



UN Inter-agency Task
Team on Science,
Technology and
Innovation for the
SDGs



The Joint Research Centre (JRC) supports the Sustainable Development Goals



Joint key messages:

“STI Roadmaps for SDGs – paving the pathways for sustainable recovery and future resilience”

High-level HLPF side event co-organized by the Government of Serbia/MESTD,
EC – JRC, UN IATT, the Government of Japan/JST

The event was held virtually. About 100 participants joined the meeting. The full meeting summary is the attachment to this document.

The HLPF side event held on 7 July 2020 built on the expert group meetings and other discussions held in the preceding days, in particular the 2-part virtual Expert Group Meeting organized by the European Commission’s Joint Research Centre, UN DESA and IATT on 22 and 30 June; 2-part India-Japan workshop held on 23 and 29 June and the UN DESA seminars on STI and COVID 19 on 20 May and 10 June. These meetings gathered over 600 participants and led to many important conclusions. The key messages and summary of the final HLPF event form annexes to this report.

The joint UN programme on STIs for SDGs roadmaps has the objective to build common guidelines and accompany Member States in the development and implementation of roadmaps that ensure an effective deployment of STI for the achievement of the SDGs. In the process to achieve this mission, the UN-IATT with partners – European Commission’s Joint Research Centre and the Government of Japan have developed a UN Guidebook on STI for SDGs and have proposed relevant tools and methodological frameworks as described in the Background Paper on existing roadmapping methodologies.

The IATT partners have increased synergies, shared challenges, good practices and lessons-learned during the development of the roadmaps in five pilot countries (Ethiopia, Ghana, India, Kenya and Serbia) under the Global Pilot Programme. Among the main focus points of the pilot countries have been the need to target specific SDGs for achieving efficient response to the national development needs. In addition, the institutional and national cooperation is highly significant, which allows assessing the gaps and proposing solutions and actions to accelerate the roadmaps’ implementation, through appropriate structures, coordination mechanisms, strong local involvement and building local stakeholders capacities.

Last but not least, the Global Pilot Program has been a great opportunity for the pilot countries and for the participant UN and international partners for building collaborations and knowledge on STIs for SDGs, learning from each other and reflecting together on the way forward for scaling up the pilot programme to get more countries on board.

Key messages:

- Science, technology and innovation not only are the fundamental means of implementation of Agenda 2030 but also can help recover from COVID-19 in more sustainable way.
- The UN Global Pilot Programme on STI for SDGs Roadmaps has created a lot of interest and good progress in 5 pilot countries who were able to identify priority SDGs, create institutional backing and mobilise stakeholders for the roadmap development. The common challenge is to find resources and commitment for implementation.
- STI policy needs to embrace directionality, ambition and resilience to respond to societal and sustainability needs. Therefore, policy makers need to revisit strategic goals.
- The experience of the pilot countries and partners shows the importance of aligning the STI for SDGs roadmaps with the national development plans and strategies. STI for SDGs Roadmaps emerge as operationalized and implementation-oriented action plans.
- One of the crucial success factors is the wide awareness building and ownership and engagement by the key stakeholders, not only from the public sector but also business, academia and civil society.
- There are challenges connected with the implementation of Agenda 2030 that result from knowledge and competence gaps, SDG interlinkages and trade-offs and insufficient resources. All of them can be addressed and alleviated by mobilising international cooperation and forging partnerships and coalitions.
- The work on STI for SDGs roadmaps has created ample opportunities to learn not only for the Global Pilot Countries but also IATT member agencies and partners. There have been methodological and programmatic developments in almost all the agencies, whose representatives underlined the need for further cooperation and focus on the implementation phase.

Annex 1: Key messages from preparatory Expert Group Meetings and other consultations

1. 2-part Expert Group Meeting on “STI Roadmaps for SDGs – paving the pathways for sustainable recovery and future resilience”

Part 1- 22 June 2020 was held virtually. About 110 participants joined the meeting. The full meeting summary is the attachment to this document.

The first part of this informal expert consultation focused on the lessons learnt from the [Global Pilot Programme for STI for SDGs Roadmaps](#) from the perspective of the pilot countries: Ethiopia, Ghana, Kenya, India and Serbia and the UN and partners focal points: UNIDO, UNESCO, UNCTAD, the World Bank and EC – JRC. It was open to the interested observers and the candidates to the Global Pilot Programme.

Key messages:

- All five countries participating in the UN-IATT Global Pilot Programme have made a significant progress in terms of STI roadmaps for SDGs.
- Despite the differences in the terms of progress due to the individual approaches and challenges, some common elements emerged in the discussion.
- All countries do agree on the importance of mobilising STI for SDGs, especially in the post COVID-19 era and in the “Decade of Action”, taking into consideration different approaches and tools.
- Serbia, Ethiopia and India mobilised STI for COVID response, an inspiring example on how the STI can be used to answer economic, social and environmental challenges.
- All Pilot countries agreed and highlighted the importance of linkages between SDGs but also between STI policies, SDGs and National Development Plans.
- The STI innovation policy is the one to accelerate achievement of SDGs.

