

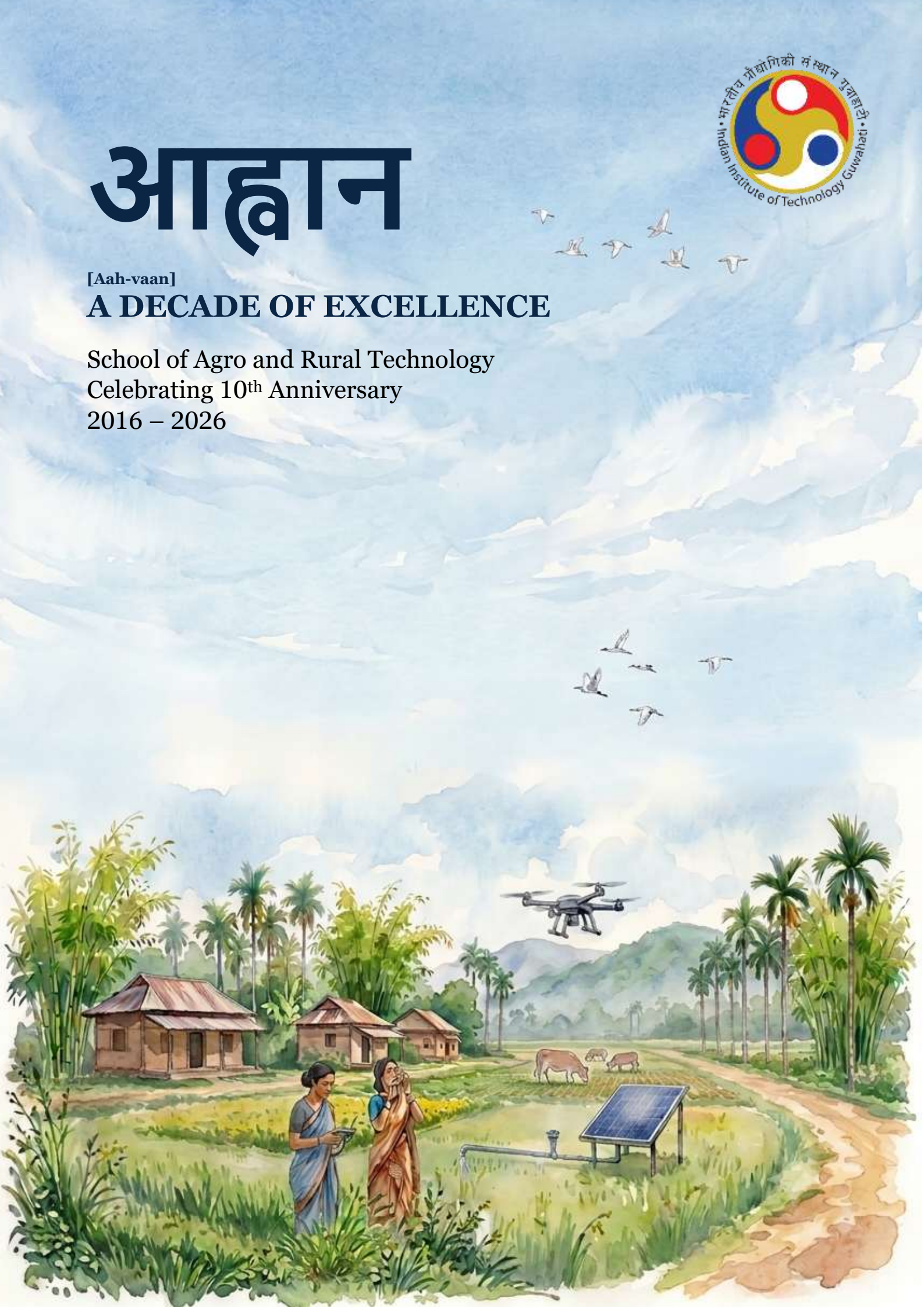


आह्वान

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A DECADE OF EXCELLENCE

School of Agro and Rural Technology
Celebrating 10th Anniversary
2016 – 2026





Sponsors: General Lab & Industrial Solutions; Krishna Enterprise.

FOREWORD

It gives me immense pleasure and a deep sense of pride to present the inaugural newsletter of the **School of Agro and Rural Technology (SART)**, IIT Guwahati, as we celebrate a significant milestone—the 10th Anniversary of our School and our First Alumni Meet on 3 October 2026.

