NETWORK OF ORGANIZATIONS FOR SCIENCE AND TECHNOLOGY COMMUNICATION

Annual Report

2023 – 24

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Chairman's Message

In today's world, direct engagement with those outside of science is critical for communicating what scientists have discovered and also for promoting an atmosphere of trust between scientists and public. Science outreach is a powerful means for bridging this gap. People come to the issue from different perspectives. To me, science outreach is in the middle of science education, science communication and science policy.

The non-scientists can be high school students, artisans, legislators, senior citizens, journalists, etc. Their needs must be addressed through authentic sources without specialized terminology. The motivation for the source, the researcher, is to convey the message that in addition to being a scientist you are a person with diverse interests, have finite knowledge and are fallible. Science gets humanized with such an approach.

Last year, while immersed in preparing a report on malaria, I took a brief pause to engage with a group of middle school students. Hoping to spark a conversation, I asked them, "Why should we study COVID?" I expected hesitation—perhaps even blank stares—but what I received instead were remarkably thoughtful and insightful answers. Their clarity and curiosity took me by surprise. I returned to my desk re-energized, carrying with me a quiet optimism: perhaps one day, one of these bright 12-year-olds will play a role in solving the unanswered questions that still surround this virus.

Network of Organizations for Science and Technology Communication is committed to facilitating such interaction. This brief report presents the highlights of the head office during the last year. It should be read along with the annual reports of the over 98 organizations spread across the country each working on issues of concern to their region as well as developing strategies for coordinated programmes.

We have a valuable opportunity to come together at NOSTC for preparation. Departing from the usual format, I am including in this report a brief note outlining suggestions for what members can undertake while preparing the *Turning Point* report of NCSTC.

We need your support for running the NOSTC, a network that was established through various rounds of discussions during early 1990s. All the reasons then are still relevant as the progress of large sections of our society continues to be hampered by lack of logic and scientific temper. You can help through a flow of good ideas, sharing your progress of innovative activities, frequent meetings and of course membership charges.

ABOUT NOSTC:

The Network of Organizations for Science and Technology Comminication (NOSTC) was formed about 35 years back with the objectives of initiating and implementing coordinated programmes of science outreach in association with government and non-government organisations. National Council of Science and Technology Communication, Department of Science and Technology, New Delhi catalyzed the formation of this organization. It is a registered body guided by a Board of Governors with headquarters at Delhi. It has about eighty members spread in all states and union territories. Volunteers in districts lend it great strength and capability for implementing projects that reach the common man and woman. It has shaped and reshaped the Children's Science Congress every year for the past 21 years giving it more features to make it enriching for all participants. It has organised the Teachers' Science Congress over the past fourteen years giving a platform for innovative science and maths teachers. Network provides platform for interacting with eminent scientists and encourages young budding scientists also. The Network led the nation in observing the Year of Scientific Awareness in 2004 and International Year of Physics (Appreciating Physics in Everyday Life) 2005. It undertook a three year campaign for Planet Earth 2007 and is drawing up ambitious plans for the future. It has many publications in Hindi, English and regional languages that are always in demand. The Network welcomes new members to improve the planning and implementation of its programmes. It seeks new areas in development communication, technology outreach and promotion of innovation over the next few years. Even as rapid developments impact on society, the next phase promises to be even more exciting and rewarding.

(I) Composition of BoG members and highlight of 25th BoG meeting.

1. Er. Anuj Sinha – Chairman
2. Shri S. K Sinha – Convenor
3. Smt. Sandhya Verma – Co-convenor
4. Dr. Kishor Manohar Rahe – Treasurer
5. Shri Girish Kadlewad – Member
6. Shri Suchant Kr. Pan – Member
7. Shri Zaffer Ulla Khan – Member
8. Shri Surender Dighe – Member
9. Shri Andrew Ahoto Semi – Member
10. Shri Santu Thapa – Member
11. Dr. Satender Singh – Member
12. Shri DNS Anand – Member
13. Dr. Joicy Rai – Member
14. Dr. Narrotam Sahoo – Member
15. Shri Sabbir Ahemed - Member

NOSTC - Today and Tomorrow

The Beginning

DST (The Department of Science and Technology, New Delhi) realized the need for an active field group for effective implementation of science outreach experiments in the late 80s. A systematic consultation was organized with representatives of government departments, autonomous agencies, research laboratories and voluntary organizations. A unique constitution evolved with over 70 leading government and non-government organizations formally joining to form NCSTC Network in 1990/91. The hub and spoke model ensured operational flexibility.

While National Council for Science and Technology Communication, DST was devoted to framing policies and supporting innovative programmes, Vigyan Prasar (an autonomous institution under DST) had the mandate for large scale development and distribution of popular science books, kits, films and videos and NCSTC Network gave shape to field programmes.