Part 2- 30 June 2020 was held virtually. About 80 participants joined the meeting. The full meeting summary is the attachment to this document.

The second part of this informal expert consultation focused on the implementation of the STI for SDGs roadmaps in the context of their contribution to sustainable recovery and future resilience. Countries, regions, cities and international partnerships presented and discussed the roadmap implementation experience based on the challenges and achievements in implementing Smart Specialisation as localised roadmaps for transformation and for the achievement of the SDGs. These presentations were the basis to elaborate suggestions on how to better use STI to deliver post- crisis recovery and strengthen resilience. The potential application of the STI for SDGs roadmaps and smart specialisation to support the economic and social recovery and greener development models were discussed.

Key messages:

- European Commission-JRC continuous to be committed to supporting UN Inter-agency Task Team on Science, Technology and Innovation for the SDGs , (IATT) as well as EU and non-EU countries at national sub-national levels in their effort to achieve SDGs by the development and implementation of STI for SDGs Roadmaps.
- Adopting integrated approach that takes into consideration complex systems and interdependencies is key to achieve the 2030 Agenda in a synergetic way, avoiding unnecessary trade-offs.
- Innovation policy needs to embrace directionality, ambition and resilience to respond to societal and sustainability needs. Therefore, policy makers need to revisit strategic goals.
- Although SDGs are not mandatory in Smart Specialisation strategies, a number of countries, sub-national entities and international partnerships have decided to address them.

- International interregional Partnerships for Smart Specialisation connect Quadruple Helix actors (governments, knowledge institutions, private sector and civil society), develop shared vision and shared goals that place people and the planet at the centre, work across the territories and leverage private investment.
- STI roadmaps are well suitable to implement structural changes and this can be key to be used for the achievement of the SDGs.
- The SDGs proved to be a common vocabulary to communicate with stakeholders at different levels (local, regional, national).

2. Key messages from 2-part India-Japan workshop on Developing STI Partnerships for Sustainable Development

The workshop was held virtually on 23 and 29 June 2020. About 80 participants joined the meeting.

Office of the Principal Scientific Advisor to the Government of India (PSA), Research and Information System for Developing Countries (RIS), Cabinet Office, Government of Japan (CAO) and the United Nations Interagency Task Team on STI for the SDGs (UN-IATT) co-organized the Workshop on Developing STI Partnerships for Sustainable Development on June 29, 2020. The main theme of the workshop was *Accelerating International Cooperation and Actions Through the Global Pilot Programme on STI for SDGs Roadmaps*. The workshop built on the preparatory dialogues between India and Japan, and invited the pilot countries and IATT partner agencies participating in the Global Pilot Program, and other interested stakeholders. The workshop saw participation by senior policy makers and experts from the pilot countries including India, and Japan and other partner agencies.

The key messages and conclusions of the workshop are the following.

1) In order to operationalise the Technology Facilitation Mechanism (TFM) adopted as part of the Agenda 2030/ SDGs, the Global Pilot Programme on STI for SDGs Roadmaps initiated in 2019 is considered the most important vehicle, backed by evidence based and robust conceptual framework and is expected to evolve into a very useful tool to strengthen national efforts on STI for SDGs mapping and international cooperation on knowledge, technology transfer, capacity, networks and finance for countries to better address global challenges including COVID-19 pandemics, by ensuring access, equity and inclusion leading to sustainability and wellness.

2) Based on the existing close partnership in science and technology between India and Japan, the both sides have expressed strong interest in extending their collaboration in STI for SDGs, particularly in cooperating in formulating STI for SDGs Roadmaps on 4 specific goals (SDG 2, 3, 6 and 7) through the Global Pilot Programme. The two countries are willing to deepen their collaboration in applying frontier technologies in the above mentioned areas and in supporting pilot countries from Africa in particular, and African and other LDCs in formulating their STI for SDGs Roadmaps by sharing of experience, knowledge and capacities with them, in the spirit of South-South and Triangular Cooperation as mandated under the TFM.

It was suggested that UN-IATT accelerate the Global Pilot Programme by launching “Partnership in Action” and by leveraging emerging partnerships among research organizations and leading think tanks based in Japan, India and select African countries, as reflected in the collective expression of interest among those participating in the workshop.

4) The participants acknowledged the importance of multi-stakeholder engagement that includes academia, think tanks and private sector in formulating and implementing STI for SDGs roadmaps.

Annex 2: Full summary of the HLPF side event

“STI Roadmaps for SDGs – paving the pathways for sustainable recovery and future resilience” High-level HLPF side event co-organized by the Government of Serbia/MESTD, EC – JRC, UN IATT, the Government of Japan/JST

The event was held virtually. About 100 participants joined the meeting.

