

High-level Study Visit to China on Science, Technology and Innovation (STI) for the SDGs

5 December 2017, Hongkou, Shanghai, China

Session 8: Capacity Building towards STI for SDGs

Useful documents:

- *DR infographics “barriers to doing research”*
- *DR synthesis*

Thank you very much to: - *note of thanks to participants* -

Introduction (1mn)

Looking at the role that Science, Technology and Innovation must play in our societies and towards the SDGs makes us interrogate ourselves about the means to mobilize human capital for their achievement. How to ensure that proper skills are developed for a knowledge society which is sustainable and growing? How to set the right incentives to create opportunities and create a community of scientists and innovators? How to ensure that this is done in a way which is contextualized, and relevant for the people in developing countries? We need these answers to implement the STI agenda, but also because they will help us to understand the effectiveness of capacity building efforts and the resources invested in it. Today I would like to share with you some of the lessons learnt by the Global Development Network over the past 17 years. Our perspective is nurtured in capacity building for social science research which, as I will mention later, can be fundamental when dealing with technology facilitation in the context of development.

Challenges and recommendations (5mn)

We therefore propose three challenges and recommendations for capacity building efforts towards Science, Technology and Innovation, and I will relate these recommendations to the Technology Facilitation Mechanism and the online platform we are discussing today.

1. Science is not a luxury

The first challenge is that in many countries, science is not seen as a priority. The number of countries having set ambitious targets on science and innovation is growing, but still small. This means that individuals who have the potential or the ambition to become scientists or innovators, are not provided with the enabling environment to do so. Several barriers stand in the way of this enabling environment, such as underinvestment, lack of opportunities, or a disconnect with other stakeholders (from policy, private sector or international science community). Because of this, many individual talents will remain hidden, and my first recommendation is to actively search for talents, identify them and help them grow.

- Recommendation 1: Actively search for talents, identify them and help them grow

One whose desire is to support the science and innovation community should firstly target this population, and provide it with incentives to engage in a research or innovation career. Open competitive calls and awards competitions are great tools to achieve this, in combination with continuous support throughout implementation, as well as visibility to other spheres of policy and practice through publications, events and such. This recommendation is also one for the online platform, to encourage buyers in supporting these competitions. Since the objective is also to give incentives to suppliers, a maximum of flexibility should be given in the choice of topic, ensuring the relevance and contextualization of the research and innovations.

2. It is often a lonely endeavor

The second challenge is that the science community in developing countries usually follows two features: it is small in size and the senior researchers have their time split between consultancy, teaching time, and their own research time. They can hardly commit time to follow new projects and their contribution to training the next generation of scientists is limited to their teaching time. Taken together, the absence of a critical mass in developing countries' science communities prevents the establishment of a fertile ground for research and innovation. The solution to this, which is my second recommendation, is to support higher education institutions, and encourage mentorship within these institutions.

- Recommendation 2: Support higher education institutions and encourage mentorship

The challenge here is to ensure the development of knowledge-based societies based on three pillars which are (1) higher education, (2) research and (3) innovation, forming what was coined as the 'knowledge triangle'. Supporting higher education institutions through demand-led programs will help to equip new generations with the skills to conduct research and accompany innovation processes. Similarly, encouraging knowledge transfer through mentorship is an effective way to ensure continuity in the science and innovation agenda, and relevance at the local level. Based on the lessons learnt by GDN throughout the years, this has proved to be a key element of successful research capacity building programs.

3. North-South innovation adoption still remains the norm

The third challenge is that the leadership of STI initiatives, including capacity building, is often taken by developed countries which have a stronger voice than their counterparts in the South. The result is that agendas do not necessarily reflect local priorities, and Southern actors are not given the full possibility to express a creative potential which is ultimately related to their local context. There is no one-size-fits-all, and this applies to the implementation of the STI agenda for the SDGs. My third recommendation is therefore to fully harness the potential of South-South Cooperation towards capacity building for STI.

- Recommendation 3: Harness the potential of South-South Cooperation

In harnessing South-South Cooperation, the objective is indeed to make the most of the existing forces working for science, technology and innovation in the Global South. Cross-country collaborations must be fostered to elicit a regional response to the potential and the challenges of technology and innovation. Regional networks must be nurtured through various forms of knowledge transfer and collaborations, to create links between the communities of scientists, technology suppliers and innovators in different developing countries. The TFM's online platform is certainly on the right track about this, with the involvement of the Chinese Ministry of Science and Technology as a key partner, thus being a great asset for the platform establishment.

Overall, these recommendations are aimed at creating an enabling environment by acting at the levels of individual, organizational and institutional capacity building. There are many barriers to STI in the South that affect the effectiveness of capacity building, and GDN believes that the Technology Facilitation Mechanism will have a successful approach if it integrates the three principles of nurturing young talents, encouraging inter-generational mentorship, and build South-South Cooperation networks.

Research Capacity Building and the SDGs (1mn)

I can cite two ways in which their implementation relates to the successful achievement of the SDGs. Firstly, the implementation of the goals needs to be tracked by the scientific community and there is no better place than the local and national research centers to monitor the effectiveness of development policies. Efforts to build a research culture should be welcome as they indirectly support the implementation and evaluation of the SDGs by strengthening analytical capacities. Secondly, capacity building programs should be broadly targeted towards priority sectors as outlined by the SDGs, in order to allow for the demand-based approach that GDN is calling for. Research capacity building efforts often take place outside the framework of the SDGs, and thus are difficult to track and their effectiveness is hardly measurable.

Conclusion – GDN's approach (1mn)

To conclude, let me note that capacity building towards science, technology and innovation for development, and for the achievement of the SDGs, - and this is a view that applies beyond the topic of capacity building – should not be implemented without the analytical lens of the social sciences. Technology and innovations can be highly disruptive, and they affect lives in many different ways. Yet, the most cutting-edge science and technology initiatives will most often come from developed countries, creating a competitive pressure on scientists and innovators in the Global South. It is the role of social science researchers to accompany these processes and ensure that they respect social, cultural and economic national priorities. Science, Technology and Innovation is indeed a sector to be harnessed for development, but also and most importantly for the benefit of people in developing countries, and ultimately to improve lives and well-being. Deploying Science, Technology and Innovation for the SDGs is a social and political process, and needs to be approached as such to ensure its success.