Some Milestones

Over the years, the NCSTC Network has played a pivotal role in shaping science communication in India. In 2023–24, its legacy initiatives continued to thrive with renewed relevance. The Children's Science Congress, first expanded from a model initiated in Madhya Pradesh, continues to inspire young minds to apply scientific thinking to local issues. This year, the program saw enthusiastic participation across districts, culminating in outstanding projects being showcased at the National Congress.

Building on the spirit of the 1991/92 Bharat Jan Gyan Vigyan Jatha, the Network facilitated region-wide outreach efforts this year through hybrid models—combining digital storytelling, community science clubs, and grassroots engagement on pressing issues such as climate change, public health, and food security.

The Teachers' Science Congress, initiated in 2001, remains a critical platform for school educators to exchange pedagogical innovations. In 2023, the Congress spotlighted experiential methods and low-cost teaching aids to simplify abstract science concepts.

Flagship campaigns such as the International Year of Millets 2023 were taken up with zeal, using them as springboards for thematic science outreach. Members also actively contributed to events related to celestial phenomena and sustainability education.

New Programmes

The Network is now formally registered as NOSTC (Network of Organizations for Science and Technology Communication, Delhi), comprising 98 member organizations representing all states and union territories. It operates under the guidance of a 15-member Board of Governors, chaired by Er. Anuj Sinha, and a General Body of all members, with the late Prof. Yash Pal honored as its founding President.

Looking ahead, NOSTC has outlined a series of collaborative and independent initiatives for the next two years. These include:

- *Turning Point of NCSTC* – a reflective documentation project on key milestones and contributions;
- *Developing Skills in Science Journalism* – to build capacity among emerging communicators;
- *Encouraging Reading of Popular Science Books* – in partnership with the Indian Public Library Movement;
- *Quality Time with Laureates of Science Communication* – for outstanding students of Mass Communication;
- *Mentorship for Innovative CSC Projects* – aimed at supporting start-ups through collaboration with IIIF;
- *National Organizing Committee for the Year of Awareness on Science and Health*;
- *Hosting the Children's Science Congress (CSC) Delhi 2023*.
- *Reading and Scientific Literacy Mission*

Preamble

Recognizing that low literacy levels continue to hinder inclusive and sustainable social development, a nationwide effort began nearly three decades ago to raise literacy rates across India. These efforts brought about significant improvements. Over the following decade, focused campaigns were launched to enroll every child in school, reduce dropout rates, and introduce the mid-day meal scheme. These measures—especially in progressive states—contributed to measurable progress in multiple social indicators.

As we move forward, cultivating the capacity for critical thinking among citizens remains a vital goal. One of the most effective ways to achieve this is by nurturing a culture of reading. Promoting reading habits, especially in regional languages, can significantly enhance cognitive skills, empower individuals, and build a more informed society.

Campaign Objective: Promoting Scientific and Critical Reading

This campaign is designed to improve access to enriching reading materials and foster a habit of reflective reading and discussion among both students and adults. The aim is to encourage deeper thinking, informed opinions, and a scientific outlook.

Essential Elements

- Access to Structured Reading Materials: Ensuring availability of quality content—books, magazines, digital media—in regional languages.

- Engagement through Reading Activities: Creating regular and interactive reading opportunities in schools, colleges, and community spaces.
- Content Creation and Curation: Encouraging authors, publishers, and librarians to develop new, engaging materials and ensure expert vetting for quality and relevance.
- Institutional Integration: Promoting book clubs, library sessions, reading competitions, and science-based storytelling as part of institutional activities.

Proposed Activities

- Thematic Reading Competitions: Organize monthly reading challenges on themes such as health, environment, or innovation. Participants will read, discuss, and present their views through speeches, comparisons, or storytelling.
- Creative Engagements: Conduct essay writing, debates, theater workshops, and declamation contests to spark interest across age groups.
- Public Library Visits: Encourage members to visit and enroll in nearby public libraries. A quarterly orientation with a guest talk by the librarian may be arranged.
- Community Library Initiatives: Set up local libraries by collecting book donations and documenting them for circulation or reference. Community support and voluntary contributions can sustain these efforts.
- Utilizing Local Development Funds: Leverage MLA and MP development funds to upgrade public libraries with new resources, infrastructure, and multimedia.
- Partnerships with National Publishers: Collaborate with Vigyan Prasar (Noida), NIScPR (New Delhi), National Book Trust (New Delhi), and Eklavya (Bhopal) to access low-cost, high-quality science communication resources.

Impact

Improved reading habits will contribute to overall learning across subjects, reduce screen dependency, and support lifelong literacy. For neo-literates, this is especially critical to prevent a relapse into illiteracy. The ripple effects will strengthen critical thinking and scientific temper in all sections of society.

Way Forward

Participating organizations will commit to achieving measurable targets using current resources while mobilizing additional support from government and private entities. International partnerships may also be explored. This movement is envisioned to grow organically, expanding its reach by enrolling new partners and sharing success stories.