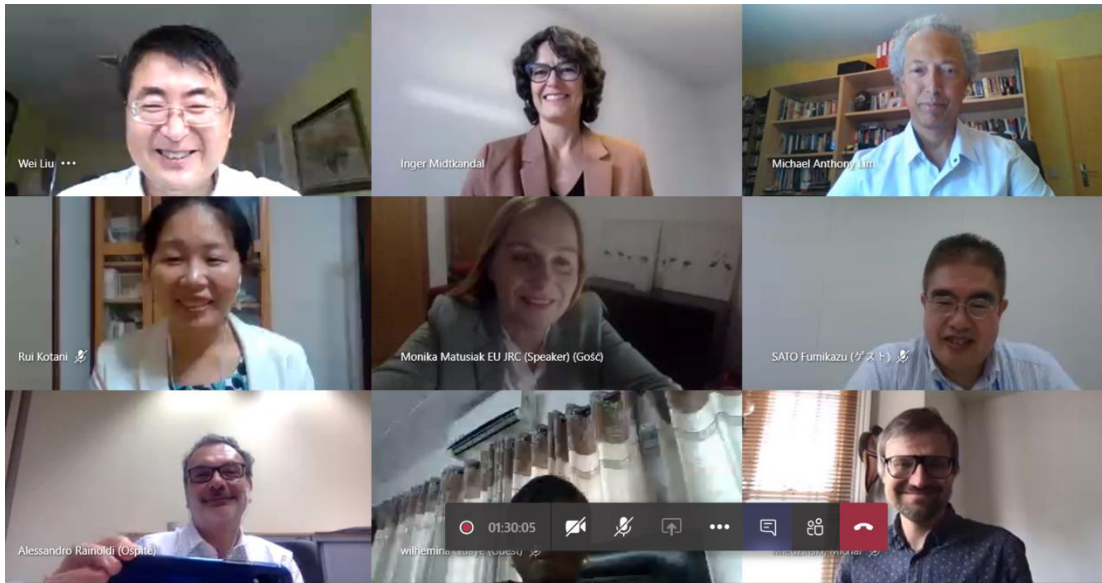
Flash report

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The joint UN programme on STIs for SDGs roadmaps has the objective to build common guidelines and accompany Member States in the development and implementation of roadmaps that ensure an effective deployment of STI for the achievement of the SDGs. In the process to achieve this mission, the UN-IATT with partners – European Commission’s Joint Research Centre and the Government of Japan have developed a UN Guidebook on STI for SDGs and have proposed relevant tools and methodological frameworks as described in the Background Paper on existing roadmapping methodologies.

The IATT partners have increased synergies, shared challenges, good practices and lessons-learned during the development of the roadmaps in five pilot countries under the Global Pilot Programme. Among the main focus points of the pilot countries have been the need to target specific SDGs for achieving efficient response to the national development needs. In addition, the institutional and national cooperation is highly significant, which allows assessing the gaps and proposing solutions and actions to accelerate the roadmaps’ implementation, through appropriate structures, coordination mechanisms, strong local involvement and building local stakeholders capacities.

Last but not least, the Global Pilot Program has been a great opportunity for the pilot countries and for the participant UN and international partners for building collaborations and knowledge on STIs for SDGs, learning from each other and reflecting together on the way forward for scaling up the pilot programme to get more countries on board.



Mr Wei Liu, the Inter-Agency Task Team Coordinator, Division for Sustainable Development Goals, Department of Economic and Social Affairs (UN-DESA), United Nations Headquarters moderated the meeting.

Key messages:

- Science, technology and innovation not only are the fundamental means of implementation of Agenda 2030 but also can help recover from COVID-19 in more sustainable way.
- The UN Global Pilot Programme on STI for SDGs Roadmaps has created a lot of interest and good progress in 5 pilot countries who were able to identify priority SDGs, create institutional backing and mobilise stakeholders for the roadmap development. The common challenge is to find resources and commitment for implementation.
- STI policy needs to embrace directionality, ambition and resilience to respond to societal and sustainability needs. Therefore, policy makers need to revisit strategic goals.
- The experience of the pilot countries and partners shows the importance of aligning the STI for SDGs roadmaps with the national development plans and strategies. STI for SDGs Roadmaps emerge as operationalized and implementation-oriented action plans.
- One of the crucial success factors is the wide awareness building and ownership and engagement by the key stakeholders, not only from the public sector but also business, academia and civil society.
- There are challenges connected with the implementation of Agenda 2030 that result from knowledge and competence gaps, SDG interlinkages and trade-offs and insufficient resources. All of them can be addressed and alleviated by mobilising international cooperation and forging partnerships and coalitions.

- The work on STI for SDGs roadmaps has created ample opportunities to learn not only for the Global Pilot Countries but also IATT member agencies and partners. There have been methodological and programmatic developments in almost all the agencies, whose representatives underlined the need for further cooperation and focus on the implementation phase.

