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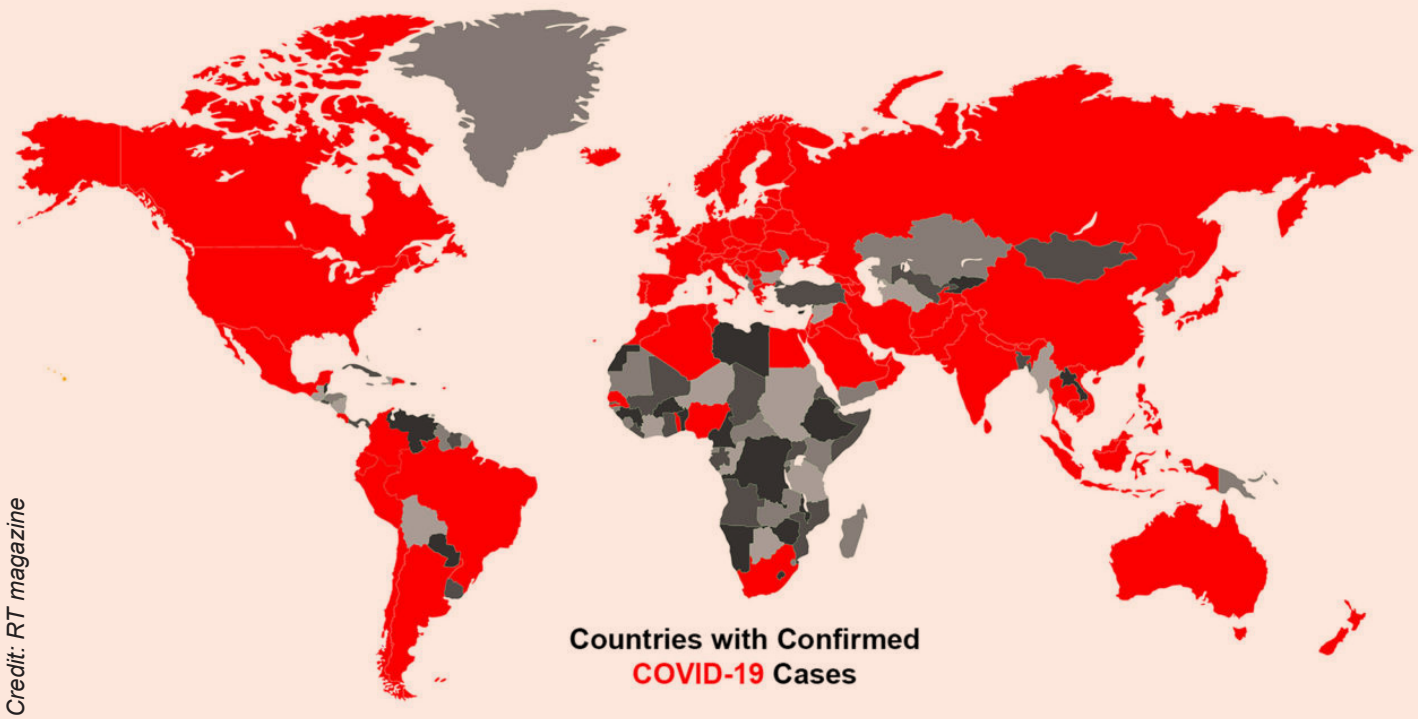
Science Diplomacy

India's Global Digest of Multidisciplinary Science



Credit: RT magazine

India's Diplomatic Footprints to Combat COVID-19

And More

Inside:

India's Diplomatic Footprints to Combat COVID-19

The Coronavirus disease (COVID-19) is caused by the virus SARS-CoV-2 and was first reported to the WHO Country Office in China on 31 December 2019. This outbreak was declared a Public Health Emergency of International Concern on 30 January 2020. Amid COVID-19 crisis, India is working closely with other countries to combat the pandemic challenge through collective response which includes joint research and collaboration, technologies, development of solutions, both therapeutic and vaccines, and testing and diagnostic kits.

On 15 March 2020, Indian Prime Minister Shri Narendra Modi addressed the South Asian Association for Regional Cooperation (SAARC) leaders through video-conference and announced the creation of the COVID-19 Emergency Fund with an initial contribution of US$10 million. The positive response of SAARC member-states to India's initiative led to a sum of US$18.8 million demonstrating the commitment to the collective fight against the pandemic. The purpose of this fund is to tackle and mitigate the risks associated with the coronavirus pandemic in the South Asian region.