Activity Profile of NOSTC

The Network of Organizations for Science and Technology Communication (NOSTC), Delhi, aims to strengthen science communication across India through the following key objectives:

- Undertaking research, development, demonstration, and outreach initiatives.
- Popularizing science and technology among all segments of society.
- Promoting science and society programs focused on women and marginalized communities.
- Identifying innovators and facilitating the commercialization of their inventions.

ACHIEVEMENT:

During the last one year, The Network of Organizations for Science and Technology Communication performed many activities in spite of severe manpower constraints. Some of the important events organized are:

Children's Science Congress – NCT Delhi (2023)

The Children's Science Congress (CSC) is a prestigious and long-standing annual initiative organized in the National Capital Territory (NCT) of Delhi by the Network of Organizations for Science and Technology Communication (NOSTC). Established in 1993, the CSC has continuously evolved as a robust platform for nurturing young scientific minds. NOSTC, headquartered at E-56, First Floor, Gali No. 1, Samaspur Road, Pandav Nagar, Delhi 110091, has been at the forefront of coordinating and executing the CSC at four structured levels — Zonal, District, Central, and State — with remarkable consistency and dedication.

The core objective of the CSC is to provide a vibrant and inclusive forum where children can channel their natural curiosity into research-based exploration. The program promotes the development of scientific temperament and equips students with the foundational elements of scientific inquiry — including keen observation, collection of relevant data, experimentation, analysis, and drawing rational conclusions. Through this initiative, young learners are empowered to identify local problems and propose innovative solutions based on scientific principles. Over the years, CSC has become an essential component of science outreach and education at the school level in Delhi.

The program operates in close collaboration with the Directorate of Education, Government of NCT Delhi. One of the key pillars of its effective implementation is the network of Zonal Science Conveners, who are appointed across 29 educational zones of Delhi. These conveners play a critical role in organizing awareness sessions, mobilizing participation, and overseeing smooth coordination of activities at the grassroots level. Under their supervision, school children form teams of two and select research projects in line with the year's theme and sub-themes, as prescribed by the National CSC guidelines.

These student teams work on their selected projects for a duration of 4 to 5 months, engaging deeply in scientific research and data-driven analysis, under the guidance and mentorship of trained teachers. The outcome of their work is documented, presented, and evaluated at successive stages, beginning from school-level and Zonal conventions to the District and State levels. The best projects are eventually selected to represent the state at the National Children's Science Congress.

The momentum significantly increased in 2023, reflecting the growing impact of the program. The District Level CSC events in 2023 were conducted in the months of August and September across 11 districts of Delhi. A total of 1,180 child scientists from 450 schools participated in this phase, presenting their research-based projects to panels of evaluators. Among the participants, 603 were female and 577 were male, demonstrating encouraging gender balance. The age-wise distribution included 409 participants from the lower age group and 771 from the upper age group, ensuring inclusivity across age brackets.

To maintain the scientific quality and objectivity of the evaluations, three expert evaluators were deputed in each district to assess the projects based on originality, scientific methodology, relevance to the theme, and presentation clarity. To ensure the quality of mentoring, 226 teachers were specially trained in advance to guide student teams through the various stages of project development, research documentation, and presentation preparation. This capacity-building of teachers added significant academic value to the overall process.

The State Level Children's Science Congress 2023 was held on 1st October 2023 at Modern Public School, Shalimar Bagh, New Delhi. This event brought together the top 84 projects, selected from across the districts, for final evaluation and exhibition. These projects included 78 female and 90 male participants, all of whom demonstrated exemplary skills in scientific thinking, innovation, and communication. The event was inaugurated by Ms. Ankita Anand, IAS, District Collector, North West Delhi, who addressed the gathering with inspiring words, encouraging the students to continue their pursuit of scientific knowledge and contribute to society through innovative thinking.

The state-level evaluators conducted a detailed assessment of all projects, focusing on parameters such as scientific understanding, data interpretation, problem relevance, creativity, and social impact. Based on these evaluations, 8 outstanding projects were selected to represent Delhi at the National Children's Science Congress, held from 3rd to 6th January 2025 at Ravindra Bhavan, Bhopal, Madhya Pradesh. These projects showcased a high level of scientific rigor and offered practical, community-relevant solutions, making Delhi's presence at the national platform impactful and inspiring.

The continued success of the Children's Science Congress over the past three decades is a testament to its transformative impact on science education at the school level. It not only cultivates research aptitude among children but also instills confidence, teamwork, presentation skills, and a sense of responsibility towards local and global issues. The initiative also strengthens the collaborative ecosystem between schools, science educators, government bodies, and academic experts.

In conclusion, CSC 2023 in Delhi was not just a science competition — it was a celebration of young minds thinking critically and creatively. With growing participation, improved academic mentoring, and consistent support from the educational administration, the CSC is poised to inspire many more generations of child scientists who will lead the way in scientific exploration and social change.