The journey of SART has been one of transformation, perseverance and aspiration. What began as a Centre for Rural Technology has evolved into a vibrant academic and research school with a growing footprint in the agro and rural technology landscape. Over the past decade, SART has witnessed remarkable growth in its academic programmes, research activities, collaborations, facilities, and most importantly, in the community of students, faculty and alumni who carry its vision forward. From an initial strength of three core faculty members, the School has grown to six core faculty members, supported by associated faculty from several relevant disciplines of the Institute. This interdisciplinary character has been one of our greatest strengths.



Traditionally, the IITs have been recognised primarily for their contributions to high-end engineering, science and advanced technologies. However, the challenges confronting Indian agriculture and rural communities demand a different, yet equally important, technological imagination. As India moves towards the vision of Viksit Bharat, agriculture stands at a critical juncture. **We need technologies that are not only scientifically advanced, but also accessible, affordable, adaptable and appropriate to the realities of our farmers and rural communities.**

This is where SART seeks to create its distinctive identity.

Our philosophy is rooted in frugal and appropriate technology. We aspire to serve as a bridge between the cutting-edge technologies developed across engineering and science disciplines at IITs and their meaningful application in the field. Technologies often need to be redesigned, downscaled, simplified and contextualised before they can become useful to resource-poor farming communities. We believe that this process of technological translation is not a compromise on innovation; rather, it is innovation with purpose. Indeed, the very frugal nature of rural technologies can make them more robust, affordable, repairable, adaptable and sustainable.

Over the last decade, SART has established a distinctive niche in the agro and rural sectors of Northeast India. The region itself provides a unique living laboratory, with its diverse agro-ecological conditions, rich indigenous knowledge, challenging terrain, dispersed rural communities and distinctive socio-economic realities. Our faculty and students remain deeply committed to addressing the needs and aspirations of the people of the Northeast. At the same time, we now aspire to take the experience and knowledge gained here beyond the region and contribute to the larger national agenda of transforming Indian agriculture and rural livelihoods.

The School's strength lies not merely in its numbers, but in its ability to bring together people and disciplines. Our associated faculty from across the Institute contribute their expertise to SART for defined periods, with their association renewed based on their contributions to the School and the academic and research objectives of the Institute. Such an interdisciplinary ecosystem allows us to connect engineering, agriculture, environment, social sciences and rural development in ways that are essential for solving complex real-world problems.

As the Head of SART, I feel particularly proud of our students and alumni. Our alumni have established themselves in diverse professional and academic domains, and many continue to carry the vision and values of SART in their hearts. The First Alumni Meet is therefore not merely a reunion; it is an opportunity to reconnect, reflect upon our journey, celebrate our collective achievements, and envision what we can accomplish together in the years ahead.

My dream is to see SART emerges as a leading national centre for appropriate and frugal technologies for resource-poor farming and rural communities of India. This is an ambitious vision, and the road ahead will undoubtedly present many challenges. But I firmly believe that we are ready to face them—with knowledge, commitment, collaboration and perseverance.

The next decade must be about moving from technology development to technology deployment, from laboratories to fields, and from isolated innovations to scalable solutions. It must be about ensuring that the benefits of India's technological progress reach those who need them the most. I invite our faculty, students, alumni, staff, collaborators and well-wishers to join hands in this journey. Together, we can bring meaningful technological change to our agro and rural sectors and make them more robust, resilient, sustainable and prosperous.

As SART completes its first decade, let us celebrate not only where we have come from, but also where we have the courage to go. Jai Hind!

Prof. Sudip Mitra, *FNASc*
Head, School of Agro and Rural Technology
Indian Institute of Technology Guwahati

A DREAM CAME TRUE: FROM RUTAG-NE TO SART

Dr. R Chidambaram, then Principal Scientific Adviser to the Government of India chaired a meeting at Assam Administrative Staff College, Khanapara, Guwahati in October, 2005. When Prof Anil K Goswami was instrumental in coordinating to organize the meeting, Mr K N Hazarika, then CMD, NEDFi was looking after the logistics. All 3 stalwarts are no more with us now but their contributions to the society, particularly to Rural India, inspire the persons like me.



Dr R Chidambaram's concept of **RuTAG (Rural Technology Action Group)** was thoroughly explained and deliberated upon in the meeting. Already 2 RuTAGs were functioning at IIT Madras and in Uttarakhand. It was proposed to start the third RuTAG in Guwahati. After few days, following the instruction of Prof. Gautam Barua, then Director of IIT Guwahati, I prepared a proposal and sent to the Office of the PSA. After presenting the proposal in a meeting at PSA's office in Delhi, the proposal was accepted. RuTAG-NE was launched on 12 April, 2006 and I was given the responsibility of becoming the Coordinator.

