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# EMPOWERING DIPLOMACY THROUGH SCIENCE IN SOUTH ASIA

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## INDIA & THE CTBT: A POLITICAL HISTORY

In 1954, Indian Prime Minister Jawaharlal Nehru championed the cause of a nuclear test ban by calling for a "standstill" agreement. In 1993, India was among those that co-sponsored the call for a test ban treaty. However, India's reservations blocked its adoption by the Conference on Disarmament (CD) in 1996.

India's principled opposition drew from its emphasis on universal and complete nuclear disarmament in a time-bound manner. India saw the attempt at a test ban becoming an end in itself, while exacerbating technology differences between the 'haves' and 'have nots.'

India also saw Article XIV, the entry-into-force (EIF) clause, as a violation of its right to voluntarily withhold participation in an international treaty. The treaty initially made ratification by states that were to be a part of the IMS mandatory for EIF. Because of this, India withdrew participation from the IMS.

On the security front, India faceduncertain dangers from Pakistan, and China, which had conducted nuclear tests even while the CTBT was being negotiated.

All of this culminated in, then Indian envoy to the United Nations in Geneva, Ambassador Arundhati Ghose's statement at the CD in 1996 in which she said, "...India will not sign this unequal treaty, not now, nor later."

After the 1998 nuclear tests in Pokhran, India declared a voluntary moratorium on future nuclear tests, which, in its view, made discussions on signing and ratifying the CTBT redundant.

## Applying a Non-Traditional Security Approach

History demonstrates that international security decision-making can often be held up by political factors. However, even in an political impasse, decisions with the potential to impact the world must be made – because problems with global interlinkages will persist regardless of whether a political deadlock is broken. Often, solutions to these global problems are technical and scientific. This project considers therefore, the instrumentalisation of diplomacy through scientific investigation.

Neog (security and foreign policy) and Jha (environment policy) came together to work on addressing diplomacy through science in service of SDG 13 in acknowledgement of the silos in which professional verticals function, and to undertake an interdisciplinary approach to global problems at the cross-section of science, diplomacy, and security.

## Revisiting Political History

In the relegation of CTBT discussion to the backburner, one important – and, crucially -- non-politicised aspect of the CTBTO is obscured: the scientific and technical benefits afforded by its monitoring system, whose data has significant spin-off potential, from disaster early warning to climate change.

Seen in the context of global commitments to Sustainable Development Goal (SDG) 13 ("Take urgent action to combat climate change and its impacts") and the country's rising climate challenges, the argument for the use of IMS data for scientific research and application is reinforced. Within the context of the CTBT, what if the focus shifts from what prevents any discussion on the CTBT in India, to an independent consideration from a purely techno-scientific lens of IMS data applicability to India's climate change instruments, and how these can give a fillip to SDG 13?

## Using Interdisciplinary Dialogue

India's INDC states "build capacities, create domestic framework and international architecture for quick diffusion of cutting edge climate technology and for joint collaborative R&D for such future technologies";

Data from IMS stations is disruptive in its precision and advantages towards interpreting climatic signals. This presents a compelling case for India to explore use of the data and the establishing IMS stations from a techno-scientific lens.

Its scientific and civilian benefits towards achieving SDG 13, expand the scope for interdisciplinary dialogue through Track 1 and Track 1.5 diplomacy.

The growing relevance of the data, a need for strong leadership and cooperation on climate change; all provide an opportunity for civilian experts, government and non-government experts, across disciplines such as environment and foreign policy, to exchange best practices in using the data to forward international security.

## IMS DATA APPLICABILITY TO SDG 13 IN INDIA

India is among the countries most vulnerable to climate change, with 85% of its area prone to one or more natural hazards. In the absence of disaster preparedness, extreme events lead to lives lost and huge economic losses (<5 billion USD in the 2018 Kerala floods).

Improved data for meteorological predictions and multi-hazard early-warning systems could lead to advances in adaptive capacity and resilience.

The use of IMS seismic, hydroacoustic, radionuclide and infrasound data could provide such advances when used by the key forecasting and research institutions –the Indian Meteorological Department (IMD), Indian Institute of Tropical Meteorology (IITM), Indian National Centre for Ocean Information Services (INCOIS); as well as leading think tanks and scientific institutions such as the Indian Institutes of Technology (IITs).

The IMS provides a stable monitoring baseline, for climate related data, that is relevant spatially and temporally; With over 300 monitoring facilities and 24x7 data over 20 years, it provides valuable signals on natural events across the globe.

An example of the above is how the using of data from radionuclide stations, has enabled scientists to predict the onset of monsoon in Kerala, India 2 months in advance with an error margin of ± 3 days; a significant improvement from IMDs prediction time of 1-3 weeks with an error margin of ± 5days.