Guiding Principles for the Development of STI for SDGs Roadmaps [Draft]
- From Japan's perspective -

In September 2015, the United Nations General Assembly unanimously adopted "the 2030 Agenda for Sustainable Development" that comprises 17 Sustainable Development Goals (SDGs) with 169 targets.

The SDGs are the universal master plans/visions for both developed and developing countries for ensuring "leaving no one behind" by tackling poverty, inequality, climate changes, etc. in a holistic manner toward the sustainable society by 2030. The sustainable, inclusive and resilient society is indeed aspiration of the world.

The 2030 Agenda stated that harnessing science, technology and innovation (STI) is crucial for achieving the SDGs ("STI for SDGs") (Paragraph 70). STI is expected to play a vital role to attain the SDGs by utilizing its innovative solutions.

The Agenda also mentioned that it *"is to be implemented in a manner that is consistent with the rights and obligations of States under international law"* (Paragraph 18) and *"is guided by the purposes and principles of the Charter of the United Nations, including full respect for international law"* (Paragraph 10).

There is no one common solution or method to promote "STI for SDGs". It is indispensable for each State/country, region, city, and community to identify local issues and thereof to allocate finance and human resources, to promote data infrastructure and to implement various programs in holistic and coherent manners for maximizing potentials of STI for the SDGs.

Engagement of various stakeholders is essential by sharing knowledge, experience and know-how, and they are expected to discuss, co-design, co-create and review their progress each other for unleashing the potential of STI.

STI for SDGs roadmap (hereinafter "roadmap") is one of the effective tools to accelerate such coactions; therefore, the guiding principles on development and application of STI for SDGs roadmaps have been mapped out hereto.

1. **Structure of roadmaps**

    There are various layers on STI for SDGs roadmaps, including global, national and sub-national levels, as well as theme/field-oriented levels and so forth. Each roadmap is expected to specify tangible actions and their progresses at each level. Under such circumstance, the government is expected to formulate a national level of roadmap.

2. **Role of the government**

    Under the leadership of national representatives (especially the leaders-level), the government should encourage various stakeholders, including ministries, institutions, private sectors, academia and civil society, to draw out their roadmaps in a voluntary and freewheeling manner, and assemble those roadmaps for monitoring the progress in order to identify underlying issues with political perspectives.

    Based on the discussions at the national and international conferences, such as the UN STI forum, the government should also promote the followings;

    1. Correlating national STI policies, plans, strategies, etc. to the SDGs
    2. Accelerating collaborations beyond sectors and institutions
    3. Providing advice to the relevant ministries and institutions

4. Allocating resources and budget, necessary for implementation
5. Creating an environment where multi-stakeholders can dialogue, co-design, and co-creation (e.g. STI for SDGs Platform).

3. Customization and communization (Local and global perspectives)

STI for SDGs roadmaps should be developed by respecting local culture, historical background, and indigenous knowledge to harmonize with the nature. The local customization according to the stages of development, socioeconomical conditions, and political situations in each country needs to be considered. Moreover, the global commonization is necessary for advancing global cooperation and understandings when roadmaps are formulated.

4. International cooperation

It is essential to strengthen international cooperation to yield profitable results and achieve sustainable development among countries concerned, rather than focusing on own prosperity. Careful determination, planning and implementation, on which STI is the most suitable to solve specific issue, are indispensable with the horizon scanning[1]and foresight analysis on various issues, socioeconomic impacts and negative impacts of STI in each country/area.

Capacity building in STI, including advanced technologies such as Artificial Intelligence (AI), is highly required in each country for achieving the sustainable development autonomously, and such dimension needs to be included in roadmaps.

Furthermore, roadmaps should encourage a wide variety of stakeholders to dialogue, gather their knowledge and act coherently for formulating the inclusive, sustainable and resilient future for all countries and people, regardless of developed or developing countries.

5. Other points to consider

Promotion of "STI for SDGs" should align with the national development strategies and STI policies for achieving sustainable and inclusive society.

Also, it is crucial to "deep dive" into each of the SDGs and determine the most efficient and feasible action by making prioritization and enhancing the collaborations across sectors.

It is recommended that each country incorporate more STI elements in the official development assistance (ODA) where and to the extent possible. Private funds should be expanded to unleash the potential of STI for SDGs, and such endeavor should also be included in roadmaps.

It is also noted that STI plays important roles yet is not an exclusive instrument to achieve the SDGs. Thus, STI for SDGs Roadmaps should be co-deigned by various stakeholders, among ministries, international organizations, private sector, academia, and civil society to subsume legal, social and economic dimensions into roadmaps.

END

---

[1] Horizon scanning; a technique for detecting early signs of potentially important developments through a systematic examination of potential threats and opportunities, with emphasis on new technology and its effects on the issue at hand. https://www.oecd.org/site/schoolingfortomorrowknowledgebase/futuresthinking/overviewofmethodologies.htm