Mandate of RuTAG is to venture out different S&T needs and to provide intervention wherever possible in the Rural context. We started with interactive sessions with different NGOs, villagers in general and artisans of different trades in particular visiting many different places in the 8 North-Eastern states. Initially we identified few key issues and formed different synergetic groups to address these issues. The synergetic groups consisted of members of different background like artisans of a particular trade, social scientists, domain experts, economists, academicians etc. With this approach we were able to provide solutions to cumbersome Eri processing, Muga weaving in power-loom, potter's wheel for comfortable operation etc. NGOs played the role of a conduit between technology developer and technology users. In this way, we were able to develop a large network of NGOs and Institutions and to deliver need based solutions

While working with RuTAG-NE, I realized that there is a tremendous need of research in varied fields and also to develop a set of dedicated manpower to develop, implement and handhold technology for rural masses. I shared this vision with Prof. Gautam Barua in a RuTAG-NE exhibition and on his advice subsequently submitted a proposal, along with five other professors of different departments, to establish a **Centre for Rural Technology** at IIT Guwahati.

Later Prof Barua marked the proposal for consideration of the new Director who was supposed to join in July 2013. Prof Gautam Biswas after joining as the new Director, called me one day for discussing the matter. Though the initial proposal was for an extra-mural centre, it was revised as an academic centre offering M.Tech. and Ph.D as advised by Prof Biswas. By this time few more faculty members joined the original team of 6. It was finally approved by the Senate followed by BoG and the Centre for Rural Technology (CRT) came into existence.

I am particularly thankful to Prof Gautam Biswas for his visionary role in shaping up the whole scheme of CRT.

The activities started from Technology Complex (TC) where RuTAG-NE was functioning. I was initially appointed as the Coordinator of CRT and then appointed as the first Head of the centre. Academic programs were started and numbers of faculty members from across the Institute taught different courses to the first batch of students. Subsequently, as per approval, we recruited 3 core faculty members.

The core faculty members started developing laboratories and also brought numbers of research projects. I too had numbers of Research Projects besides RuTAG-NE. With time it was found very difficult to operate from the temporary location in TC due to space crunch. A proposal to construct a building for CRT by demolishing the south-west part of Technology Complex did not materialize somehow. The authority was urged to adequately house the centre and finally the Ground plus 3 floors of a newly built building near Department of Design have been allocated to CRT. The Centre was also rechristened as the **School of Agro & Rural Technology (SART)** and it has been growing with numerous projects breaking the societal barrier. Numbers of beneficial events had already been organized by erstwhile CRT or present SART.

The leadership role is rolling with time and core faculty members have increased from 3 to 6. Numbers of students received M Tech and Ph D degrees and serving for the rural masses. Looking back, I feel immensely proud that an idea conceived by me about 15 years ago has evolved into a thriving School dedicated to agriculture, rural technology, innovation, and societal empowerment. I am sure SART is going to deliver immensely to empower the rural community with adequate technology.

Let's join hands in empowering rural India with Technology!

Long live SART IITG!

Prof S.K. Kakoty

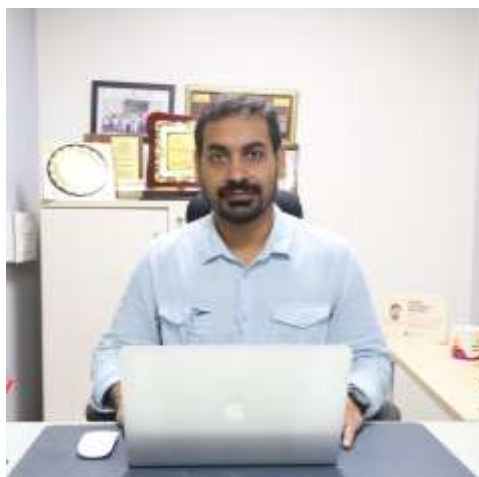
Founding Head, SART

Indian Institute of Technology Guwahati

A JOURNEY FROM THE FIRST PHD TO A CONTINUING LEGACY

It is a privilege and a deeply cherished experience to be part of the 10-year celebration of the School of Agro and Rural Technology, IIT Guwahati. I feel particularly honoured to be associated with this milestone as the first PhD scholar to receive a doctoral degree from the School in 2020.

My doctoral journey at the School was much more than an academic pursuit. Under the guidance of Prof. S. K. Kakoty, the founder of the School and my PhD supervisor, I explored how technology and innovation could address the challenges faced by rural communities. His vision for the School and emphasis on context-sensitive solutions had a lasting influence on my academic and professional journey.



