent mobility and circulation programs with countries that share values. Also, various forms of diplomacy should be utilized through the network of science and technology advisors. In particular, where funding agencies in science and technology diplomacy play an important role in practice, it is important to work with science and technology advisors to expand partnerships with reputable global funding agencies.

3. Importance of collaboration with various sectors, including industry, both domestically and internationally.

- (1) In promoting science and technology diplomacy, it is important to communicate, collaborate, and build trust with various sectors, including various policies, the scientific community, industry, and society. In particular, the industry is a key player in science and technology innovation not only domestically but also at regional and global levels, and cooperation between the public sector and industry is essential for joint science and technology development and international talent mobility and circulation.
- (2) Promoting the international talent circulation and mobility of scientists will be beneficial to industry in the mid- to long-term, as it will lead to the creation of a strong and sustainable pipeline ecosystem for the supply of human resources. Therefore, it is beneficial for industry, government, and academia to collaborate in promoting international brain circulation, for example, by offering attractive career paths and employment opportunities.
- (3) Startups cannot expand by remaining domestically; it is important for them to enter the global ecosystem and collaborate internationally. It is also necessary to learn from excellent examples overseas. It is important to create mutually beneficial relationships by coordinating the STI policies, industrial policies, and security policies of each country and working together.
- (4) The various issues in the context of sustainability, such as solving energy problems and achieving carbon neutrality, are issues that no country has had experience with before and should be addressed through collaboration (co-creation) among multiple countries and diverse sectors. For this reason, international human resource development, circulation, and connections are important.

4. Promoting evidence-based science and technology advice and science and technology diplomacy, and the roles and capabilities of advisors

- (1) Now that science and technology have become the core of national strength and science and technology policy is important for all policies, there is a greater need than ever for evidence-based scientific advice that considers how technology will affect the economy and society. It is important to communicate among various stakeholders about the integrity, legitimacy and transparency of research, and the value and impact of science. To put this into practice, it is important to strengthen the science and technology advisory system and make appropriate use of it.
- (2) It is necessary to expand the activities of science and technology advisors and at the same time provide training to scientists and engineers in policy making and diplomacy. In doing so, we should take action, keeping in mind the importance of interdisciplinary and transdisciplinary fusion, as mentioned earlier (2.(4)) .
- (3) As part of strengthening the functions of diplomatic missions abroad in the field of science and technology diplomacy, the science and technology attaché should be expanded and strengthened. Furthermore, as future science and technology advisors, we should promote the development of young researchers.
- (4) It would be beneficial for countries that share the values to work together to undertake the above-mentioned human resource development initiatives, rather than undertaking them in a single country.

Figure 1. Important events for Science and Technology Diplomacy

2023	Oct. 1-3	STS forum in Kyoto > Prime Minister Kishida mentioned "Science Diplomacy (Science for Diplomacy) is essential" in his opening remarks. > Science and Technology Advisors Roundtable was held.	
	Dec. 18-19	EU Science Diplomacy Conference in Spain	
	Jan. 31	AAAS and Royal Society released "Science Diplomacy 15 years On" > Update framework for science diplomacy due to significant geopolitical changes over 1 year.	
	Feb. 15-17	AAAS Annual meeting in Denver, US	
	Mar. 21	The 3rd Science and Technology Diplomacy Symposium in Tokyo, Japan	
	April. 23-25	Ministerial Meeting of the OECD CSTP in Paris, France	
	April. 30-May 2	INGSA Conference, FMSTAN in Kigali, Rwanda	
	May. 9-10	UN-STI forum (STI for SDGs) in NY, US	
	2024	May. 29-30	GRC(Global Research Council) Annual Meeting in Interlaken, Switzerland
		June. 12-15	ESOF in Katowice, Poland
Aug.		The Science Diplomacy Workshop for early to mid-career researchers in ASEAN in Bangkok, Thailand	
Oct. 6 -8		STS <i>forum</i> in Kyoto	
Oct.		GESDA Summit, Geneva, Switzerland	
2025	Nov. 20-23	World Science Forum 2024 in Budapest	
		★ New Science Diplomacy Concept	

Program

14:00-14:20 Opening Session

H.E. Mr. FUKAZAWA, Yoichi, Parliamentary Vice-Minister for Ministry of Foreign Affairs

Mr. MATSUO, Hiroki, Vice-Minister / Secretary-General, Secretariat of Science, Technology and Innovation Policy, Cabinet Office