On similar lines, the G-20 nations had a virtual meeting on 26 March 2020 and the member countries (including India) decided to inject US$5 trillion into the global economy to fight the social and economic challenges offset by the coronavirus pandemic. The joint statement highlighted the commitment to share timely and transparent information; exchange epidemiological and clinical data; share materials necessary for research and development; and strengthen health systems globally, including through supporting the full implementation of the WHO's International Health Regulations.

India is further consulting, cooperating and collaborating with other countries such as Russia, US, China, France, etc. in addressing the challenges arisen due to this major global crisis. It has started receiving test kits from South Korea, Germany and now expects to get a million kits from the World Health Organization. India has also ordered 10,000 ventilators from China. The lessons learnt from working together in fighting COVID-19 would go a long way in fostering a culture of cooperation in the future too.

COVID-19: India's Domestic Efforts

On the domestic front, the Indian Government has announced a package of Rs. 1.7 lakh crore (US$22.6 billion) targeted to help the poorer sections of the society (including migrants' workers, women and the handicapped). Many government organisations and institutes are targeting their efforts to combat the COVID-19 crisis.

Amidst the shortage of sanitisers in the wake of the coronavirus outbreak, the CSIR-Institute of Himalayan Bioresource Technology (CSIR-IHBT), Palampur has developed a new type of hand sanitiser without harmful chemicals. The technology has been transferred to a Palampur based company M/s A.B. Scientific Solutions for the commercial production of this newly developed hand-sanitiser. Another CSIR Institute, CSIR-Indian Institute of Toxicological Centre (CSIR-IITR), Lucknow has also come up with its version of an effective hand sanitiser.

Researchers at the Indian Institute of Technology (IIT)-Hyderabad, IIT-Delhi, IIT-BHU and IIT-Roorkee have also developed hand sanitisers in line with World Health Organization (WHO) standards to meet their Institutional needs. IIT Kanpur has developed a prototype of a low-cost ventilator, priced at Rs 70,000 each instead of the Rs 4 lakh versions currently in use. IIT Hyderabad has proposed an alternative to ventilators, a redesigned 'bag valve mask' which is used to resuscitate persons in emergencies.

The Defence Research and Development Organisation (DRDO) is working with the private sector to mass-produce ventilators, provide high-grade personal protective equipment for use by researchers and healthcare professionals, and will provide vital enzymes that are needed to make test kits for the virus. Over 20 research institutes in India are operating overnight to develop vaccines for the treatment of the highly infectious novel coronavirus. The National Institute of Virology (NIV), Pune, and the Indian Council of Medical Research (ICMR) are among these research institutes.

In an attempt to contain the pandemic from spreading further across the country, the Indian government is planning to use phone trackers to keep a tap on the Covid-19 infected patients and monitor people for staying indoors. CoVid-19 apps in India include Corona Watch, Corona Kavach, COVA Punjab and Test Yourself Goa among others. Corona Kavach tracking app has been developed by the National e-Governance Division of the Ministry of Electronics and Information Technology (MeitY) in association with the Ministry of Health and Family Welfare (MHFW). NitiAayog will be launching Cowin-20, which uses Bluetooth to warn users. IIT Bombay has developed 'CORONTINE' - an app to track potential coronavirus carriers. This app can help authorities trace asymptomatic Coronavirus (COVID19) carriers and help them check if they confine to their quarantined zones. The app is ready and invites participation from city and state agencies.

Further, to facilitate the process of efficient and timely information dissemination and to curb the spread of rumours, myths and misinformation, **MyGov Corona Helpdesk** – an official Government of India chatbot to answer queries about the COVID-19 pandemic, has been developed. The MyGov Corona Helpdesk chatbot is available on WhatsApp and can be accessed by messaging the cellphone number 9013151515.

Worst Locust Attack in Decades Requires Inter-Governmental Efforts

While almost the whole world is locked down due to the coronavirus outbreak, there is another problem searing its head and threatening food security in two continents. Many countries of North-East Africa, Middle-East Asia, Pakistan, and India are fearing the worst locust attack in decades. A small swarm of the desert locust, *Schistocerca gregaria*, can destroy as much

food crops in a day as is sufficient to feed 2,500 people. A swarm can fly up to 150 km a day when aided by the wind.

Several countries are collaborating and cooperating to combat this outbreak. Scientists are employing technology to prevent further locust attacks. A supercomputer donated by Britain is using satellite data to track locust swarms and predict their next destination. So far, this supercomputer, funded by £35m of UK aid as part of its Weather and Climate Information Services for Africa programme, has successfully forecast the movement of locusts using data such as wind speed and direction, temperature, and humidity. The model has achieved 90% accuracy in forecasting the future locations of the swarms. The prediction would help the authorities to focus their spraying efforts in the areas that are most likely to be affected by the desert locust. It would help to control the hoppers before they swarm. The aim is to control the upsurge.