Developing Skill and Enthusiasm among Science Communication in the Digital Age

The project titled "Developing Skill and Enthusiasm among Science Communication in the Digital Age" was conceptualized with the goal of enhancing science communication skills among professionals,

students, and teachers of mass communication. The thematic genesis of the project focused on addressing the growing need for effective science communicators in an increasingly digital world. Recognizing the critical role that science journalism plays in bridging the gap between scientists and the public, the project sought to cultivate a new generation of journalists capable of accurately and engagingly presenting scientific information across various media formats.

To achieve these objectives, a six-week certificate program titled "Science Journalism in the Digital Age" was developed and implemented in a hybrid mode. This approach combined both online and in-person sessions, ensuring accessibility for participants across the country. The curriculum was meticulously designed to provide a comprehensive learning experience, covering both theoretical and practical aspects of science communication. Participants were equipped with tools and techniques to effectively communicate complex scientific concepts, with a focus on maintaining journalistic integrity and adhering to regulatory standards.

The course also emphasized the importance of critical analysis in science journalism, encouraging participants to distinguish between well-supported and weak conclusions and to examine potential conflicts of interest. This investigative approach is essential for shaping informed public discourse, particularly in key areas such as political, economic, cultural, and social policy discussions.

The project was arranged by the Network of Organizations for Science and Technology Communication (NOSTC) in Delhi and received approval from the National Council for Science and Technology Communication (NCSTC) under the Department of Science and Technology (DST), New Delhi. Lovely Professional University served as the knowledge partner, providing academic expertise and support throughout the course. By the end of the program, participants were well-prepared to contribute meaningfully to the field of science journalism, helping to foster a more scientifically literate society.

INEX – 2022-23 (An International event)

The Fifth edition India Internation and Innovation Expo - INEX (2022-23) was organized at Ravindra Bhavan, Margaon, Goa under the patronage of IBS Global. Goa is a historical city with e-visa facility and many flights operate from International airport of Goa. India Internation and Innovation Expo - INEX (2022-23) organized by India Innovators Association (IIA) in Association with Network of Organization for Science and Technology Communication, Delhi under the NCSTC-Projects. The event was hosted by Goa Innovation Council, Goa Administration in collaboration with Don Bosco College of Engineering, Margaon, Goa and supported by various Ministries, Industry associations and premier R&D Institutes. Abstract of Research innovations best practices were be released during the fair as part of knowledge sharing amongst IBS Global. Indian innovation eco-system has evolved since then, information is now available on IPR, fund, business plans etc. from several source. Still there is gap in connecting innovators to the market. In the current phase NOSTC and IIA actively working to connect global innovators to global markets. Showcasing Indian innovations in international fairs and bringing global innovationsto Indian fair is part of this strategy.

The two-day event was held in the exhibition hall of Ravindra Bhavan located in Margaon, Goa and attended by about 3,000 visitors who spent on the average 2hrs in the fair. Innovators from various countries displayed their innovations.

NOSTC (Network of Organizations for Science and Technology Communication, Delhi) selected 33 student innovators for this international fair from out of 98 finalists at National competition that was supported by National Council for Science and Technology Communication, Department of Science and Technology, Government of India. They came from different parts of the country, including Gujarat, Nagaland, J&K, Bihar, Delhi, Maharashtra, Chhattisgarh, Karnataka, Andhra Pradesh and Telangana, Uttar Pradesh, Delhi, Kerala, Andhra Pradesh, Assam, West Bengal.

The fair was inaugurated on 17th November 2022 Shri Nilesh Cabral, Minister for Legislative Affairs, Environment, Law and Judiciary and Public Works Department, Govt. of Goa, inaugurated the INEX 2022. He visited each stall and asked keen questions about the displays by IYIIC participants. Dr. J.M. Noronha, Chairman, Goa State Innovation Council, and Goa Public Service Commission took a keen interest in the exhibition and spent over two hours spread over two days. Dr. Martins Lewinson, Member Secretary, Goa State Council for Science & Technology and Waste Management, Goa, Er. Anuj Sinha, Chairman, NOSTC, President of Indian Innovators Association, Dr. A S Rao spent considerable time along with his team of scientists at the Fair. Dr. Praveen Arora, the Head, NCSTC-DST, Govt. of India was present on the day. He also visited all the stalls and interact with the innovators during fair. He spends 2 days' time. Whereas, Dr. Sujit Banerjee, Scientist 'F', NCSTC also present on the occasion also showed their keen interest and visited the exhibits. A special Lecture session on IPR was arranged for the participants of INEX 2022. Ms. Ananyaa Banerjee, from SS Rana & Co., Delhi delivered on it.

The Chairman Goa Innovation Council, Goa Administration, Shri J. M. Naronah, was Chief Guest at the Awards Function during Valedictory Session on 18.11.2022. Awards were given by the President IBS Global, Poland, NCSTC-DST officials Dr. Praveen Arora, Dr. Sujit Banerjee and NOSTC officials, Er. Anuj Sinha, Dr. D. K Pandey and Dr. Mrs. Kanak Lata. **Three Gold, 10 Silver and Twenty Bronze award were given to the IYIIC participants** on the day. The event concluded with the thanks to the Chief Guest on the occasion.