Dr. KAKITA, Yasuyoshi, Director-General, Science and Technology Policy Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT)

Dr. KISHI, Teruo, Professor Emeritus of the University of Tokyo and the former Science and Technology Advisor to the Minister of Foreign Affairs

14:20-16:20 Session I : Trends of Science and Technology Diplomacy

14:20-14:40 Keynote lecture

Dr. HASHIMOTO, Kazuhito, President of the JST, Science and Technology Advisor to the Cabinet

14:40-15:05 Trends in the U.S

Dr. GRUBER, Patricia, the Science and Technology Adviser to the Secretary of State

15:05-15:30 Trends in ASEAN

Dr. PHANRAKSA, Orakanoke, Senior Advisor for International Affairs, Thailand Science Research and Innovation (TSRI)

< 15:30-15:45 Break >

15:45-16:05 Trends in EU

Dr. MÜLLER, Jan Marco, Coordinator for Science Diplomacy and Multilateral Relations, DG Research & Innovation, European Commission (Online participation)

16:05-16:20 Comments from Experts

H.E. Mr. PAQUET, Jean-Eric, Head of the Delegation of the European Union to Japan, Ambassador Extraordinary and Plenipotentiary

H.E. Mr. ONG Eng Chuan, Ambassador of the Republic of Singapore to Japan

Mr. LEVENDOGLU, Emil, Deputy Head of Mission at the British Embassy in Tokyo

16:20-17:50 Session II : Science and Technology Diplomacy in the Future

16:20-16:40 Keynote lecture

Dr. MATSUMOTO Yoichiro, Science and Technology Advisor to the Minister for Foreign Affairs

16:40-17:50 Panel Discussion

Moderator: Mr. ARIMOTO, Tateo, the Senior Advisor to the President of JST

Panelists :

Dr. SOMEYA, Takao, Professor, the University of Tokyo

Dr. GRUBER, Patricia, the Science and Technology Adviser to the Secretary of State

Dr. PHANRAKSA, Orakanoke, Senior Advisor for International Affairs, Thailand Science Research and Innovation (TSRI)

Mr. KOBAYASHI, Osamu, Director for Department of International affairs, JST

Commentator:

Dr. KOYASU, Shigeo, the Science and Technology Advisor to the Minister of Education, Culture, Sports, Science and Technology

Dr. KOTANI, Motoko, the Science and Technology co-Advisor to the Minister of Foreign Affairs

Mr. ODOI, Satoshi, Director for International Science and Technology Division, Science and Technology Policy Bureau, the Ministry of Education, Culture, Sports, Science and Technology (MEXT)

17:50-18:00 Wrap-up

Dr. KAWAI, Maki, President, National Institutes of Natural Sciences

Facilitator: Ms. ASANO, Kana, Fellow, Center for Research and Development (CRDS), JST

Profile of Speakers (in order of appearance)

Dr.HASHIMOTO, Kazuhito President Japan Science and Technology Agency
Science and Technology Advisor to the Cabinet (Japan)



Kazuhito Hashimoto is currently the President of the Japan Science and Technology Agency (JST) and serves as the Science and Technology Advisor to the Cabinet for the Government of Japan. He earned his BS (1978), MS (1980), and Doctor of Science degree (1985) in Chemistry from the University of Tokyo. Previously, he held the position of Professor of Applied Chemistry at the University of Tokyo from 1991 to 2016, followed by his role as President of the National Institute for Materials Science (NIMS) from 2016 to 2022. Hashimoto's research interests lie in the areas of physical chemistry and materials science. He has also been actively involved in science and technology policy as an executive member of the Council for Science, Technology and Innovation Policy (CSTI) from 2013 to 2022. Hashimoto has received numerous awards for his contributions to the field of science, including the Japan Prime Minister Award (2004), the Imperial Award/Japan Invention Award (2006), the Japan Chemical Society Award (2012), the Electrochemical Society Heinz Gerischer Award (2017), and the Medal of Honor with Purple Ribbon (awarded by the Emperor of Japan in 2019).