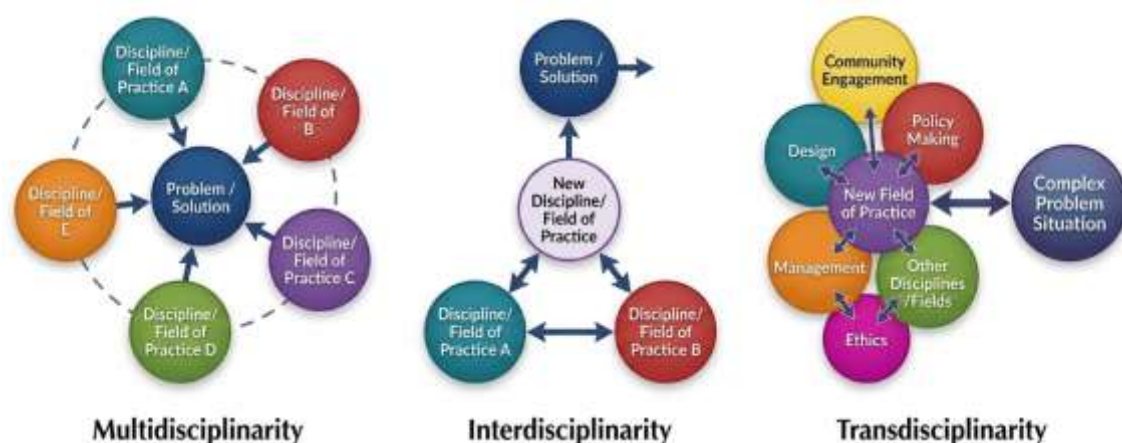
Being a doctoral scholar during the formative years of the School was a unique experience. The interdisciplinary environment encouraged me to look beyond conventional disciplinary boundaries and appreciate the importance of integrating technology with local knowledge, human needs, and social contexts. The learning and experiences I gained at the School continue to influence my present role as a faculty member in the Department of Design at IIT Roorkee. The interdisciplinary approach, exposure to rural communities, and problem-solving mindset developed during my doctoral years have become integral to my teaching, research, and community engagement. In many ways, the School not only prepared me as a researcher but also shaped the way I approach teaching and academic responsibilities.

Looking back, **I realize that the School gave me much more than a PhD; it gave me a way of looking at problems with empathy, curiosity, and a commitment to meaningful impact.** I congratulate all faculty members, staff, students, and alumni on this important milestone. From being the School's first PhD graduate to witnessing its growth into a vibrant academic and research community is a journey I will always cherish. I wish the School many more years of impactful research, innovation, and service to rural India.

Dr. Bibhuti Ranjan Bhattacharjya
Assistant Professor,
Department of Design,
Indian Institute of Technology Roorkee
(First Ph.D. Graduate from SART: 2016-2020)

FROM MULTIDISCIPLINARY TO TRANSDISCIPLINARY SCHOOL : SART VISION

The School of Agro and Rural Technology (SART) was established in the year 2016 as the erstwhile Centre for Rural Technology (CRT) at the Indian Institute of Technology Guwahati to complement and contribute to the pertinent sector of Rural Development. Understanding the need and importance of the agriculture sector, the scope of the Centre was expanded, and it was renamed the School of Agro and Rural Technology (SART) in 2021.



While the school traditionally promotes multidisciplinary activities focusing on developments in the agro and rural sector, addressing today's complex rural challenges requires moving toward a fully transdisciplinary paradigm. Addressing these complex rural situations requires a transdisciplinary approach. Transdisciplinary innovation within agriculture and rural technology is action-oriented, future-focused, participatory, holistic, and purposive. Instead, transdisciplinary innovation places these technical interactions within an integrated system with a social purpose, resulting in a continuously evolving and adapting practice.

This shifts agricultural innovation beyond a narrow, "customer-centred" focus to a broad, "society-centred" perspective, requiring active collaboration among academic researchers, public and private sector organizations, governments, and farming communities. To realize this vision, SART emphasizes core takeaways regarding learning, spaces, levels of impact, and partner selection. We focus on training researchers in systemic problem structuring alongside technical execution, creating field spaces where engineers and local stakeholders co-create solutions, measuring success from local farm adoption to regional policy, and selecting strategic partners across government and non-profit sectors to ensure technology transfer creates lasting rural development.