IYIIC - SELECTED PARTICIPANTS

Sl No	Name of Participants	Online (Virtual) 17th November 2022	Offline (Physical) 17th Nov.& 18th Nov. 2022	State	ST/SC/OBC/Gen	Awards achieved
1	Harsh Bajpai	--	Physical	Madhya Pradesh	Gen	Gold
2	Hitika Mathur	Virtual	--	Uttar Pradesh	Gen	Silver
3	Aryan Harlalka	--	Physical	Chhattisgarh	Gen	Silver
4	Navya Agrawal	--	Physical	Rajasthan	Gen	Bronze
5	Tarapreet	--	Physical	Haryana	SC	Silver
6	Jiya Thakur	Virtual	--	Himachal Pradesh	Gen	Bronze
7	Saanvi Nagpal	--	Physical	Delhi	SC	Bronze

8	Livino Yesca	Virtual	--	Nagaland	ST	Bronze
9	Vijaylaxmi Biradar	--	Physical	Karnataka	ST	Bronze
10	J. Uma Sri Varshini	--	Physical	Andhra Pradesh	ST	Bronze
11	Arpit Kumar	--	Physical	Bihar	SC	Bronze
12	Saanvi Yadav	Virtual	--	Uttar Pradesh	OBC	Bronze
13	Kaushl Tulsidas Vasani	--	Physical	Surat, Gujarat	OBC	Silver
14	Yogita Singh	--	Physical	A & N Islands	Gen	Bronze
15	Anusweta Deb	--	Physical	Assam	Gen	Silver
16	Hajis Shahz	--	Physical	Jammu & Kashmir	Gen	Bronze
17	Akshit Kumar Lall	--	Physical	Bihar	Gen	Silver
18	Raja Kumar Keshri	--	Physical	Bihar	OBC	Gold
19	Megha Mohan	--	Physical	Kerala	SC	Silver
20	Prince Kumar	--	Physical	Uttar Pradesh	SC	Bronze
21	Bhajanpreet Kaur	--	Physical	Punjab	SC	Bronze
22	Upasana Boruah	--	Physical	Assam	Gen	Silver
23	Divyanshi Chourasia	--	Physical	Madhya Pradesh	OBC	Bronze
24	Emant Jhunjhunwala	Virtual	--	Delhi	Gen	Bronze
25	Uma Tamang	Virtual	--	Meghalaya	ST	Bronze
26	Vineet Kumar	Virtual	--	Bihar	SC	Bronze
27	Talawar Kotresh	--	Physical	Karnataka	SC	Bronze
28	Dr. Seema Gajera	--	Physical	Vadodara, Gujarat	Gen	Gold
29	Kanika Salaria	--	--	Vadodara, Gujarat	SC	Bronze
30	Deep R. Shah	Virtual	--	Vadodara, Gujarat	SC	Bronze
31	Bhumika Singh	Virtual	--	Chhattisgarh	Gen	Silver
32	Aryan Prasad	--	Physical	Uttar Pradesh	SC	Bronze
33	Lohit T.D	--	Physical	Karnataka	ST	Bronze

34	Monesh	--	Physical	Karnataka	ST	Bronze
35	Kartik Kumar Bagiavaidya	--	Physical	Karnataka	SC	Silver
36	Raunak Parakh	--	Physical	Delhi	Gen	Bronze

YASH Report

Executive Summary:

- The COVID-19 pandemic has fundamentally altered public health dynamics worldwide, revealing vulnerabilities in healthcare systems and the urgent need for innovative responses. In India, the National Innovation Foundation (NIF), an autonomous institution under the Department of Science and Technology (DST), took proactive measures to harness the creativity and resourcefulness of citizens through the Challenge COVID-19 Competition (C3). Launched from March 31 to May 10, 2020, C3 aimed to stimulate grassroots innovation to address the challenges posed by the pandemic, emphasizing the role of science and technology in developing effective solutions.
- The competition attracted widespread participation from individuals and organizations across India, reflecting a collective commitment to combat the health crisis. This engagement underscored the potential of community-driven solutions in addressing urgent health needs. Among the notable innovations emerging from C3 was a foot-operated hand sanitization device, conceptualized by Shri Mupparapu Raju from Warangal, Telangana. This innovative design allows users to dispense soap and water without any physical contact, thereby minimizing the risk of virus transmission. The effectiveness of this device has been demonstrated through its implementation at various locations throughout Telangana, where it has contributed significantly to enhancing hygiene practices.
- In addition to the sanitization device, another remarkable development from the competition was the creation of a large-area sanitization sprayer. This innovative technology employs dual radial fans to disperse sanitizing agents across expansive areas, such as roads, compounds, and public spaces. With the capability to cover a radius of up to 30 feet horizontally and 15 feet vertically, the sprayer can efficiently sanitize large environments, thereby playing a crucial role in public health safety. The device operates using tractors equipped with a Power Take-Off (PTO) mechanism, making it suitable for deployment in diverse settings, from urban to rural areas.
- The response to the C3 initiative illustrated the power of collective action in the face of adversity. By providing incubation and mentoring support to innovators, the NIF aimed to facilitate the transition of concepts into practical applications. Prof. Ashutosh Sharma, Secretary of the DST, emphasized the importance of recognizing and empowering grassroots innovators, highlighting that the competition has successfully encouraged citizen participation in addressing the pandemic.
- While C3 focused on technological innovations, it was equally essential to enhance public understanding of health risks and promote informed decision-making. To this end, the NCSTC launched the Year of Awareness on Science and Health (YASH) program, which focuses on effective health and risk communication related to COVID-19. The YASH initiative aims to build a scientifically informed society capable of navigating health challenges through clear communication and education.
- The YASH program is designed to clarify misconceptions surrounding COVID-19, foster trust in scientific information, and promote community engagement in health discussions. By disseminating reliable information and resources, YASH seeks to minimize risks associated with the pandemic while empowering individuals to adopt safe practices. The program includes the development of communication tools tailored to various demographic groups, such as publications, audio-visual materials, and community outreach campaigns.
- A significant component of the YASH initiative is its emphasis on two-way communication, allowing for feedback and engagement from the public. This approach recognizes that effective health communication is not merely about disseminating information but also involves listening to community concerns and addressing them appropriately. By fostering dialogue between health

authorities and citizens, the program aims to enhance public trust and confidence in health measures.

- Moreover, the YASH program strives to integrate local knowledge and cultural practices into health communication strategies. Recognizing the diversity of India's population, the initiative aims to create messages that resonate with different communities, ensuring that information is relevant and accessible. By leveraging local languages and culturally appropriate mediums, YASH aims to reach a broader audience and encourage widespread participation in health initiatives.
- The intersection of innovation and effective communication is critical in addressing the multifaceted challenges posed by the pandemic. By combining technological advancements with robust health communication strategies, the NIF and DST are fostering a holistic approach to public health. This dual strategy not only addresses immediate health concerns but also builds a foundation for long-term resilience in the face of future challenges.
- Through these initiatives, the NIF and DST are paving the way for a more informed and engaged society, capable of leveraging innovative solutions to navigate health crises. The pandemic has underscored the importance of collaboration between various stakeholders, including government bodies, academia, industry, and the public. By fostering partnerships and encouraging collective action, the NIF and DST aim to create an ecosystem that nurtures innovation and enhances public health outcomes.
- In conclusion, the Challenge COVID-19 Competition and the Year of Awareness on Science and Health program represent a comprehensive response to the challenges posed by the COVID-19 pandemic. By harnessing the creativity of grassroots innovators and enhancing public health communication, these initiatives aim to empower communities to respond effectively to health crises. The commitment to innovation and effective communication not only addresses the immediate challenges of the pandemic but also lays the groundwork for a healthier and more resilient future.
- This blog post by Dr. Krishna Reddy, Director of ACCESS Health India, explores the private sector's response to COVID-19 in India. Although the public sector led the initial response, India's private healthcare system—which provides two-thirds of the country's health services—plays a critical role. The post highlights the fragmented nature of the private sector and outlines action plans for a coordinated response, including ensuring adequate protective measures for healthcare workers, promoting telemedicine, and adopting innovative approaches to healthcare delivery.
- Private healthcare facilities must embrace public health responsibilities, focusing on quality, safety, and reducing healthcare-associated infections. Building public trust is essential, as concerns over affordability and service quality have led to growing mistrust. The private sector should also collaborate with insurance providers to address financial challenges and innovate in consumer financing.
- The post calls for stronger public-private partnerships and leveraging India's strengths in digital health to achieve universal healthcare. Finally, it emphasizes that COVID-19 presents an opportunity for the private healthcare sector to transform, focusing on population health, digital innovation, and improved public health outcomes.
- The chapter highlights India's innovative responses to the COVID-19 pandemic across healthcare and public health sectors. Healthcare institutions swiftly adapted diagnostic procedures, implemented safety protocols, and expanded tele-consultation services. Voluntary organizations played a crucial role in raising awareness and supporting rural communities, while the government utilized geospatial technologies to monitor and manage the virus. Innovations like low-cost COVID-19 detection kits further addressed healthcare challenges in remote areas. These efforts, involving rapid adjustments and cross-sector collaboration, not only minimized the pandemic's impact but also paved the way for improved healthcare preparedness and resilience in future crises.

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Conclusion

The COVID-19 pandemic has emerged as one of the most significant global health crises in recent history, prompting an urgent need for innovative solutions and effective communication strategies. The National Innovation Foundation (NIF) and the Department of Science and Technology (DST) in India have risen to this challenge by implementing initiatives like the Challenge COVID-19 Competition (C3) and the Year of Awareness on Science and Health (YASH) program. These efforts highlight the critical importance of grassroots innovation and public engagement in addressing public health challenges.