Meeting summary

Highlights from the Opening remarks

H.E. Slavica Djukic-Dejanovic (Minister without portfolio in charge of Demography and population policy, Government of Republic of Serbia) delivered opening remarks welcoming all participants and thanking them for their willingness to share and discuss their experience on STI for SDGs roadmap development. She stressed that the ongoing Covid-19 outbreak is an unprecedented global crisis that is affecting everyone, everywhere without sparing a country or region. However, it is proving that innovation and modern technologies can be used to gather and unite people to work together just as we are doing today from the safety of our homes and offices, safeguarding both our and the health of the people around us. The Minister remarked that technology, science, innovation and capacity building are fundamental pillars of the Means of Implementation of the Post-2015 Agenda and Addis Ababa Action Agenda, as well as preconditions for the fulfilment of the global promise to reach Sustainable Development Goals. Mobilizing global STI resources and engaging in multi-stakeholder cooperation is an indispensable opportunity to mitigate the longer-term impacts of COVID-19 pandemic, address challenges that threaten progress on the 2030 Agenda, and find ways to accelerate the implementation of SDGs at all levels. The Minister confirmed that Serbia is firmly committed to sustainable development and reaching the targets of all SDGs equally. She wished the participants to use the outstanding opportunity to overview perspectives and the lessons learned from the UN Global Pilot Programme on STI for SDGs Roadmaps, including EU Smart Specialization Strategies piloted in the Republic of Serbia. The Minister expressed her confidence that this meeting will help identify new ideas and inspire novel partnerships to sustain our efforts in supporting the accelerated SDGs implementation and recovery from the COVID-19 pandemic through science, technology, and innovation.

Highlights from Session 1

The Global Pilot Programme on STI for SDGs Roadmaps: main results and next steps

The Addis Ababa Action Agenda¹ recognises science, technology and innovation as a means to achieve Sustainable Development Goals (SDGs). As part of the Technology Facilitation Mechanism (TFM), the UN Inter-agency Task Team (IATT), together with partners such as the Government of Japan and the European Commission's Joint Research Centre, have been working towards developing STI Roadmaps for SDGs. Expert consultations in New York, Tokyo, Brussels, Nairobi and during virtual events² led to the development of a joint

¹ https://www.un.org/esa/ffd/wp-content/uploads/2015/08/AAAA_Outcome.pdf

² <https://s3platform.jrc.ec.europa.eu/-/smart-specialisation-and->

guidebook, two background papers and shaped cooperation with selected countries in this field. A Global Pilot Programme on STI for SDGs roadmaps was announced during the HLPF, in July 2019, focusing on 5 pilot countries: Ghana, Ethiopia, Kenya, India and Serbia.

The first session presented the results and lessons learnt from the UN Global Pilot Programme on STI for SDGs Roadmaps with the special focus on the methodological approaches used in the pilot countries, including the updated EU Smart Specialisation Strategies piloted in Serbia.

Dr Peggy Oti-Boateng (Director, Division of Science Policy and Capacity-Building, UNESCO), on behalf of IATT co-leading agencies (UN-DESA, World Bank, UNCTAD, UNESCO and EU-JRC), reflected on the main achievements of the Global Pilot Programme and the work of IATT, which started within the framework of UN Technology Facilitation Mechanism. Within the current global crisis, building the STI for SDGs Roadmaps and inclusive STI systems, is very important for all of us and it should be a common mission and joint effort to ensure that nobody is left behind. The primary role of the IATT joint action has been to shape a consensus on principles, common guidance and possible common framework for country-level STI for SDGs Roadmaps. International expert meetings (in New York, Tokyo, Nairobi, Bangkok, Brussels) and regular consultations of IATT members and partners have resulted in the development of:

- The Guidebook for the development of Science, Technology and Innovation (STI) for SDGs Roadmaps, a step-by-step approach to guide the development and implementation of national STI for SDGs roadmaps, but also promoting international partnerships in the STI arena.
Two Background Papers on “Overview of the existing STI for SDGs Roadmapping methodologies” and “The international STI collaboration and investment for Sustainable Development Goals”, that provide essential information and conceptual framework for the countries that engage in the roadmapping design process, but they also serve the purpose of peer learning.
- The Global Pilot Programme, with five countries selected in the first phase, 20 applying to join.
- Expert Group Meetings and additional workshops, including the preparatory meetings and consultations before the HLPF :
 - 22 and 30 June: Expert Group Meetings: STI Roadmaps for SDGs: pathways for sustainable recovery and future resilience (key messages attached to this report),
 - 23 and 29 June: India-Japan workshop: Developing STI partnerships for sustainable development (key messages attached to this report),
 - 20 May and 10 June: UN DESA seminars on STI for SDGs and recovery from COVID 19,
- A progress report on the Global Pilot Programme, with a summary and analysis of the different approaches and progress made in each of the five pilot countries, has been prepared by the UN-IATT work stream, analyzing the achievements, expected outcome, lessons learnt and key activities. Greater technical and financial assistance from international partnerships for SDGs Roadmaps will be needed to develop effective roadmaps. Involving broad range of STI stakeholders and their active

participation in the process is also further needed. Creating means and platforms for coordination and collaboration among government and between government and other stakeholders are also part of the lessons learnt in the path of implementation so far. Getting relevant expertise and securing funding are also aspect to guarantee success.

- The report has been published on-line on the HLPF web page, together with the Guidebook and Background papers.

The work on the STI roadmaps development came at the request of UN Members States. The initiative will be further implemented and expanded to more Member States. We are building together a Partnership in Action on the STI for SDGs Roadmaps to demonstrate the global leadership in advocacy and action required to create the political momentum, provide practical solutions, and mobilize multi-stakeholder engagements on STI for SDGs.

