

# RE-ENERGISING SCIENCE DIPLOMACY IN SOUTH ASIA

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At the 108th Indian Science Congress on 3 January 2023, Prime Minister Narendra Modi exhorted the scientific community to work towards meeting “the needs of the country...and give momentum to the world’s humanity”.<sup>1</sup> The salience of science and technology (S&T) as important drivers for economic development has long been recognised. Science diplomacy and scientific collaboration, bilaterally and multilaterally, remains critically important, given the need to mitigate common challenges that transcend borders. These include economic crises, global pandemics, the climate crisis and environmental degradation. Scientific endeavours can not only act as an effective tool to engage countries, but also can accelerate global solutions to shared challenges.<sup>2</sup>

The South Asian Association for Regional Cooperation (SAARC), formed in 1985, identified science and technology as one of the core areas of cooperation among the member states. A Technical Committee on S&T was formed to facilitate cooperation through workshops, expert group meetings, circulation of state-of-the-art reports on different S&T sectors, training of scientists and initiating joint research and development (R&D) projects in the area of energy, food technology, remote sensing, forestry development, erosion control and mining.

Regional initiatives relating to science diplomacy in South Asia are largely absent. The SAARC Technical Committee on S&T, in fact, has not met since 2010.<sup>3</sup> Joint research publications, which are considered an important indicator of the strength of research collaboration and its impact on different fields, are also largely absent. Most of the scientific publications of South Asian scholars are with researchers in institutions outside of South Asia, while intra-regional collaboration is relatively rare, as highlighted in the 2021 UNESCO report.

**Source:** [UNESCO Science Report 2021](#), Paris (Social Sciences, Arts and Humanities are excluded).

On the failure to advance science diplomacy under SAARC Technical Committee of S&T, the former secretary to the Science Advisory Council to the Prime Minister of India, P.J. Lavakare, flags lack of financial resources and political will as reasons that are preventing scientists from taking initiatives.<sup>4</sup> Similarly, Malti Goel, former adviser at the Ministry of Science and Technology, Government of India, notes that “countries in this region do not see each other eye to eye, making it difficult for science diplomacy to progress.”<sup>5</sup> Indeed, several diplomats, heads of NGOs and research institutes, international organisations and government officials from South Asian countries have said that “cross-border tensions are holding back progress in environmental policy and scientific research”.<sup>6</sup>

There are several examples of scientific collaborations between countries with inimical relations. During the Cold War, the United States and the Soviet Union collaborated on space science.<sup>7</sup> Subsequent to the US embargo on Cuba from 1961, scientific collaboration between the two countries was limited to marine sciences and health threats from infectious diseases.<sup>8</sup> The US–Cuba engagement, though, resumed following the restoration of diplomatic ties under President Barack Obama in 2015. SESAME (Synchrotron-light for Experimental Science and Applications) in Jordan was commissioned in 2017 to foster scientific cooperation with the member states of Egypt, Cyprus, Pakistan, Iran, Israel, Palestine and Turkey.<sup>9</sup>

As regards China–US research collaborations, Deng Xiaoping and Jimmy Carter signed the first formal ‘US–China Inter-governmental Science and Technology Agreement’ as far back as in 1979.<sup>10</sup> In one of the studies on co-authored publications during 2009–2018 between Chinese and American scholars judged on three criteria, i.e., overall volume, high impact and high-technology research, it was ascertained that China has been the US’s largest collaborator since 2011. On high-impact research (82 high impact science journals compiled in *Nature Index*), Chinese researchers have published a total of 5,779 papers in 2009, with US researchers being the largest collaborators (on 1,516 papers). In 2018, of the total 17,044 papers Chinese researchers published, US researchers were again the largest collaborators (on 5,339 papers). On high-technology research (nuclear science and technology, remote sensing and robotics), the US was the biggest collaborator since 2009.<sup>11</sup>

US domestic policies like ‘American First’ and ‘Make America Great Again’ (by the Trump administration) coupled with rising geo-political contestations with China, though, have cast a shadow on such scientific cooperation, going forward.<sup>12</sup> The Trump administration also reduced the budgets of many agencies like National Science Foundation (NSF), National Institutes of Health (NIH), National Institute of Standard and Technology (NIST), Department of Energy (DoE), and the Environmental Protection Agency (EPA). Former US science and technology adviser William Colglazier cautioned that pursuing narrow visions of national interest based on a ‘zero sum’ view of international relations rather than a notion of shared interests that require a ‘win-win cooperation’ will have negative consequences.<sup>13</sup>

With the backdrop of growing climate crises, the notion of a green economy has emerged as a dominant policy response for an alternative vision of growth and development. Negotiations on the transferring of green technologies for socio-economic development are taking place multi-laterally and bilaterally, at forums like COP26, Earth Summits, among others.

Though SAARC has been termed ‘ineffective’ and ‘defunct’, there is still a silver lining, where member countries can get together to resolve global challenges. Such a spirit of collaboration was evident in fighting the COVID-19 pandemic, where the heads of the SAARC member states came together on 15 March 2020 and initiated a COVID-19 Emergency Fund of US\$ 21.8 million.

The recently released UN report on Sustainable Development Goals (SDGs) has drawn attention to the fact that the South Asian region is not on track to achieve any of the 17 SDGs, and the COVID-19 pandemic and climate change have only exacerbated the developmental challenges in the region.<sup>14</sup> In the midst of these perilous times, advancing ‘science’ remains a viable option of addressing global and regional developmental issues.<sup>15</sup> Science diplomacy can therefore be effectively used to address critical challenges regionally in South Asia.

*Views expressed are of the author and do not necessarily reflect the views of the Manohar Parrikar IDSA or of the Government of India.*

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