Editorial Team

ACADEMIC PROGRAMS & TALENT DEVELOPMENT

The Academic Programs & Talent Development

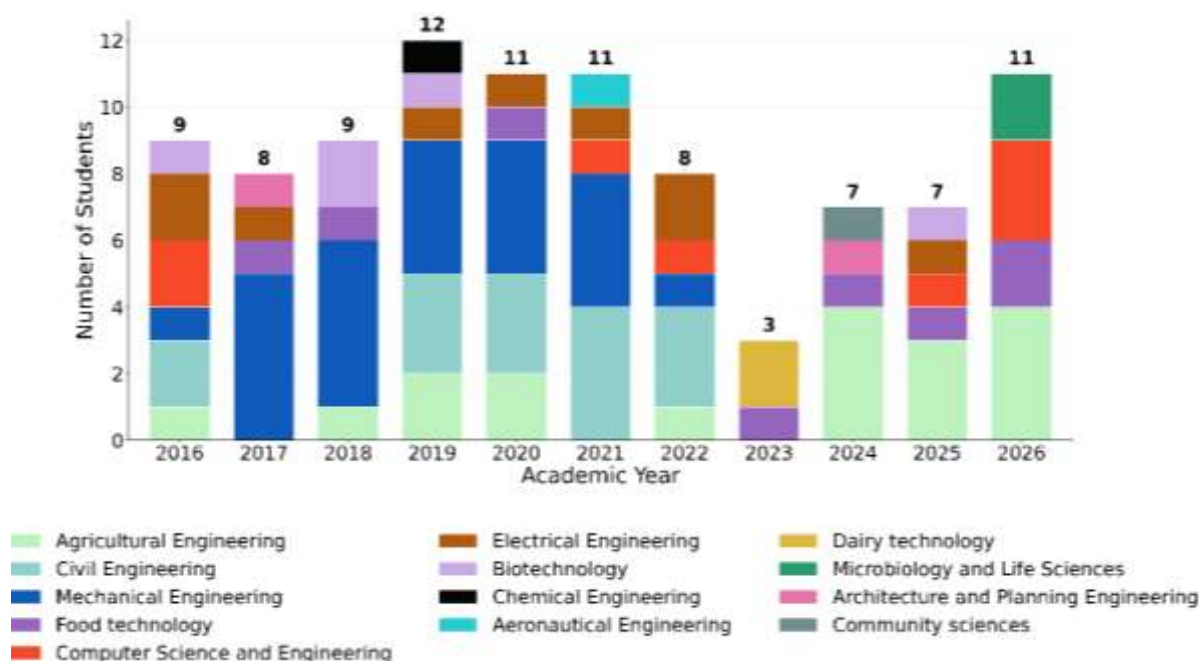
SART nurtures a new generation of professionals and researchers capable of addressing real-world agricultural and rural development challenges through science, technology, and community engagement. The academic programmes are designed to combine strong technical foundations with field immersion, interdisciplinary learning, and research-driven innovation, preparing students for impactful careers across academia, industry, government, and the development sector.

M. Tech. in Rural Technology

The M. Tech. programme at SART is designed to develop professionals who can bridge technology with rural transformation. Through a unique blend of classroom learning, laboratory training, field immersion, and interdisciplinary research, the program prepares students to address challenges across agriculture, food systems, natural resources, water and sanitation, renewable energy, geospatial technologies, and rural entrepreneurship.

Diverse and Inclusive Student Community

The M. Tech. programme has attracted students from across India with diverse educational backgrounds, creating an interdisciplinary learning environment where engineering, agriculture, biological sciences, food technology, and rural development perspectives converge.



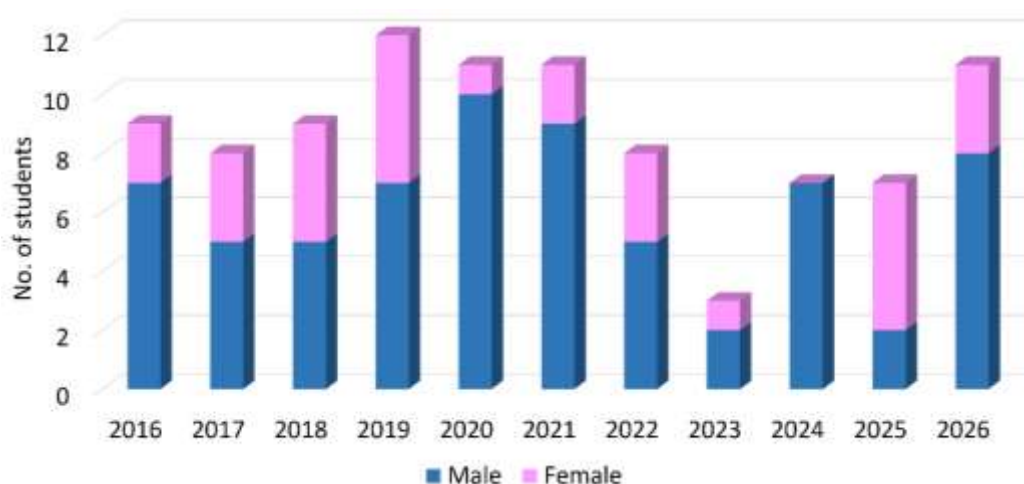
The programme brings together students from a remarkably broad range of undergraduate disciplines, reinforcing SART's multidisciplinary and transdisciplinary vision.