Mr Alessandro Rainoldi (Head of Unit, Territorial Development, European Commission - Joint Research Centre) presented The Background Paper: *Overview of the existing STI for SDGs Roadmapping methodologies* developed by European Commission's Joint Research Centre in cooperation with IATT members and experts. He underlined that European Commission is honoured to be a part of this process and the leading organization on the development of this Background Paper, which is a way to show that the statements and ambitions for developing STI for SDGs Roadmaps are supported by the methodologies developed over the last years and which have given concrete results. The Background Paper concentrates on a few such methodologies used by IATT members and partners. They include:

- Smart Specialisation Strategies (EC-JRC),
- STI Policy Reviews (OECD),
- STI Policy Review Framework (UNCTAD),
- Strategic Industrial Intelligence and governance (UNIDO),
- Transformative Innovation Policy (TIPC),
- Public Expenditure Reviews in STI (WB).

There are two main challenges in the work on STI for SDGs. First of them is the change of directionality of STI policy, from the traditional focus on competitiveness to sustainability and putting forward STI as a general enabler to achieve the SDGs. The second challenge is adaptability. As countries across the planet are in very different stages of the STI efforts and taking up SDGs, they have different levels of stakeholder and entrepreneurial capability. The European Commission pays particular attention to territorial adaptability – how the roadmaps can be adapted to the needs of local communities and help localise SDGs. We have seen that there are many approaches – some methodologies are focused more on the STI system, some are more modular and others have broader view of socio-economic and environmental challenges. None of them is best or worst, they cater to different needs. The conclusion is that we are on solid ground and build on years of accumulated experience. There are also synergies – the methodologies can be combined and adapted to the particular situation and ambitions of each particular country. This collective effort calls for two main topics to develop in the future: synergies and collaborations among the institutions that developed these methodologies and that can come forward with adaptations and improvements to deliver STI roadmaps that can really deliver the SDGs. The second one is to transform these methodologies into toolboxes that can really support

countries and subnational authorities and move from the design phase to the selection of combined and consistent project portfolios, which ultimately will be the ones who will help achieve SDGs.

Highlights from Session 2 **STI for SDGs Roadmaps in Ethiopia, Ghana, India, Kenya and Serbia**

The representatives of Global Pilot countries presented the state of play of the STI for SDGs Roadmaps in their countries focusing on questions:

- What are the 3 key elements of the STI for SDGs Roadmap in your country?
- What are 2 most important lessons learnt from the work on STI for SDGs Roadmaps so far?
- What is 1 question you would like to ask other pilot countries?
- Do you think that STI for SDG Roadmap can help in post-Covid sustainable recovery and building future resilience to crises?

H.E **Afewerk Kassu Gizaw** (State Minister of Science and Higher Education (MoSHE) of the Federal Democratic Republic of *Ethiopia*) *could not join the meeting due to the Internet outage but he passed on a message of continued commitment of Ethiopia to the work on STI for SDGs Roadmaps. For the last two years MoSHE works on the STI for SDGs roadmap together with the Ministry of Innovation and Technology.*

Viktor Nedovic (Assistant Minister, Ministry of Education, Science and Technological Development, Serbia) mentioned that Serbia is in the process of significant STI reforms, which established the Innovation and Science Funds and the key element of them is the new mechanism of financing science and innovation. Serbia also has a new Smart Specialisation Strategy, adopted on 27 February and the country is using this experience in the Global Pilot Programme. The first verification of SDG challenges was organized in February, when stakeholders verified the insights and conclusions on a workshop organized together with EC JRC and UNIDO. The key elements of the Serbian STI for SDGs Roadmap are that it is based on evidence and a very inclusive Smart Specialisation process, with over 50% participation of the private sector. It is also based on the adapted Smart Specialisation Strategy, with SDGs as the main framework and the full attention on societal and environmental issues adding to the economic, innovative and scientific aspects that were the focus so far. Serbia has identified and prioritised the main challenges resulting from the SDGs and identified the STI potential that can be mobilised to answer the knowledge and competence gaps. Lessons learnt show that all Serbia's Smart Specialisation priority domains: Food for Future, Information and Communication Technologies, Future Machines and Manufacturing Systems, Energy-Efficient and Eco Smart Solutions and Key Enabling Technologies can find opportunities and have potential to tackle the SDGs. Also, Serbian SDG-oriented STI communities are very well connected internationally, with very strong relations within the region of South East Europe, but also with EU Member States, UK, USA and for some specific goals with China, India, Malaysia and Iran. Serbia would also like to learn about the challenges faced by other pilot countries. The present crisis shows how important it is to understand and to be able to mobilise the STI potential in times of crises. In the case of Serbia, the STI sector has been one of the support pillars to the society at

large to fight with the consequences of COVID 19 disease. The STI Roadmaps used in the right way, can help plan for the future crises and build resilience.

