**3.6.1 - Extension activities in the neighbourhood community in terms of impact and sensitising students to social issues and holistic development during the year**

 CIs/OCC of HBNI has a long tradition of interacting with the community in the neighbourhood. The faculty of HBNI takes pride in extending their knowledge base to train and educate the community, through a large number of professional bodies that are functional in these organizations. Faculty also participates as resource persons in the extension/outreach programs organized by DAE across the country. HBNI and its CIs organizes several webinars and online educational courses in addition to educational visits of students to CIs or outreach activities as part of dissemination of knowledge to school/college /teachers across the educational institutes in the country. Some of the outreach programmes conducted by HBNI and its CIs during the academic year 2022-2023 are listed below:

**Outreach activities at the Central office, HBNI**

1. As part of the DAE iconic week celebration of “Azadi Ka Amrit Mahotsav”, HBNI organized special lectures by eminent speakers on the current research areas and future challenges for the benefit of students/faculty of educational institutes across all over India during August 22-28, 2022.
2. HBNI also organized talks for the popularization/promotion of science in association with four higher educational institutions in and around Mumbai city, to create awareness among graduate and postgraduate science students regarding the career opportunities in basic science, and encouragement for a research career.

**Outreach activities at Institute of Plasma Research**

1. Under the auspices of "Azadi Ka Amrut Mahotsav", IPR participated in the exhibition titled "Vision Rajasthan-2022" which was organized at the Mahatma Gandhi School, Sirohi, Rajasthan during 1-3 November, 2022.
2. IPR’s Outreach Cell conducted a “One Day Workshop on Plasma Physics and its Applications” on 26th April, 2023 at Pandit Deendayal Upadhyaya Adarsha Mahavidyalaya (PDUAM), Tulungia, in Bongaigaon district of Assam.
3. Under the auspices of "Azadi Ka Amrut Mahotsav", IPR organized a scientific outreach programme entitled "Aurorae-2022" at the Bhavan's Adarsha Vidyalaya, Kakkanad, Kochi (Kerala) during 19-24 September, 2022. As part of this programme, an exhibition on plasma and its applications and nuclear fusion was set up. An inter-school quiz competition was also organized by IPR outreach as part of the event.
4. IPR participated in the State Science Fair and State Level Children’s Science Congress (NCSC) - 2022 held at the premises of Government Higher Secondary School, Tezpur from 16-19 December, 2022.

**Outreach activities at NISER, Bhubaneshwar**

NISER organized the outreach talk series including series of talks by eminent personalities. Some of them are listed below:

1. Dr. Tirumala K. Chowdhary from NISER spoke at length on “Where the COVID-19 pandemic virus, SARS-CoV-2, comes from? - A difficult question to answer” on July 29, 2022.
2. A panel discussion on “RBI's Annual Report, 2021-22” was conducted by eminent speakers from the Department of Economic and Policy Research, Reserve Bank of India, on August 12, 2022.
3. Professor Richard N. Zare from the Department of Chemistry, Stanford University, delivered a talk on “A New Way to Stop the Spread of Viral Respiratory Infections” on August 19, 2022.
4. Prof. Rohini Balakrishnan, a critically acclaimed ecologist and bioacoustics expert at CES, IISc, gave a talk on “Benefits and costs of acoustic communication in crickets and katydids” on August 20, 2022.
5. Prof. N. Sathyamurthy, Honorary Professor from IISER Mohali, spoke on “Learning Science from the Kitchen Garden” on September 16, 2022.
6. Professor Surendra Ghaskadbi from the Developmental Biology Group, Agharka Research Institute, gave a talk on “Development of Animal Form” on October 12, 2022.
7. Dr. Jayesh Mahendra Goyal from NISER delivered a talk on “Exoplanets and the Search for Habitable Worlds” on November 18, 2022.

