



Suggestions on enhancing Science and Technology Co-operation between India and Bangladesh



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For more than four decades, India and Bangladesh have been cooperating in many fields, including Science and Technology (S&T). The countries are common members of the regional and international organizations such as SAARC, BIMSTEC, IORA, Commonwealth, etc. Both have unique problems of poverty and climate change to name a few, and they share strong cultural ties. In the realm of Science and Technology, Bangladesh and India have recognized the importance of international scientific collaboration quite early and considered it an important tool for the advancement of S&T research. As a result, these two countries have signed a number of collaborative agreements on diverse themes and projects. Some of the examples of such collaborations include agreement signed on cooperation in the field of technological and scientific research for development in 1982 between the Government of People's Republic of Bangladesh and the Government of Republic of India and the protocol signed for scientific and technical cooperation in 1991 between the Science and Technology Division of Bangladesh (STDB) and the Department of Scientific and Industrial Research (DSIR) of India.

In the 4th meeting of India-Bangladesh joint commission on the S&T in 2014, both adopted an agenda under which two workshops were held on chemical meteorology and food safety. A working programme was deployed for S&T cooperation between CSIR, India, and BCSIR, Bangladesh on 15 January 2015 for the period 2014-2017. Lately, the Council of Scientific and Industrial Research (CSIR), India, took the initiative to undertake joint activities to be implemented in the next five year period (2018-2023). Under this new arrangement, both countries would organize seminar, symposium, workshop, short-term training (3/6 month), long-term training (1-2 year) and/or PhD course in the specific fields. The cooperation would include exchange of scientists, researchers

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and scholars in the specific fields and long-term training for young scientists and short-term training for senior and junior scientists.

Considering the above, following potential areas have been identified for further co-operation. They need to be developed further as full-fledged proposals. While we look forward to contribute to them as the participants of the ITEC Programme in Science Diplomacy, these are placed for kind consideration of both the governments.

Material science and advanced organic materials

- Presently, the BCISR Laboratories, Dhaka, have ongoing R&D projects to develop Nano-structured materials for their potential application in Solar energy conversion and storage, gas sensor, photo-catalytic water splitting, water purification, etc. The BCISR scientists are keen to learn cutting-edge technologies in the given field and share research outputs for mutual scientific and technological advancements. India-Bangladesh may collaborate in this area through agreements and joint programmes between the CSIR and other research institutes of India with following institutes and their respective area of research.
 - » Central Glass and Ceramic Research Center(CGCRC): Nano-Structured Materials
 - » National Physical Laboratory(NPL) : Flexible Organic Energy Devices

- » Indian Institute of Chemical Technology(IICT): Solar Energy Research Polymer & Functional materials, Nano-materials Synthesis and Characterization techniques
- » International Advanced Research Center for Powder Metallurgy and New Materials(ARCI): Solar Electrochemical Energy storage(H_2 production), Mesoporous Carbon and Graphene synthesis for consumer electronics; Solar Energy Materials; Sol-Gel Coating and other low cost & industrially scalable synthesis techniques.

After reflecting on the collaborative efforts in the S&T, undertaken by different institutions in Bangladesh and India, it can be inferred that there is an optimism in both the countries, particularly among scientists with interest to encourage mutual sharing of scientific expertise and capabilities.

Various institutional mechanisms and policy interventions may help in further strengthening cooperative endeavors for addressing challenges in agriculture, health-care and biodiversity and environment.

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