Sachin Chaturvedi (Director General at the Research and Information System for Developing Countries (RIS), New Delhi, India) underlined that it is important to see how the pilot countries are viewing the Global Pilot Programme initiative and bring STI for the achievement of SDGs, which is especially important in post-pandemic reality. For India it is important how the institutional architecture, in particular the robust ecosystem that is required, can deliver the innovation, and how the technologies and foresight can be brought together to inform the decision-making. One of the key challenges, important for all the pilot countries is how to mobilise the resources when the economies are off-balance. The need for institutional consistency and coordination is particularly important – this is what India has tried to achieve in the RIS working with the Principal Scientific Advisor to the Government of India and trying to bring about access, equity and inclusion. In the work on the STI for SDGs Roadmap India has given priority to nutrition, health, water management and energy, which means the focus on the SDGs 2, 3, 6 and 7. The question to other pilot countries is if they also want to narrow down the priorities, which would help to operationalise within TFM and make it more effective and responsive to their needs. It should help bring institutional coordination, coherence and synergies. The expenditure review on STI was helpful for India to see how different ministries and agencies finance STI projects. During the recent workshop India has initiated a network of think tanks to work on STI for SDGs and select best practices. Other important aspects were STI for SDGs mapping and the exchange of ideas, both among Indian stakeholders and with IATT on how we can make the engagement of the Global Pilot Countries mutually supportive, how to share the technologies and experiences, learn from each other and develop indicators to be used within the TFM.

Wilhelmina Quaye (Director of the CSIR-Science and Technology Policy Research Institute, Accra, Ghana) expressed the gratitude for being invited to present Ghana experience during the Expert Group meeting on 22 June and HLPF side event. The Ghana Ministry for Environment, Science, Technology and Innovation is involved in the work on Global Pilot Programme. Ghana has also created a task team for STI for SDGs Roadmap and prepared an analysis and terms of reference. The topic of STI for SDGs has been discussed during workshops and one of the challenges that emerged is the lack of understanding among the stakeholders of the role of STI for the achievement of SDGs. That meant that the consultation had to be widened. The Task team decided to focus on the STI for SDGs Roadmap and select and prioritise the SDGs 1, 2, 3, 4, 5, 7, 8, 9 and to reflect on what is already done in Ghana's development plans, assess the interlinkages, the current situation and map out the local priorities. Concerning the lessons learnt, Ghana understood that to achieve the STI for SDG Roadmap, we need a wide consensus, mobilise resources and have an awareness workshop for the relevant stakeholders, including the youth, the private sector and the civil society. The consultation showed also that further reprioritisation is needed. Now that Ghana has the team, also resources are needed to push the process further. There has been a delay due to COVID 19 but there is a commitment to fast track the process now. There is a high demand for the STI for SDGs Roadmap in Ghana and the need to assess the capability gaps. The work on STI for SDGs Roadmap is aligned with the national

agenda for jobs, inclusivity and other development plans. The next focus is to answer to local needs and build local ownership of the roadmap.

Tom Peter Migun Ogada (Executive Director, African Centre for Technology Studies, Kenya) explained that the Kenyan STI Roadmap for the SDGs is being led by the Department of Planning under The National Treasury, which is the custodian of SDGs in the country. The National Commission for Science, Technology and Innovation, which is the government agency responsible for STI, is the deputy leader. The World Bank is the IATT focal point and the process is being supported by African Centre for Technology Studies, as a Technical Partner. The process started in mid-2019. The following are the three key elements of the STI roadmap for the SDGs in Kenya.

- It is aligned to the current development agenda of the country – the Third Medium Term Plan (2018-2022). The plan has prioritised 4 sectors, namely agriculture, manufacturing, health, and housing (The Big Four Agenda). The roadmap focuses on agriculture and manufacturing.
- The roadmap has prioritised SDG2 (end hunger). The team had identified that by addressing SDG2, this will also contribute to addressing SDG 1 (End poverty), SDG 8 (Economic growth) and SDG 9 (industrialization).
- On the STI side, the National Commission for Science, Technology and Innovation has just finalised the development of the STI policy (2020). The roadmap will provide an implementation plan for the STI policy for the period 2020-2022.

The two key lessons learned include:

- The roadmap is a powerful tool for implementing STI policies and ensuring that STI is used to address SDG gaps. It makes it possible for government agencies that have been working in parallel to work together.
- The success of the development of STI roadmap depends on stakeholder engagement. Careful mapping of the relevant stakeholders and securing their active involvement is important.
- a. Development of the roadmap should not be an end to itself. The impact of the roadmap on the SDGs can only be realized if the roadmap is implemented. Resource mobilization will be key, and this will require partnership and international collaborations.

The STI roadmap for the SDGs can help in the post Covid-19 to achieve sustainable recovery and building future resilience. For every disaster there are always opportunities. The biggest beneficiary of Covid-19 pandemic is the digital technology. The power of the digital technology, as a key tool for economic recovery has been proven and therefore current pilot STI roadmaps must consider adjusting their focus to include the deployment of digital technologies in various aspect of economic life. The Kenyan roadmap had identified ICT as cross section, but now we will need to relook at that to enhance the role of the digital technology to the big four agenda. There are quite a lot of interesting AI applications coming up in Africa to address Covid-19 pandemic and economic recovery. It may be useful to document these and come up with intuitional and policy framework that can support the deployment of such technologies to a scale that can have impact on SD.