Students have joined the programme from disciplines including:

- | | |
|--|--|
|  Agricultural engineering |  Civil Engineering |
|  Mechanical Engineering |  Electrical Engineering |
|  Aeronautical Engineering |  Computer Science & Engineering |
|  Biotechnology |  Food Technology |
|  Dairy Technology |  Microbiology & Life Sciences |
|  Planning Engineering |  Community Sciences |

Gender Diversity in the M.Tech. Programme

The M.Tech. programme at SART is committed to fostering an inclusive and equitable academic environment by providing equal opportunities to students.



Gender distribution of M.Tech. students admitted across academic years.

Over the years, the programme has maintained a healthy representation of both male and female students, reflecting its commitment to diversity and equal participation in higher education. This balanced gender composition enriches collaborative learning, encourages diverse perspectives, and strengthens the programme's multidisciplinary academic culture.

Priyakrishna and Monisha Bhattacharya Scholarship program for M.Tech. Students

SART recognizes and supports academic excellence by providing fellowships to deserving postgraduate students. These fellowships are instituted to encourage high-quality research, innovation, and sustained academic engagement in the fields of agriculture and rural development. In addition to national fellowships,

SART offers the late *Priyakrishna Bhattacharya and Monisha Bhattacharya Fellowship*, established to honour the distinguished contributions to the Institute and to promote excellence among M.Tech.

IIT Guwahati has established the Priyakrishna and Monisha Bhattacharya Fellowship through a philanthropic contribution of ₹3 crore by Dr Amit Kanta Mitra, the son-in-law of Mr. Priyakrishna and Ms. Monisha Bhattacharya. The fellowship substantially increases the financial support available to postgraduate students during their two-year programme. Dr. Amit Kanta Mitra handed over this endowment grant to Prof. Devendra Jalihal, Director of IIT Guwahati in the presence of his family members Prof Sudip Mitra (Head, SART), Prof Latha Rangan (HAG Prof at BSBE) and Mr. Anindya Mitra.

Dr Amit Kanta Mitra is an orthopaedic surgeon with a professional focus on sports medicine. Over more than four decades in Singapore, he has remained closely engaged with academic institutions and professional training. He has taught UG students, PG trainees, and early-career professionals at the National University of Singapore and Singapore General Hospital.

Highlights:

- Monthly Fellowship of ₹ 25000
- By the end of the 3rd semester or during the 4th semester, if a candidate is selected to present M. Tech - related work at a high-repute international conference, the committee may approve ₹90,000 as travel support.
- ₹10,000 for two years as contingency.



For the M.Tech. Batch 2025-2027, two meritorious students - Ms. Chansa Raingnam and Ms. Stootie Baruah were awarded this prestigious fellowship in recognition of their outstanding academic performance and potential. Through

such initiatives, the SART continues to nurture talented researchers and strengthen its vibrant academic and research ecosystem.

The M. Tech. programme emphasizes learning through research, laboratory experimentation, field immersion, community engagement, entrepreneurship, and technology-driven innovation. Students gain exposure to remote sensing and GIS, renewable energy systems, food value addition, water quality analysis, data analytics, and participatory rural appraisal, equipping them to contribute effectively to academia, industry, government, and the development sector.

Career development

Graduates of the M. Tech. Rural Technology programme have pursued careers and research opportunities in farming, agri-food and nutrition industries, government and development sectors, research organisation, and environmental and rural technology initiatives.



Ph.D. Programme

The Ph.D. programme at the School of Agro and Rural Technology (SART) fosters interdisciplinary and transdisciplinary research aimed at addressing complex challenges in agriculture and rural development. Research scholars work across engineering, geospatial technologies, environmental sciences, water resources, renewable energy, food systems, climate resilience, and rural livelihoods to develop solutions with tangible societal impact.

The programme encourages collaboration with academic institutions, government agencies, industries, and local communities, ensuring that research

contributes not only to scientific advancement but also to sustainable rural development.

