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Global Governance of Technology and Institutional Architecture

The International Framework

The prevailing debates on the unprecedented COVID-19 health and safety crisis of humankind world over have thrown up deeper policy insights as ethical and socio-economic issues are yet to be comprehensively addressed in the emerging frameworks for global governance of technology. In the spheres of technologies like information and communication technology, nanotechnology, new material sciences, biotechnology, including the synthetic biology, convergence, multiplication, application of artificial intelligence and use of cyber tools with ability to scaleup have created new opportunities for social and economic development and new challenges for governance.

After the launch of Technology Facilitation Mechanism (as part of Agenda 2030) and launching of STI for SDGs at the Osaka G-20 Summit, while the world is looking at making technologies work for access, equity and inclusion (AEI), the other frontiers of governance are posing increasing threats to humankind and our civilization. Although nuclear and space technologies are areas where governance mechanisms have responded well, biosecurity is yet to receive due attention. Since the adoption of the Biological Weapons Convention (BWC) in 1975, adequate institutional and governance mechanisms for security and disarmament could not come up. Its linkage with other arms of the UN, like the WHO, has also left a lot to be desired. It is essential to address such matters *a priori,* instead of reacting in retrospect.

This year, the Biological Weapons Convention (BWC) is celebrating its 45th anniversary and the U N Secretary General made a very significant observation when he said, "Scientific advances are reducing technical barriers which earlier limited the potential of biological weapons…I therefore call on States, parties to urgently update the mechanisms within the Convention for reviewing advances in science and technology and to work together to improve biosecurity and bio-preparedness so that all countries are equipped to prevent and respond to the possible use of biological weapons. The

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This Policy Brief has been prepared by Professor Sachin Chaturvedi, Director General, RIS.

Convention's Ninth Review Conference in 2021 is an opportunity to address these and other issues."

India has been consistently raising the issue of STI and disarmament for last several years at various meetings. In its statement on 26th March 2020, India suggested strengthening of the institutional architecture for greater effectiveness of the BWC. India again raised the issue of role of science and technology in the context of international security and disarmament.[1] This was actually building further on India's proposal of 2017 when, along with 18 other countries, it had proposed the need to explore challenges and concern areas related to the use of such technologies for military purposes. The proposal had also raised the issue of potential application of such technologies for enhancing assurance levels and confidence building as well as lowering the costs of disarmament verification and arms control.

In these discussions at the BWC, views from India corresponded with those of the global South to a great extent. Several developing countries backed India. At the March 2020 event, US reaction was very sharp when Senator Chris Ford, Assistant Secretary, US State Department Bureau of International Security and Nonproliferation (ISN), tweeted: "We observe the 45th anniversary of the Biological Weapons Convention and reaffirm the importance of BWC Parties' commitments to preventing biological weapons. The Covid-19 pandemic highlights the importance of BWC Parties' commitments to reducing all biological risks."

STI and International Cooperation

India is Member of a working group established between high level officials such as Ministers and Chief Scientific Advisers from the following countries: Australia, Brazil, Canada, Germany, Japan, New Zealand, South Korea, Singapore, United Kingdom, Spain, Portugal and USA. The objective of this working group is to share research results and information on how science can assist in the decisions and measures that governments are taking to face the Corona virus that causes COVID-19. Prime Minister Narendra Modi and his Swedish counterpart Stefan Lofven agreed on 7th April 2020 on the possibility of collaboration and data sharing between researchers and scientists of the two countries, a move which would contribute to the global efforts against COVID-19. Apart from initiating a $10 million SAARC Fund, India also hosted SAARC e-ITEC network training programme on COVID-19 management for healthcare professionals. More than 150 SAARC participants joined the course that began on 17th April, 2020.

Developing countries like India have major institutional challenges that range from low budgetary allocation to low level of intra-agency coordination, intense fights for turfs and almost no effort to engage with other actors. India's response to COVID 19 from the STI perspective is extremely unique from all possible stand-points. The role of STI has certainly emerged as an important facet. As we move forward, this would have to be duly addressed for enhancing institutional efficiency.

[1] This issue was first added to the agenda of the First Committee in 1988, with India as the main sponsor. In introducing a draft resolution, the delegate recalled that increasing amounts of resources were being devoted to developing new weapon systems, which caused uncertainty and insecurity. Developments such as the graduated use of nuclear explosive power, miniaturisation and large-scale computing capabilities using micro-electronics, and fuel and laser technology were transforming the security environment. Therefore, it was argued that work should be initiated to develop a shared perception of the problems involved and to make possible concerted efforts to resolve them.