Highlights from Session 3

Japan's Roadmaps and Efforts to Promote STI for SDGs

Mr. SATO, Fumikazu (Councillor for Innovation Promotion, Cabinet Secretariat / Deputy Director General for Science, Technology and Innovation, Cabinet Office, Government of Japan) highlighted Japan's leadership in adopting G20 Guiding Principles for the STI for SDGs Roadmap in 2019. Additional guidelines are provided in the Guidebook for the Development of STI for SDGs Roadmaps that indicates the need to develop policy frameworks and key actors, offers step by step guidance and promotes international collaboration. Japan is very keen on achieving the SDGs as they are the global, common goals. There are three possible approaches that can be used: to address the challenges in various service areas with specific technologies; to address the specific challenges by utilizing various technologies; and to address the challenges by back casting from the desired future outcomes. Japan's three major SDG-oriented strategies include AI Strategy, using the first approach; Environment Innovation Strategy from 2020, using the second approach; and Moonshot Goal 5 (2020) based on the third approach. Based on these three strategies Japan has created five roadmaps to achieve the SDGs. Japan's policy package to promote STI for SDGs includes sharing Japan's experience and knowledge in formulating STI for SDGs Roadmaps, collaboration in the Global Pilot Programme on STI for SDGs, cooperation with UN agencies and international collaborative research and development. A recent activity within the Global Pilot Programme includes co-organization of the India-Japan workshop on developing STI partnerships for sustainable development. In cooperation with UNDP Japan will support the Accelerator Lab. The country will also work on STI for SDGs Platform to match Japanese technologies and global needs. As we are now in a crucial time because of COVID-19, Japan believes that the STI and international collaboration will serve to find possible features of our future society and SDGs.

Highlights from Session 4

Conclusions from Global Pilot Programme for IATT members and partners

Michael Lim (Economist, Science, Technology and Innovation Policy Section, Division on Technology and Logistics, UNCTAD) is an UNCTAD focal point working with Ethiopia. He pointed out that good inter-agency collaboration is valuable for the work stream on STI for SDGs roadmaps as we can learn from each other and from the experience of different pilot countries. Lessons for the future include achieving greater collaboration and stronger partnerships in implementing the roadmaps. The key constraint in achieving this is the lack of dedicated resources, hopefully to be overcome in the future. Another lesson learnt, is that there is not a single best methodology, there are different approaches and great diversity in the countries we are working with – in terms of the local context, approaches to policy design and institutional arrangements. Therefore, rather than a single methodology, IATT can come up with different practices useful for all the different methodologies, depending on country needs. The process used in the roadmap design and implementation is very important – a good process can lead to better implementation. Strong engagement of local stakeholders is essential for success. So far the collaboration has been useful and we should strengthen it further.

Fernando Santiago Rodriguez (Research and Industrial Policy Officer, Research and Industrial Policy Advice Division, UNIDO) is UNIDO's focal point working with European Commission's Joint Research Centre (EC JRC) on Serbia. He mentioned that UNIDO's understanding of the Global Pilot Program is as a learning exercise in different fronts. However, the three main areas from which to extract lessons for the future are: 1) the need to reassess the value of STI for achieving pressing development challenges, as expressed in the SDGs. This exercise has provided IATT participant entities the chance to learn about new methodologies and approaches, and to fine tune existing methodologies that the different IATT partners have been implementing, but that were designed without having the complex interrelations of the SDGs in mind. 2) The idea of interaction, among IATT members and with partners – for UNIDO, partnering with EU-JRC has made possible to formalize the engagement started in the past and to provide opportunities to test new ground and new ways of working together. This concerns also other methodologies – even if distinct IATT member differ in their approaches to STI for SDGs, and while there is still need to build a common understanding of pertinent issues, there is a clear willingness to collaborate and work together. 3) It is often mentioned that we need resources for the implementation of the pilot programme, but these are not only financial resources but also knowledge and political support. UNIDO is strongly committed to continue working on this topic.

Ana Persic (Programme Specialist, Division of Science Policy and Capacity-Building, UNESCO) is UNESCO's focal point working with Ghana. She indicated that the work on STI for SDGs has been a very good experience for UNESCO, in terms of inter-agency cooperation, building new strategy and understanding who is doing what and who has the biggest value added in different parts of the process. UNESCO values the cooperation with Ghana. The lessons learnt for the future include the need of parallel work on building capacity among stakeholders in STI governance and inclusive and evidence-based policy-making. Local development partners and UN country teams are also important as it helps organize the process in a broader framework of pursuing the SDGs, including also the national priorities. Finally, there is a need to set up appropriate implementation mechanisms, through budgetary allocations but also well-balanced strategic mix of policy instruments. One of the important aspects of the STI for SDGs work stream is the opportunity to learn from each other and see how in different contexts, there is a variety of different instruments that can be used. The inter-agency cooperation has indeed been very good and the Technology Facilitation Mechanism provides a good platform for such interactions. UNESCO has invested a lot in the process and there is a significant interest from Member States in such an interactive and collaborative approach. There are also good developments in different areas of work (methodology, programme etc.) as a result. UNESCO is ready to engage more and to learn more in the process.