Research that Creates Rural Impact

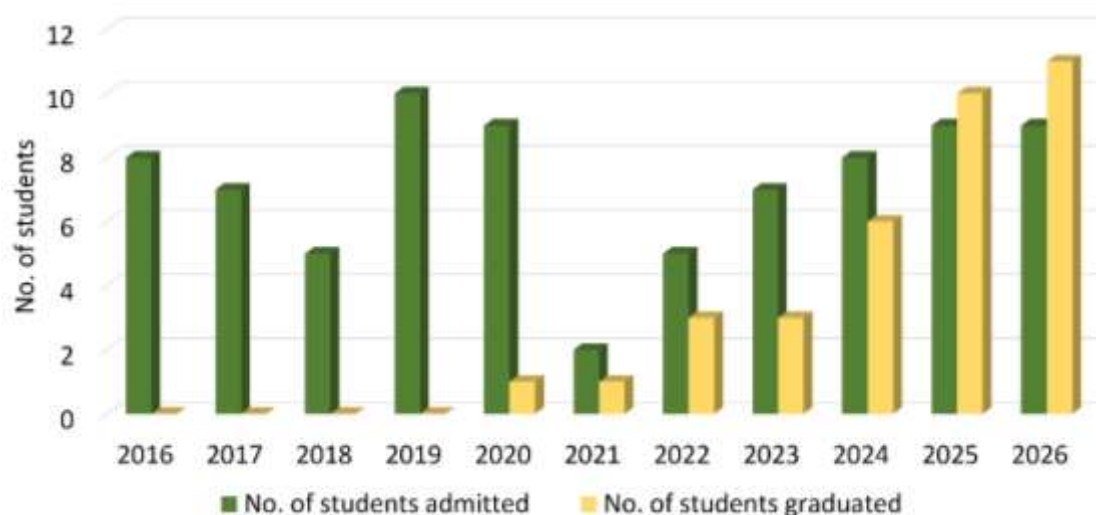
Ph.D. scholars at SART undertake research in diverse thematic areas, including:

- Remote Sensing, GIS and Digital Agriculture
- Climate-Smart Agriculture and Natural Resource Management
- Rural Water Supply, Sanitation and Water Quality
- Renewable Energy and Sustainable Rural Infrastructure
- Food Technology and Value Addition
- Rural Livelihoods and Agribusiness Innovation
- Environmental Monitoring and Data Analytics

This interdisciplinary ecosystem enables scholars to integrate technology with field-based problem solving and policy-oriented research.

Growing Doctoral Community

Since its inception, the Ph.D. programme has witnessed a steady expansion in admissions while also producing a growing number of graduates, reflecting the maturation of the research ecosystem at SART.

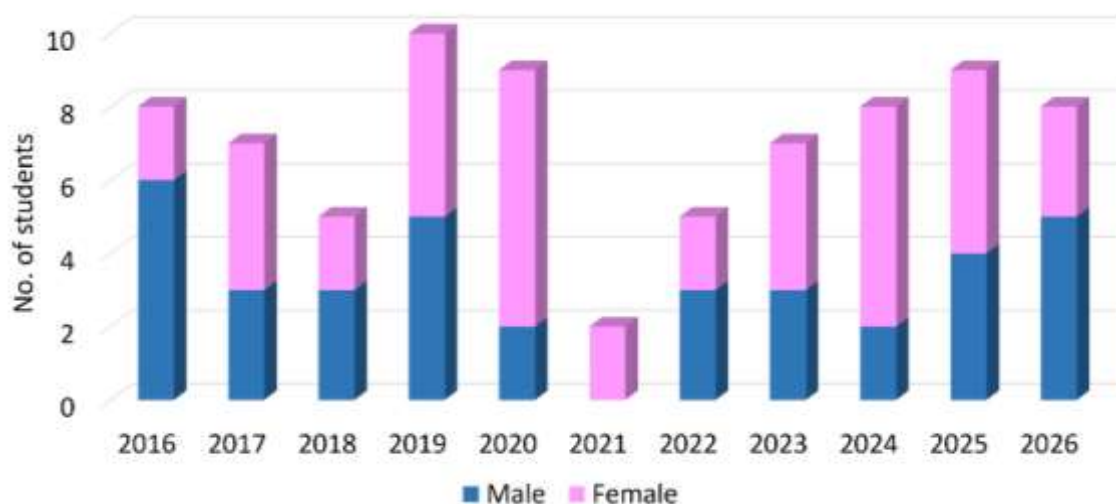


Year-wise Ph.D. admissions and graduations at SART

- Ph.D. admissions have steadily increased since the establishment of the programme.
- Graduations began from the 2020 batch onwards as the earliest cohorts completed their doctoral research.
- The recent years indicate a healthy balance between incoming scholars and graduating researchers, reflecting sustained research productivity.

Gender Diversity in the Ph.D. Programme

SART continues to build an inclusive research environment with increasing participation of women researchers alongside male scholars across academic years.



