

Harnessing Biotechnology for Development

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I am pleased to inaugurate the Second Conference on Biotechnology for Asian Development being organized by RIS in collaboration with CII and IUCN, and with the support of UNESCO and DBT. I recall being at the First Asian Conference organized here by RIS two years ago and I am happy to note that the policy dialogue initiated at that conference for harnessing the potential of this new core technology for Asian development is continuing. I am particularly pleased to see scholars and experts here from many Asian countries besides experts from international development institutions.

For some time now there has been a discussion on the potential of biotechnology for development. It is now well established that these technologies provide valuable tools for meeting a number of developmental challenges in different areas. In agriculture for instance, the high yielding varieties which have been extensively used since the mid-sixties and ushered in green revolution are not only reaching a plateau in terms of yields but are not sustainable given their heavy dependence on chemical fertilizers, pesticides and irrigation. Biotechnology provides tools for addressing the yield growth in a more sustainable manner by developing low cost varieties

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based on use of biofertilizers and integrated pest management and hence are more appropriate for small and marginal farmers in developing countries. Biotechnological tools can also be used to improve the nutritional content of food crops so as to address the problem of malnutrition in developing countries.

Biotechnologies are revolutionizing the health care system with new diagnostic tools, medicines and drug delivery systems. Recent developments in genome research have the potential of transforming the healthcare system beyond recognition. Biotechnologies also find major applications for development of environmentally friendly technologies in industry, in non-conventional energy, mining, food processing, among many others.

Recognizing the potential of these technologies, the governments worldwide have taken steps to harness them for their development. Several Asian countries have built impressive institutional infrastructure and capability in different areas of applications. These countries can fruitfully cooperate in various ways to exploit their synergies and expertise in the sphere of biotechnology for mutual benefit. Some initiatives at regional cooperation are already on in the framework of Asian Cooperation Dialogue (ACD), in ASEAN-India context, and in SAARC, among others. I am happy to note that the focus of the Conference this time is on regional cooperation for ensuring access and capacity building. I believe that regional cooperation in this area can usefully complement the growing Asian regional economic integration in trade and investment among other areas. Regional cooperation can also be fruitful in building a more development friendly international regime for harnessing the potential of these technologies.

An important issue in context of WTO concerns the import regulations for genetically modified food and other items. At present there are very few countries where production and import of GM crops are completely legalized. Various WTO committees like the Committees for Sanitary and Phyto-Sanitary (SPS) Measures and Technical Barrier to Trade (TBT) are discussing issues like traceability and labelling, equivalence and precautionary principle, etc. I believe that a collective thinking and

coordination by Asian countries at these Committees and other forums would be fruitful.

Furthermore, as we look forward in context of diffusion of GM crops across developing countries, we realize that a key focus has to be on capacity building in terms of handling GM crops in the fields. One needs to take lessons from the experiences with Bt Cotton and Corn in a number of countries with respect to issues relating to labelling, traceability and bio-safety management. Sharing of these experiences can be fruitful. The regulatory issues concerning biosafety are being discussed at international level. The Seventh Conference of Parties (COP) held at Kuala Lumpur in February this year has advanced the agenda for meeting the objectives of the Convention of Biological Diversity (CBD) and the Cartagena Biosafety Protocol.

Apart from building a consensus on biosafety issues there are two more important issues which I believe need to be considered. One is to explore the possibility of launching genetic literacy drive to ensure wider popular participation in the biotechnology revolution.

The second is to see that investment in R&D and production by both public and private sectors is channelled in areas of highest social priority rather than driven by purely commercial considerations. This is important if we are to fully harness the potential of these powerful technological tools. This in turn requires an enabling environment for growth of biotechnology industry in terms of intellectual property rights (IPRs) regime, availability of institutional infrastructure, finance and venture capital, etc. One of the areas of concern in this respect is the tightening regime of intellectual property protection. In particular, the patent protection on research tools necessary for further development such as expressed sequence tags (ESTs) and restriction enzymes, etc. can adversely affect accessibility of these technologies by developing countries. In the earlier technology revolutions such generic tools used to be in public domain available to researchers everywhere. We need to debate the implications of such trends and draw the attention of the international community to respond to them.

I hope that biotechnology industry can further speed up the growth in Asia especially with regional cooperation. Asia is a continent known for rapid economic progress over the past fifty years. The Japanese example of rapid growth in the 1960s and 1970s was followed in rapid succession by several other Asian countries such as South Korea, Singapore, Taiwan, Malaysia, Thailand and Indonesia and 7 per cent annual growth became a routine affair in east Asia. China has achieved an average growth rate of about 9 per cent per year since 1980. Once considered as a laggard, South Asia has grown at about 5.5 per cent on average over the past two decades and the current growth outlook is much brighter. The Indian economy is currently growing at about 8 per cent per annum. With the rise of China and India, it is now clear that the center of gravity of the world economy will shift to Asia in the 21st century. A recent study by Goldman Sachs shows that China and India would emerge among the top three economies of the world in the next 50 years.

I am sure that this Conference will address these and many other challenges that the policy makers face in the Asian countries. I hope that you will come out with useful findings and policy lessons for capacity building in this important area of technology including those pertaining to regional cooperation in Asia.