India is buying drones and specialist equipment to monitor the movement of locusts. The UN's Food and Agriculture Organization has warned that an imminent second hatch of the insects could threaten the food security of 25 million people across the African region as it enters the cropping season. Experts predict that further increase in locust swarms could linger till June.

MoUs Signed

India signs 15 MoUs with Brazil including Cyber Security

During the visit of Brazilian President Jair Messias Bolsonaro to India, 15 agreements were signed between India and Brazil in various fields on 25 January 2020. The MoUs are: 1. MoU on Bioenergy Cooperation, 2. MoU for Cooperation in the field of Oil and Natural Gas, 3. Investment Cooperation and Facilitation Treaty, 4. Agreement on Mutual Legal Assistance in Criminal Matters, 5. MoU in the field of Early Childhood, 6. MoU on Cooperation in the field of Health and Medicine, 7. MoU in the field of Traditional Systems of Medicine and Homeopathy, 8. Cultural Exchange Programme for the period 2020-2024, 9. Agreement on Social Security, 10. MoU on Cooperation between the Indian Computer Emergency Response Team (CERT-In), Ministry of Electronics and Information Technology (MEITY) of India and the General Coordination of Network Incident Treatment Centre, Department of Information Security, Institutional Security, Cabinet of the Presidency of Brazil (CGCTIR/DSI/GSI) on cooperation in the area of Cyber Security, 11. Programme of Scientific and Technological Cooperation for implementing the agreement on scientific and technological cooperation for the period 2020-2023, 12. MoU on Cooperation in the field of Geology and Mineral Resources, 13. MoU between Invest India and the Brazilian Trade and Investment Promotion Agency, 14. Joint Declaration of Intent (DoI) for Cooperation in the fields of Animal Husbandry and Dairying, 15. MoU for establishing a nodal institution in India to carry out research on Bioenergy.

India & Norway ink 4 MoUs in the Field of Research and Higher Education

India and Norway signed four MoUs in the field of research and higher education to strengthen their bilateral partnership on 4 February 2020 in New Delhi. The agreements were signed during the visit of a delegation of prominent education and research institutions from Norway led by Director-General, Anne Line Wold, Norwegian Ministry of Education and Research.

One agreement was inked between the Indian Institute of Technology Delhi and UiT, The Arctic University of Norway, for cooperation in fields such as bio-photonics, health and diagnostic tools, nanotechnology, water management and renewable energy. Another MoU was signed between the Indraprastha Institute of Information Technology and UiT, to facilitate exchange of students and staff and consolidate joint efforts towards project initiatives in national and EU arena. The other agreements were signed between IIT Jammu and Norwegian University of Science and Technology, and IIT Mandi and Norwegian University of Science and Technology with special focus on activities in landslides, tunnels, water management, hydropower, project-based learning, student and researchers' mobility and cold region technologies. The agreement signing was witnessed by Norwegian Ambassador to India Hans Jacob Frydenlund and the head of the delegation.

MoUs Signed Between India and Portugal to Enhance Cooperation in Various Fields

India and Portugal inked 14 agreements and MoUs to extend cooperation in a number of key areas, including maritime, intellectual property rights, aerospace and scientific research, etc. The agreements were signed after detailed high-level talks between Indian Prime Minister Shri Narendra Modi and visiting Portuguese President Marcelo Rebelo de Sousa in New Delhi on 14 February 2020. One of the MoUs was signed between the CSIR-National Institute for Interdisciplinary Science and Technology (CSIR-NIIST), Thiruvananthapuram and Instituto Superior Técnico (IST), Portugal, for collaboration in higher sciences. Another MoU was between TERI-DEAKIN Centre, Gurugram and International Iberian Nanotechnology Laboratory (INL) Braga for cooperation in Nano-biotechnology.

