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

Geneva, Switzerland
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Contribution by India

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

INPUTS FROM INDIA ON PRIORITY THEME 2 FOR CSTD INTER-SESSIONAL MEETING ON 21-22 OCTOBER 2024

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

   The Technology Policy Statement 1983, GoI highlighted the need for undertaking technology forecasting and assessment studies on a systematic and continuing basis and based on the Cabinet SAC PM Recommendations, TIFAC was instituted as an autonomous registered society under DST in February, 1988. Since its inception, as per its mandate TIFAC has been carrying out STI Foresight and Technology Assessment activities for the Government of India.

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?**

   Not applicable

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

   Based on the Cabinet SAC PM's Recommendations, TIFAC was instituted as an autonomous registered society under DST in February, 1988 for carrying out Technology Foresight and Technology Assessment in he Country for the Government of India. TIFAC is a Technology Think tank under the Department of Science and Technology.

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?**

   TIFAC, Technology Think tank under the Department of Science and Technology has carried out Technology Foresight and Technology Assessment exercises and evolved Roadmaps for the same. The Technology Vision documents along with the Technology Roadmaps and Technology Foresight Reports have been disseminated to Government Ministries, Departments and Industry associations for carrying implementation activities at their end.

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 Technology Vision Documents have addressed several SDGs and suggested the Technology interventions for each of the SDGs.

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

   Both Qualitative and Quantitative foresight techniques were employed for the ForSTI and TA including Brainstorming, Delphi, Scenario, Expert panels, Technology Prioritization, Multicriteria decision analysis etc.

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?**

   Awareness and Necessity for carrying out Periodic Technology Foresight and Technology Assessment is an area of focus in the country. R&D Institutions and Government Ministries

should be given periodic training on conducting ForSTI exercise within their respective organisations also.

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 Technology Vision and Technology Foresight exercises include components of Technology assessment also which is an integral part of it.

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

TIFAC is in partnership with International Institute of Applied System Analysis (IIASA), Austria and Higher School of Economics (HSE,Russia) in this regard. Activities on ForSTI and TA in Climate Change and Sectoral Roadmaps are ongoing.

10. **What role(s) can international cooperation, and the CSTD, play in promoting ForSTI and TA?**

International cooperation can prove to be an ideal platform for sharing of best practices in 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.)?**

Technology Vision 2020 Exercise (Reports released in 1996), Technology Vision 2035 Exercise (Reports released in 2016) followed by Sectoral Technology Roadmaps. Subsequent policies and schemes/programmes designed and implemented by the Government Ministries have taken cue and derived inputs based on the findings and recommendations in these documents.

12. Based on your experiences, how have ForSTI and TA improved STI decision making and the prioritization, design and implementation of STI policies?

Policies and schemes/programmes designed and implemented by the Government Ministries have taken cue and derived inputs based on the findings and recommendations in these documents. The National Educational Policy (NEP2020), National Biofuel Policy, Prime Minister's Matsya Sampada Yojana (PMMSY), New India Vision 2022 by Niti Aayog, National Policy on Electronics 2019 etc are some examples wherein inputs from TIFAC Documents have played a critical role.