

**INTERSESSIONAL PANEL OF THE UNITED NATIONS COMMISSION
ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (CSTD)**

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Contribution by Japan

to the CSTD 2024-2025 priority theme on “Technology foresight and technology
assessment for sustainable development”

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PRIORITY THEME 2: Technology foresight and technology assessment for sustainable development

1. Has your country conducted ForSTI, TA or both? If yes, what were the reasons for undertaking ForSTI and TA?

Since 1971, large-scale science and technology foresight surveys have been conducted roughly every five years in Japan. The National Institute of Science and Technology Policy (NISTEP) has been implementing these surveys since the fifth survey (1992). These surveys aim at gaining insight into science and technology and the future they will bring about, and at providing evidence for contributing to the consideration of science, technology and innovation policies and strategies.

2. If you have not conducted ForSTI or TA in the past, what were the reasons for this (lack of need or requests for it, lack of familiarity, lack of capacity, lack of funding etc.)? Would you be interested in pursuing either ForSTI or TA as a policy tool in the near future?

3. What agency (or agencies), if any, is responsible for ForSTI and/or TA?

4. Who was responsible for implementing the ForSTI and/or TA undertaken - national government, sub-national levels of government (state/province or other levels), industry, universities, research institutes or civil society?

5. In which sectors and/or for what policy processes have ForSTI and TA been undertaken, or linked to? What SDGs have they related to?

The Center for Research and Development Strategy of the Japan Science and Technology Agency (JST-CRDS) has compiled a collection of practical examples and lessons learned from STI for SDGs in Japan and overseas, and compiled them into [a commentary for future implementation](#).

The commentary consists of the following summary of international discussions and activities at the United Nations, OECD, and other organizations, as well as the domestic situation and issues emerging from the JST's previous efforts and

surveys:

Chapter 1 Achievement of the SDGs: Five Years After the UN Resolution

Chapter 2: The Role and Methods of Science, Technology and Innovation

Chapter 3: Japan's Initiatives: Toward the Realization of Society 5.0

Chapter 4: Challenges and Future Directions

We hope that this commentary will help many stakeholders, including the science and technology community, government officials, universities and educational institutions, companies, and NPOs, in promoting STI for SDGs.

6. What specific methods (tools) and methodologies have been used for ForSTI and/or TA?

Please refer to the responses for Questions 1.

7. What challenges have you experienced in undertaking ForSTI and TA exercises? Does your country have any specific capacity needs to strengthen the conduct and use of ForSTI and TA?

8. Have you conducted combined ForSTI and TA in a single exercise at any time? What were the benefits and challenges of combining ForSTI and TA? Do you see this as a useful and feasible approach?

The JST-CRDS “Overseas Policy Initiatives for Technology Foresight — Basic Survey for Considering Future Research and Development Strategies and Funding Areas” (CRDS-FY-2024-RR-01) surveyed the Foresight and TA initiatives in several countries. Important points identified by the report were: the development of quantitative methods, the consideration of methodologies combining quantitative and qualitative methods, the consideration of open and inclusive methodologies, and the setting of evaluation criteria.

(<https://www.jst.go.jp/crds/report/CRDS-FY2024-RR-01.html> pp 31-34)

9. Are you involved in any international cooperation or partnerships for ForSTI and TA? Which ones and what are their benefits?

The OECD’s Committee for Scientific and Technological Policy and its subsidiary body, the Working Party on Biotechnology, Nanotechnology and Converging

Technologies (BNCT), have conducted international research projects on strategic intelligence and anticipatory governance of emerging technologies, including [Foresight](#) and [TA](#). JST-CRDS has participated in these projects.

These projects collect and compare case studies of initiatives in various countries to draw out practical knowledge for promoting initiatives and to develop a common framework to promote initiatives based on shared values and norms in each country.

Reference:

[OECD Framework on Anticipatory Governance of Emerging Technologies](#)

In addition, the OECD launched [the Global Forum on Technology \(GFTech\)](#) in 2023. Focus groups have been established on quantum technologies, immersive technologies, and synthetic biology, and the GFTech is conducting horizon scanning and other TA activities.

- 10. What role(s) can international cooperation, and the CSTD, play in promoting ForSTI and TA?**
- 11. What have been some important ForSTI and TA examples undertaken in your country, especially related to national policy (prioritization, design etc.)?**
- 12. Based on your experiences, how have ForSTI and TA improved STI decision making and the prioritization, design and implementation of STI policies?**

The JST-CRDS “Overseas Policy Initiatives for Technology Foresight — Basic Survey for Considering Future Research and Development Strategies and Funding Areas” (CRDS-FY-2024-RR-01) surveyed the Foresight and TA initiatives in several countries and underscored operational innovations and initiatives designed to reflect foresight in policies and projects. These include the in-house development of administrative foresight functions, the acquisition of skill sets and literacy, the formation of cross-organizational foresight communities, domestic and international networking activities, and the fostering and utilization of human resources engaged in foresight.