Rui Kotani (Science and Technology Specialist, The World Bank) is a focal point for India and Kenya, working with support from Japan. The World Bank, together with IATT partners and OECD has led the recent publication work – the Guidebook, the Background Paper on international cooperation and the progress report on the Global Pilot Programme. All of them highlight the usefulness of STI for SDGs Roadmaps to address the global challenges, including COVID-19 in both developed and developing countries. Because it is a new tool to align domestic policy agendas of key national/international partners: STI, SDGs and economic growth policies. Now is the time to take a collective action to extend and

strengthen the Global Pilot Programme. We need to draw more on existing national and international information, technical/financial resources and take a full advantage of new and existing technologies through Partnership in Action – a new support mechanism to be launched for the second phase of the programme.

Monika Matusiak (Coordinator for Smart Specialisation and Sustainable Development Goals, Joint Research Centre, European Commission) has underlined that for EC – JRC, the participation in IATT STI for SDGs work stream has been a great learning opportunity in three dimensions. Firstly, the work with Serbia on a new, updated Smart Specialisation Strategies aimed to better contribute to SDGs and parallel cooperation with UNIDO, where we can exchange the views and understanding on how we can improve our approaches. Secondly, institutionally, in the European Commission there have been new developments such as the European Green Deal and new priorities for the European Commission. It is very important for EC that all our policies contribute to Agenda 2030, so EC JRC has done a lot of work to make sure that the Smart Specialisation Strategies are real STI for SDGs Roadmaps and this process will be continued. Finally, learning from other IATT members and the amazing experience accumulated in the UN system, applied over the years in a number of countries, was a very good experience, giving us food for thought and ideas for further improvement. She agreed with colleagues that we now need to focus on the implementation of what was achieved so far but also to scale up, to open up and to allow more countries use what we have developed. EC JRC wants to continue being involved and support this process. There is always more to do, but a great job was already done by the colleagues and their agencies. The role of UN DESA has also to be underlined, for providing platform for the meetings and efficient coordination of the process.

Highlights from Closing remarks

Ms Inger Midtkandal (Head of Secretariat - Maritime 21. Department of Energy, The Research Council of Norway) pointed out that opening the Norwegian presidency of ECOSOC, the Minister of International Development said ‘Norway will use its presidency of ECOSOC to promote common solutions to the challenges facing the world today’. She mentioned that it was a pleasure to hear the progress and the lessons of the UN Global Pilot Programme of STI for SDGs Roadmaps and expressed belief. In times of the present pandemic, we need even more to mobilize our STI communities to deliver targeted solutions. The positive experience of the last months was that we have never before experienced such a high trust in science. This belief in science is very welcome now that we face ever tighter public budgets and hence even more pressing needs to invest wisely according to well-planned STI for SDGs Roadmaps because we need STI in combination with good governance. Norway has started developing the STI Roadmaps already some time ago and the results are very promising. She confirmed that, similarly like the colleagues from Japan, we all need this kind of planning for action – both in developed and developing countries. Through STI for SDGs Roadmaps we learn our strengths, weaknesses and areas of excellence and we collaborate with research, innovation, civil society, public and private sector. But by focusing on national challenges we also understand how we contribute globally. The special dimension of SDGs is that they tie us all together and we are mutually dependent, so we need every country to contribute as we have heard from the pilot countries. We will never achieve Agenda 2030 acting alone. Science, technology and

innovation are the great accelerators but we also need international partnerships and cooperation for specific goals. From this crisis we have learnt that we need to be prepared for emerging crises but also that we need to work for sustainable transformation, development and recovery, and building resilience in the Decade of Delivery and Action. The lessons collected from the pilot countries and IATT members and partners in this session give a very strong message to the HLPF. We fight the pandemic with STI and we fight for all SDGs with STI Roadmaps. The five pilot countries have shown the way but we need other countries on board. It would be also great if we, as the global community could start to cooperate internationally on STI for SDGs Roadmaps.

Discussion

There was a number of questions asked during the webinar (in the chat box). Questions were answered in writing but also discussed during some interventions from the speakers). These are some of the questions posted:

Question: How can existing methodologies, tools and information sources be applied in designing, implementing and evaluating STI for the SDGs roadmaps?

Answer: Examples of proposed actions/ projects/programmes for the implementation of the STI for SDGs Roadmap

<https://sustainabledevelopment.un.org/index.php?page=view&type=20000&nr=7132&menu=2993>

Question: Do you think Smart Specialization Strategies are the best way to integrate STI to achieve SDG?

Answer: I can say it was great experience, in our case it worked really well, with the focus on evidence-informed decision-making, inclusive, participatory process and real mobilization of stakeholders and political buy-in. The updated approach, focused on SDGs is promising too, and from our, Serbia' perspective we can recommend it.

Question: Why output growth has reduced poverty but slowly and why does India have economic growth without jobs?

Answer: The pilot progress report answers the question on narrowing down the Pilot project: "All of them have chosen a narrow set of SDGs because of the difficulty of tackling all the SDGs simultaneously. As most countries are low income or lower middle-income countries with high poverty rates and the largest share or employment in agriculture, it is not surprising that SDGs 2 and 8 are the most commonly chosen goals."



This flash report was drafted by Monika Matusiak with the support from Wei Liu and Kornelia Tzinova