The C3 initiative exemplifies how tapping into the creativity of citizens can lead to impactful solutions tailored to the needs of communities. Innovations such as the foot-operated hand sanitization device and the large-area sanitization sprayer are not only practical but also essential in promoting safe hygiene practices during the pandemic. By providing incubation and support to these innovators, the NIF is facilitating the transition from concept to practical application, thereby enhancing public health measures on the ground. The overwhelming response to the competition underscores the potential of collective action, demonstrating that ordinary citizens can contribute significantly to crisis management through their ingenuity and resourcefulness.

Equally vital is the YASH program, which emphasizes the need for effective health communication in managing public perceptions and behaviors regarding COVID-19. The program's focus on clarifying misconceptions and building trust in scientific information is crucial for fostering compliance with health guidelines and promoting positive health behaviors within communities. By actively engaging with the public, the YASH initiative encourages a two-way dialogue, allowing health authorities to address concerns and adapt messages to better meet community needs. This approach not only enhances public trust but also empowers individuals to take informed actions to protect themselves and others.

Moreover, the YASH program's commitment to integrating local knowledge and cultural practices into health communication strategies is an essential aspect of its effectiveness. Recognizing India's diverse population, the initiative aims to ensure that health messages resonate with various communities, making them more relatable and actionable. This inclusivity is vital in ensuring that all segments of society are reached and that no one is left behind in the fight against COVID-19.

The combined efforts of the NIF and DST illustrate a comprehensive approach to public health that balances innovation with effective communication. This dual strategy not only addresses immediate health concerns but also builds resilience for future challenges. The pandemic has exposed vulnerabilities within health systems, but it has also presented opportunities for growth and improvement through collaboration and creativity.

In conclusion, the initiatives undertaken by the NIF and DST serve as a blueprint for addressing public health crises. By harnessing the power of grassroots innovation and promoting effective health communication, these programs not only tackle the challenges of COVID-19 but also lay the groundwork for a healthier, more informed, and engaged society. The lessons learned during this pandemic will be invaluable in shaping future responses to health crises, reinforcing the idea that innovation, collaboration, and effective communication are essential components of any successful

public health strategy. As we move forward, it is imperative to continue fostering an environment that encourages innovation and supports informed public discourse, ensuring that communities are well-equipped to handle current and future health challenges.

India's response to the COVID-19 pandemic was characterized by a coordinated, multifaceted approach that brought together scientific research, technological innovation, public-private partnerships, and community engagement. The country's efforts in vaccine development, diagnostics, and medical equipment production were complemented by robust communication strategies aimed at raising public awareness and encouraging safe behaviors. Initiatives like YASH and the NATMO dashboard played critical roles in ensuring that both urban and rural populations were informed and empowered to manage the crisis. As India continues to navigate the challenges of COVID-19, these efforts provide a solid foundation for future public health interventions and scientific advancements.

It concludes that India's private healthcare sector must adapt and evolve in response to COVID-19. Key takeaways include: To meet the challenges posed by COVID-19. A coordinated response is essential, as the sector is currently fragmented. Private providers must take on greater public health responsibilities, ensuring robust infection control practices and quality certification. Building public trust is crucial, particularly through transparent pricing and responsible healthcare practices. Financial solutions, such as partnerships with insurance providers and innovative financing models, are needed to ease access and support healthcare providers. Strengthening public-private partnerships is vital to optimize underutilized resources and improve population health. Finally, the pandemic has accelerated the shift toward digital health, presenting the private sector with opportunities to enhance healthcare delivery both domestically and globally. This crisis is a turning point for the private healthcare sector to redefine its role within the broader health system.

The COVID-19 pandemic posed an immense challenge to India's healthcare system, but it also provided opportunities for innovation, collaboration, and improvement. By rapidly adapting diagnostic procedures, adopting telemedicine, setting up testing laboratories, and embracing geospatial technologies, India's healthcare providers demonstrated resilience and resourcefulness. Voluntary organizations played a crucial role in raising awareness and supporting vulnerable populations, while government initiatives in geospatial data and low-cost diagnostics helped address the unique challenges posed by the pandemic. The lessons learned from these experiences will be invaluable in shaping future public health strategies, improving healthcare delivery, and building a more robust and equitable health system.

Turning Point of NCSTC

The project was aimed to present the four decades of innovative and path breaking research and development, fieldwork, software development, manpower development, etc by National Council for Science and Technology Communication, Department of Science and Technology, in positive light among policy makers and influencers. It would also assist team NCSC to review areas that require more resources in the context of current and future challenges. Network of Organizations and Science and Technology Communication (NOSTC), Delhi has long experience in organization of Science Communication activities and development of resource materials. The organization harvest its expertise available in different fields of science communication and science education. In

addition, member Oranisations, experts of different institutions were invited for academic inputs as and when required.