Now that some leading groups are on the EU supported Covid Moonshot project for crowd sourcing of ideas, India would have to step up cooperation across labs and national programmes. In this respect, Prime Minister's call to the young Indian scientists to deliver is very timely. A high-level task force has also been constituted with the main objective of speeding up national and international efforts towards vaccine development to treat Covid. The Task Force would be headed by the PSA and NITI Aayog and it would also have representatives from the AYUSH ministry, ICMR, department of biotechnology, drug controller general of India, among others.

India's efforts to evolve a robust STI response would have greater strength if India continues to support global STI efforts that have assumed much greater significance in situations like pandemics, where borders just don't matter. In this regard, pragmatic R&D linkage with WHO may be further explored. With several polarising views about the organisation, it cannot be missed that the WHO released around 50 technical documents and mobilised around 2 million protective equipment to 133 countries, since the outbreak of COVID-19.

Global Public Goods

The most important target at this point before the global community is in form of SDGs. With the launch of Technology Facilitation Mechanism (as part of Agenda 2030) and launching of STI for SDGs at the Osaka G-20 Summit, the trajectory on sustainability seems to be emerging fast. The effort should be for making technologies work for access, equity and inclusion (AEI), the other frontiers of governance are posing increasing threats to mankind and our civilization.

Further, the world leadership must take a call on what Prime Minister Modi has suggested in the regional context of South Asia for the need to move collectively in the fight against COVID-19. As is clear, nationalism is no solution to this major crisis at hand. Together we need to move for creating global public goods. They are required to be strengthened and nurtured, particularly in the realm of connectivity, supporting national medical and other specialised capacities and collective R&D efforts.

The world urgently requires several initiatives to address the needs of each country for improving infrastructure to meet their national challenges in the sphere of STI. There are several countries that have been sharing their teams of senior doctors and scientists for promoting expert led crisis management. It is a popular modality of partnership in the context of South-South cooperation; moreover, in this hour crisis, this has also become the buzzword for North-South cooperation.

Collective Governance

Prime Minister Narendra Modi's proposal to engage with SAARC member countries and leaders through video conferencing for chalking out collective strategy for combating Corona virus outbreak is a very timely and laudable initiative. This truly reflects the spirit of the G-20 statement which said that the G20 countries would enhance cooperation and coordination to control the outbreak, protect people, mitigate the economic impact and maintain economic stability.

It indeed shows how the leaders at global level articulate positions and how best regional cooperation may help cope-up with the crisis.

While the challenge seems to be deepening on all fronts, the globalisation that was already grappling with the rising of nationalism now is facing a much greater crisis of global governance. In this respect, the key question is how the world organises itself, as trust deficit has also multiplied many times, particularly when economic challenges have also deepened.

At national level it need to be realised that the science agencies working on the biological part of the pandemic came together and delivered what we all have witnessed. However, a biosecurity framework with teeth is urgently required at an international level. Debates on how to tighten verification and control in this field are unlikely to move in any direction. Among the existing institutional architecture within the country, our weakest link is of biological sciences. The trinity of space, nuclear and defence R&D had lot of attention since the 1970s. However, We must create an agile framework to cover the whole chain of public-health interventions – from scientific research and early warning to policy formulation, implementation, and evaluation. Bioscience expertise and knowledge networks should be urgently evolved in light of our national preparedness for biological warfare and STI would be a crucial component.

It is also pertinent for India to create a National Authority on Biosecurity and Biological Emergencies (NABBE) which would not only lead but also coordinate by encouraging institutions to work together in well-defined supplementing roles, based on expertise and to not compete with each other and protect illusive turfs. With seamless coordination one can avoid loss of time in unnecessary approvals and egoist coordination. The NABBE would need to work closely with other national initiatives for the disaster management and other agencies including defence, home, agriculture, finance, etc. At global level, a collective global governance strategy for biosecurity is need of the hour in view of the challenges thrown up by COVID-19.

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Core IV-B, Fourth Floor
India Habitat Centre
Lodhi Road, New Delhi-110 003, India.
Ph. 91-11-24682177-80
Fax: 91-11-24682173-74-75
Email: dgoffice@ris.org.in
Website: www.ris.org.in