India and Norway Strengthen Partnership on Blue Economy

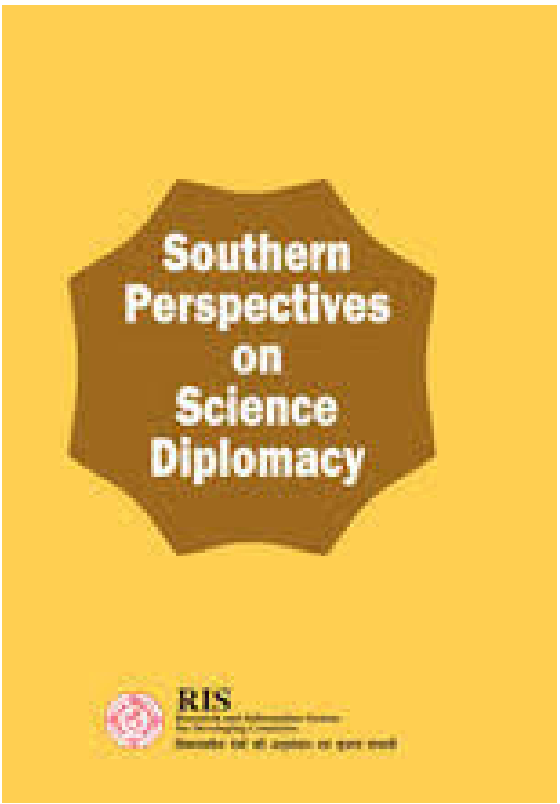
India's Minister for Earth Sciences, Dr Harsh Vardhan, and Norway's Minister for Climate and Environment, Sveinung Rotevatn, opened the India-Norway Task Force on Blue Economy for Sustainable Development on 18 February 2020. The two countries also commenced a new collaboration on Integrated Ocean Management & Research. As a part of the joint initiatives, several projects on combating marine litter are already being implemented. The two Governments signed a letter of intent confirming that they will develop a new framework for collaboration on Integrated Ocean Management & Research. The letter of intent was signed in the presence of Ratan P. Watal, Member Secretary, EAC to PM; Hans Jacob Frydenlund, the Norwegian Ambassador to India; Nina Rør, Deputy Director General, Ministry of Climate and Environment, Norway; M. Rajeevan, Secretary, Ministry of Earth Sciences, Govt. of India; and Sumita Misra, Senior Adviser, EAC to PM.

The strength and value of the India-Norway Joint Task Force on Blue Economy is its ability to mobilise relevant stakeholders from both Norway and India at the highest level, and ensure continued commitment and progress across ministries and agencies.

Publications

Southern Perspectives on Science Diplomacy: ITEC Programme on Science Diplomacy

"Southern Perspectives on Science Diplomacy" is a collection of articles authored by participants of the ITEC Programme on Science Diplomacy. The programme was conducted by Research and Information System (RIS) for Developing Countries, under the aegis of the Ministry of External Affairs, Government of India, from 6 to 17 January 2020. It was attended by 30 participants, representing 23 countries. This thematic volume is an outcome of the aforementioned course, which was designed to give a holistic understanding of different dimensions of Science Diplomacy.



Call for Proposals

Indo-Uzbek Joint Research Programme
Last date: February 14, 2020
Further information at: https://dst.gov.in/callforproposals/india-uzbekistan-joint-call-proposals-2019

Indo-Hungarian Joint Research 2019
Last date: March 11, 2020
Further information at: https://dst.gov.in/callforproposals/call-proposals-indo-hungarian-joint-research-2019

Indo-Danish Research and Innovation Cooperation in the areas of Cyber physical systems
Last date: March 17, 2020
Further information at: https://dst.gov.in/callforproposals/india-denmark-joint-call-proposals-cyber-security

India-Spain Joint Call for Operation in Biotechnology 2019
Last date: March 27, 2020
http://dbtindia.gov.in/sites/default/files/Indo-Spanish%20CFP%202019-2020_0.pdf

DBT-BIRAC COVID-19 Consortium
Last date: March 30, 2020
Further information at: http://dbtindia.gov.in/sites/default/files/COVID-19_%20Research_Consortium.pdf

TDB-CEFIPRA-Bpifrance
Last date: March 31, 2020
Further information at: http://tdb.gov.in/call-for-proposals

India-Korea Joint Programme of Cooperation in Science & Technology
Last date: May 29, 2020
Further information at: http://dbtindia.gov.in/sites/default/files/INDO_KOREA_JOINT_CALL_FOR_PROPOSAL_2020.pdf

DBT-VINNOVA Joint Call on Artificial Intelligence and Health
Last date: August 28, 2020
Further information at: http://dbtindia.gov.in/sites/default/files/digital%2healthcare%20Vinnova%20final.pdf

Forthcoming Events

2020 AAAS-TWAS Course on Science Diplomacy
Venue: Trieste, Italy
Date: 10-13 July 2020
Further information at: https://twas.org/opportunity/2020-aaas-twas-course-science-diplomacy

TWAS-ASM Regional Workshop on Science Diplomacy
Venue: Kuala Lumpur, Malaysia
Date: 20-24 July 2020
Further information at: https://twas.org/opportunity/call-applications-twas-asm-regional-workshop-science-diplomacy

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