An advisory committee with Er Anuj Sinha, Dr D K Pandey, Shri Sanjib Sinha and representatives of Head NCSTC had guided the project at every stage. Researchers, designers, video makers, software experts and other domain experts had function under direction of the committee.

With the rich experience and capability of designing, coordinating and implementing projects that was the strong elements of developing communication material, training field communicators, mobilizing and sensitizing community with limited resources. Over 100 institutional members and many independent experts have helped to complete the project.

Since 1991 NOSTC has always come forward to increase quantitative reach of every initiative of NCSTC hence for this documentation of activities has all understanding and knowledge about people involved in past in various activities of NCSTC.

Background of the programs:

Over 100 institutional members and many independent experts have helped campaigns such as Year of Scientific Awareness, Year of Understanding Physics, Year of Planet Earth, international Year of the Periodic Table, etc. NOSTC since 1991 has always come forward to increase quantitative reach of every initiative of NCSTC hence for this documentation of activities has all understanding and knowledge about people involved in past in various activities of NCSTC. Also Compiling Turning Point of NCSTC-DST too.

Compiling Turning Point of NCSTC-DST:

NOSTC constitute a panel of experts who have experience and are competent science communicators for researching turning points of science communication by NCSTC since its formation. Archives of NCSTC in all electronic and non-electronic media, inputs of eminent science communicators, and policy makers have also incorporated. The research has been documented as self-contained highly attractive reports in print, video and e versions. The process has involved frequent and regular interaction and consultation with Head NCSTC.

Celebration of National Science Day

Government has approved the proposal by NCSTC to celebrate National Science Day on 28th Feb in 1986/87 which is the anniversary of the announcement of the path breaking discovery by Sir CV Raman of the effect now known as Raman Effect. The activities proposed are designed to popularize S&T through the invited talk, public exhibition and stage performance. The felicitation of science communicators aims to develop role models for the next generation of science workers.

Network of Organizations for Science & Technology Communication (NOSTC) Delhi has been actively involved in organizing the various science communication program at District, State and National level, successfully.

NCSTC has awarded a prestigious program to NOSTC to celebrate the national event of National Science Day on 28th February, 2024.

The aims of this program are:

Raise awareness of the importance of science; Enroll leading scientists in outreach programs; Build confidence among the students to opt for science as a career and that can benefit them and society in long run.

To fulfil the aims and objective of this program NCSTC and NOSTC has draw a line for the success of the event in grand success and constitute a committee for monitoring and execute the identified event.
The theme was decided by a core team of the NSD Event. To launch of National Science Day Theme by Dr. Jitender Singh, Hon'ble Minister of State (Independent Charge) Ministry of Science and Technology, GoI was invited to launch the theme on 06th February, 2024.

06.02.2024: National Media Centre, New Delhi.

For launching the NSD Theme "National Media Centre" New Delhi was booked in advance for successful launching in highbred mode. All State Science and Technology Councils were invited to join the event on virtual mode. The State Councils had arranged launching event through video conferencing mode and arranged activities by inviting scientists, College and School student were present on the day.
Due to Lok Sabha Session during the days Dr. Jitender Singh, MOS, could not spare them selves on the day. The event was launched by Dr. Abhay Karandikar, the Secretary, Department of Science and Technology, Govt. of India. The Theme of the NSD 2024 was declared "Indigenous Technologies for Viksit Bharat" in presence of Dr. Rajesh S. Gokhle, Secretary, DBT; Dr. N Kalaiselvi, DG, CSIR and Shri S N Choudhary, Media In-charge, S & T communication.
The Launching video of NSD Theme is uploaded on the You-Tube. The Link of the launching program is given below:

https://youtube.com/live/Q8Z7MWScVl4

About 200 Scientific staff of DST and media persons were present of the occasion. A Video film on DST achievement was also played on the occasion. Dr. Rashmi Sharma replied the quarries raised by Media personals. The Launching program was ended with the Vote of Thanks by Dr. Rashmi Sharma, Scientist 'G' and Head, NCSTC, DST, GoI.

28th February, 2024 Central function of National Science Day 2024.

Celebration of National Science Day was arranged at "VIGYAN BHAWAN" New Delhi on 28th February, 2024. Dr. Jitender Singh, Hon'ble Minister of State (Independent Charge) Ministry of Science and Technology, GoI had inaugurated the National Science Day 2024 event. The event was incorporated exhibition of projects selected under IRIS National fair.

Dr. Abhay Karandikar, the Secretary, DST welcomed the Chief Guest Dr. Jitender Singh, MOS, S &T and other dignitaries present on the dais. Dr. Rajesh S. Gokhle, Dr. N Kalaiselvi deliberated on the theme and give their views on the eve. A brief remark was also given by Prof. A. K. Sood, Principal Scientific Advisor to Government of India.