**Outreach activities at Institute of Physics**

1. IOP organized an open day event to celebrate the National Science Day involving diversified research activities, and demonstrated various live experiments. The main objective of this observation was to awaken the scientific spirit and temper in the minds of the budding talents and create more scientific and technological awareness among the students, teachers, parents, technology enthusiasts and the general public in the day-to-day life.
2. Prof. A.M. Srivastava gave a popular talk on "Black Holes for General Public" in the SOAFAL (Siksha O Anusandhan Fortnightly Academic Lecture) Series of SOA University, Bhubaneswar on 15th June, 2022.
3. A motivational talk was arranged on 21st July, on the topic, "Modern Number System: Finite and Transfinite". The talk was delivered by Mr. Chandra Kumar Dash, Associated Member of "Institute of Electronics & Telecommunication Engineers, new Delhi.
4. A Science Awareness program for school and junior college students was organized on 24.08.2022. Around 120 students from different schools and colleges of Odisha participated in the program.
5. As a part of the DAE Iconic week, the Institute organized one-day academic science awareness program for senior college students. Prof. A.K. Tyagi, Director, Chemistry Group, BARC, Mumbai delivered a popular lecture on the "Career in Science" and had a close interaction with the students. Prof. K. K. Nanda, Director, IOP delivered a popular talk on "Photoluminescent materials for societal applications".
6. A health camp on Cardio, Ortho and Diet subjects was conducted as part of Iconic week. The camp was organized with the professional doctors from local well-known Kalinga Hospital, Bhubaneswar.
7. With an aim of inculcating scientific temper as well as patriotism in children, a drawing competition program was conducted on the theme "Azadi Ka Amrit Mahotsav".

**Outreach activities at RRCAT, Indore**

1. RRCAT celebrated the DAE Iconic Week under Azadi Ka Amrit Mahotsav. Talks on “Indian Freedom Struggle and Science” and “Satyagraha of Indian Scientists during British Rule” were arranged during the inaugural session. A meeting on DAE incubation program was organized where around 70 representatives from MSME participated. Another meeting was organized at RRCAT to introduce farmers to the liquid nitrogen based refrigerated transportation technology developed at RRCAT and named as Sheetal Vahak Yantra (SHIVAY).
2. Several teams from RRCAT visited different schools in Indore district during DAE Iconic Week to spread scientific and health awareness. More than 1000 school students of 13 schools participated in program.
3. A separate camp was organised in which the photonics based compact and portable cancer screening device “Oncodiagnoscope”, developed at RRCAT was used to screen over 150 individuals.
4. RRCAT celebrated the National Science Day - 2022 in an online mode under the “Azadi Ka Amrit Mahotsav”. More than 650 students and teachers participated from 42 schools and 12 colleges in and around Indore through the online program.

**Outreach activities at VECC**

1. VECC has conducted several outreach programs and interacted with school and college students such as Mahatma Gandhi Memorial School Barasat, Jukia High School, Medinipur, Kalupur Panchpota School, Bongaon, Chandannagar, Nadia, Pachberia Ramchandra Sriti Sikha Mandir, Raniganj Girl's college, etc. throughout the year.
2. VECC also participated in several exhibitions and represented DAE in 30th State Science and Technology Congress at Science city, Acharya Satyendranath Basu Smarak Bijnan "O" Prajukti Mela, Hedua Park, 108th Indian Science Congress at Nagpur, Maharashtra, Ras Utsav and Science Exhibition cum fair 2022 at Jabda, Purba Medinipur.
3. National Science Day 2022 was celebrated by VECC, Kolkata, on Feb 08, 2023. Around 100 students and teachers participated in the celebration, in particular from schools from remote rural areas were invited, with an emphasis to reach students of schools far away from the city.
4. The Public Awareness Cell of VECC arranged a one-day programme on 25th august, 2022 for school and college students in and around Kolkata to promote science & scientific thinking.

**Outreach activities at IGCAR**

1. As a part of Azadi ka Amrit Mahotsav celebrations, IGCAR has organised a sequence of awareness programs to showcase and celebrate the technology development carried out and transfer of certain technology in the application of societal benefits by Department of Atomic Energy for the past 75 years after independence.
2. IGCAR has organized one-day event on “Generation of Magic Squares” of 750 squares with 75 students from nearby eight Govt. Higher Secondary Schools of Kalpakkam, using 75 important dates of milestone activities of different units of DAE. The event is conducted on 22nd Aug’ 2022, in Higher Sec School, Sadurangapattinam.
3. As a part of Azadi ka Amrit Mahotsav (AKAM) –DAE ICONIC week Celebrations, IGCAR and GSO, have organized a sand art sculpture in the Kalpakkam beach during 27th -28th Aug, 2022 depicting various technologies of DAE applied to the societal benefits, highlighting contribution to power sector, agriculture, health and technology development.
4. Anu Walkathon was one of the activities conducted at Rajaji Bhavan and Elliot’s beach, Chennai on 28th August 2022.
5. DAE Exhibitions were held at SRM University – AP, during 3rd - 6th November 2022 on the occasion of the 88th Annual Meeting of the Indian Academy of Sciences.