

Session 16: Science-policy interface and emerging issues

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Bridging Developing Countries' STI Capacity Gap for SDGs through Science-Policy Interface

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- 1. Identifying the STI capacity gaps for SDGs**
- 2. Lessons Learned of science-policy interface for
STI capacity building**
- 3. Recommendations**



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1. Identifying the STI capacity gaps for SDGs

- ❑ The ambitious nature of the 2030 Agenda requires fundamental changes in the ways in which the SDGs are implemented.
- ❑ These changes can be achieved, among others, through traditional and emerging science, technology and innovation (STI).
- ❑ STI is not only an explicit focus of Goal 9 but also a key enabler of most of the Goals.



1. Identifying the STI capacity gaps for SDGs

- ❑ Developing countries are facing many STI capacity gaps when implementing SDGs.
 - Inadequate and mismatched R&D.
 - low literacy rates and higher-education enrollment rates.
 - Weak infrastructure.
 - Unafford to and Lack of suitable and advanced technologies for sustainable development.



2. Lessons Learned of science-policy interface for STI capacity building

- ▣ From “for the poor” to “ by the poor”: frugal, grassroots, and pro-poor innovation for SDGs.
 - Wearable patient sensors in Sierra Leone.
 - Low-cost battery powered infusion monitors in Guinea and Liberia.
 - The Mitticool refrigerator designed by an Indian potter to work without electricity.
 - In Brazil, networks for grass-roots innovations provide water cisterns to capture and store rainfall.

2. Lessons Learned of science-policy interface for STI capacity building

- ❑ **From downstream practice to upstream policy:** China's National Technical Task Force (TTF) Initiative
 - launched nationwide by the MOST since 2002, which was up-scaled from a local city practice.
 - Encourage scientists to bring their research achievements and technologies to farms to reduce poverty in rural areas, through transferring knowledge to smallhold famers to increase agriculture outputs, add values, alleviate disasters, and help them to develop businesses.
 - >700,000 TTF.
 - > 50 million beneficial farmers.
 - Internationally spread TTF.





2. Lessons Learned of science-policy interface for STI capacity building

▣ From civil society action to government initiative: Program of Science Classrooms in Rural Schools (SCRS)

- launched in 2012 by donation from enterprises, operated by a Foundation.
- About 300 in 5 years, most in western least developed areas, like Tibet, Yunnan.
- Retired scientists guide students to conduct experiments. Enable rural students to experience science.
- Centre government acknowledged this Program and made it a national policy, through public budget to mobilize more private funding.





2. Lessons Learned of science-policy interface for STI capacity building

- ❑ From “elite innovation” to “mass innovation”: Mass Entrepreneurship and Innovation Initiative
 - Chinese government puts the innovation-driven strategy as national priority. Through policies to facilitate mass entrepreneurship and innovation which, in turn, blooms the needs of STI capacity building.
 - Millions of grassroots, the poor and migrant workers successfully started up their business at home by ICT and E-commerce rather than migrate to cities for the low-paid jobs.
 - Encourage scientists to transfer their research papers to actual technology by unprecedented stimulating policy.



2. Lessons Learned of science-policy interface for STI capacity building

- From “traditional methods” to “emerging solutions”:
 - More quickly application of STI: Mobike, OfO for green transport; internet finance for small-and-micro business.
 - Policies should encourage and guide development of emerging technologies to deal with grand challenges.
 - Also have enough tolerance to emerging technologies and keep balance between regulation and deregulation.



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3. Recommendations

- ❑ **Beyond ivory tower:** Policy should raising awareness of scientists to devote themselves to address SDGs with economic solutions through research.
- ❑ **Synergy science and development:** SDGs should be a priority in national research agenda, while research results should apply to SDGs.
- ❑ **Break winner-take-all:** Mainstream STI capacity building and technology transfer in the Official Development Assistant (ODA).



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3. Recommendations

Last but not least:

- ❑ Further play role of the Commission on Science and Technology for Development as the torch bearer and the premier international forum for addressing new and emerging issues in STI.
- ❑ Mainstream STI in the HLPF review process.
- ❑ links between HLPF and UN bodies to support our collective efforts to strengthen the science-policy interface for sustainable development.



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Many thanks for you attention!

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