Dr. GRUBER, Patricia Science and Technology Adviser to the Secretary, United States
Department of State



Patricia Gruber is serving as the Science and Technology Adviser to the Secretary of State. In this role, she engages with academic and private sector research communities to inform foreign policy priorities and promote international science and technology collaboration. Dr. Gruber served as the Director of Research at the Office of Naval Research (ONR) with responsibility for the Dept. of Navy fundamental research portfolio, balancing critical investments in future capabilities with exploration of high risk, emerging technologies. In this role, she also led the development of the Naval S&T Strategic Plan, initiated the Basic Science of Autonomy program and coordinated ONR's education, outreach and diversity programs. More recently, she served as Technical Director for ONR Global, leading a group of fifty scientists and engineers who facilitated international research collaboration and acted as technical liaisons to operational fleet/forces. She had oversight of the Navy's International Science Program which awarded over 200 grants per year across a wide range of technologies and partner nations. Prior to ONR Global, she was Vice President/General Manager of Maritime Systems at Battelle and the Deputy Director at the Applied Research Laboratory at the Pennsylvania State University. She has held a number of technical management and business development positions at AT&T, Lucent Technologies and Marconi Communications. Dr. Gruber received a M.S. and Ph.D. in Applied Marine Physics from the University of Miami and a B.S. in Meteorology from the Pennsylvania State University. She conducted research in marine science at the Naval Research Laboratory and Bell Laboratories.

Dr. PHANRAKSA, Orakanoke Senior Advisor for International Affairs, Thailand Science Research and Innovation (TSRI)



Dr. Phanraksa is a policy specialist in the field of intellectual property laws the National Science and Technology Development Agency (NSTDA), Thailand. Currently, she is serving Thailand Science Research and Innovation (TSRI) to lead the international affairs division. She has been playing a key role to form a policy framework to promote and strengthen technology licensing offices and IP professionals in the academic and research institutions in Thailand. In 2019, she was the first to be awarded the Global IP Champion Award from the Global Innovation Policy Center, US Chamber of Commerce. This award was given to five individuals in the field of intellectual property who are leading efforts to bring about positive change in their communities and around the world. In 2023, she was selected as regional IP Policy expert by the WIPO to develop the IP Policy Model for Universities and Research institutions in ASEAN.

Dr. Phanraksa was one of the former Co-Chairs of the Global Young Academy 2015/2016. She also co-founded the ASEAN Young Scientists Network. In 2022, she was appointed as the International Science Council Fellow. She experiences in policy development by serving the Minister of Higher Education, Science, Research, and Innovation (MHESI) Thailand from 2020-2022.

Dr. MÜLLER, Jan Marco Coordinator for Science Diplomacy and Multilateral Relations, DG Research & Innovation, European Commission



Following his PhD in Geography at the University of Marburg (Germany), Jan Marco Müller's career included management positions at the Helmholtz Centre for Environmental Research in Leipzig (Germany), the former JRC Institute for Environment and Sustainability in Ispra (Italy) and the Centre for Ecology & Hydrology in Wallingford (UK). After being an Assistant to the Director-General of the European Commission's Joint Research Centre JRC (2009-2012), he managed the office of the Chief Scientific Adviser to the President of the European Commission (2012-2015) and then helped setting up the Commission's current Scientific Advice Mechanism. 2017-2020 he worked for the International Institute for Applied Systems Analysis (IIASA) in Vienna (Austria) as Head of the Directorate Office and Acting Chief Operations Officer. 2020-2022 he served as the first Science & Technology Advisor of the European External Action Service (EEAS), before joining DG Research and Innovation as Coordinator for Science Diplomacy and Multilateral Relations, where he currently leads the development of a European framework for science diplomacy.

Dr. MATSUMOTO, Yoichiro Science and Technology Advisor to the Minister for Foreign Affairs



Prof. Matsumoto received his Bachelor's, Master's and Doctoral degrees all from the University of Tokyo in Mechanical Engineering respectively in 1972, 1974 and 1977. He became Lecturer of the same University in 1977, Associate Professor in 1978 and full professor in 1992. He served as Dean of School of Engineering from 2006 to 2008, and served as Executive Vice President from 2009 to 2015. He was also served as Secretary-General of the Office of Medical Innovation, Cabinet Secretariat from 2012 to 2013, Executive Director of RIKEN from 2015 to 2018, Director of National Cancer Research Institute from 2015 to 2020 and President of Tokyo University of Science from 2018 to 2021. He is now Professor Emeritus of the University of Tokyo, and Science and Technology Advisor to the Minister for Foreign Affairs since April 2020.

He is honorary members of VSJ, JSME, JSFM, JSMF and Life Time Member of ASME. He is fellows of JSFM, JSME, JFES and ASME and member of the Engineering Academy of Japan. He was member of Science Council of Japan from 2011 to 2017. His scientific interests are computational engineering, fluids engineering and biomedical engineering.