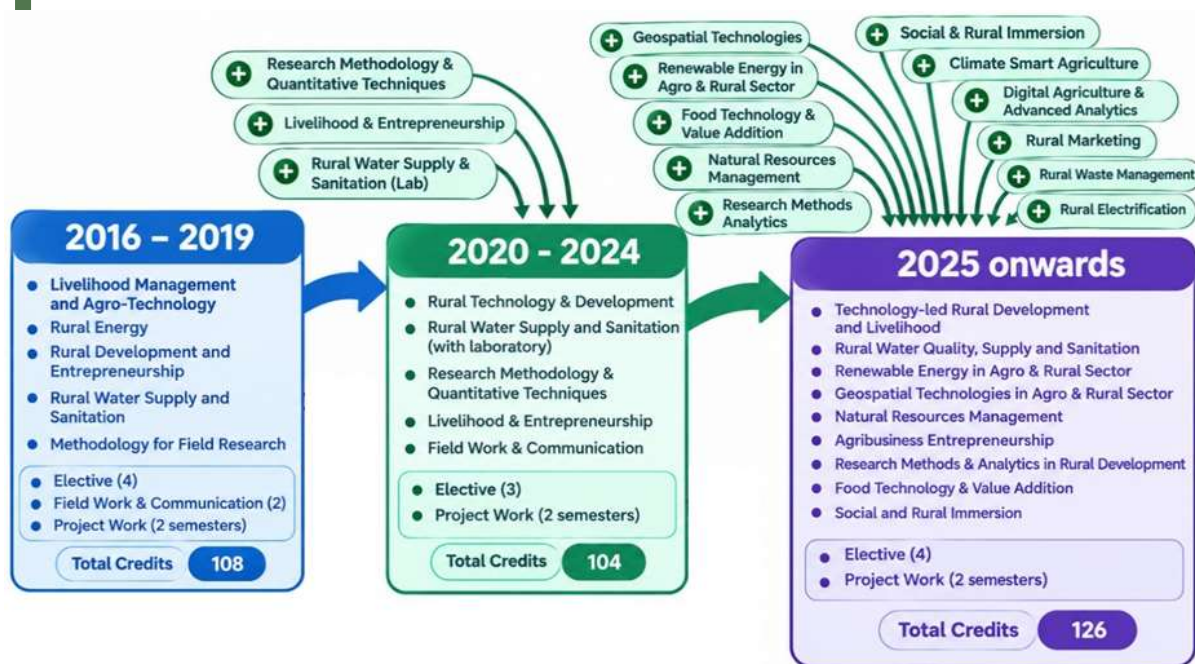
Gender distribution of Ph.D. scholars across academic years.

Highlights

- The programme has maintained participation from both male and female scholars since its early years.
- Female enrolment has shown a noticeable increase in recent admission cycles, indicating improved gender diversity within the doctoral community.
- The evolving gender balance reflects SART's commitment to creating an equitable and inclusive research ecosystem.

Curriculum Evolution (2016–2025)

Over the years, the curriculum has evolved from a multidisciplinary learning framework, incorporating emerging technologies and sustainability-driven courses while strengthening experiential learning.



Evolution of the M.Tech. Rural Technology curriculum from 2016 to 2025 highlighting major additions, revisions, and expansion of academic courses.

The first ever curriculum had 6 core courses and 4 elective courses throughout the year, distributed as 5 core subjects in the 1st sem and one core and 4 elective courses in the 2nd sem. Where each course had a total credit of 6. with a total credit of 104.

The first modification in the course curriculum was launched in 2019, it was there for the academic year 2020-2024, it had several advancements:

- Livelihood Management and Agro technology was modified and renamed as Livelihood and entrepreneurship.
- Methodology for Field research was modified and renamed as Research methodology and Quantitative techniques for Rural Development.
- Courses removed- Rural energy and Rural Development and Entrepreneurship
- Courses added- Rural technology and Development
- Elective courses remain as they were.
- Two courses on Field work and Laboratory Practices were combined into one- “Field work and Communication”.

Second, modifications to the curriculum were made for the academic year 2025 and onwards, bringing major changes to the course curriculum. The number of credits increased to 126; it also redefined the overall structure and played a key role in the shift toward becoming multidisciplinary.

- **Social & Rural Immersion** was introduced as credit course. It accounts for factors governing social development, etc., conduct of participatory rural appraisal (PRA) survey, Rapid Rural Appraisal (RRA) and rural sensitization, qualitative data collection and analysis, group discussion with local community on their social issues and challenges.
- A new thought was paid to the Technology led Rural Development and Livelihood
- Rural water supply and sanitation become Rural water Quality, Supply and sanitation.
- Research Methodology & quantitative techniques for rural development become Research methods and analytics in rural development.
- Livelihood and Entrepreneurship, Field work and communication, water resource management, Agri-horticulture produce processing, and Technology were modified.
- Renewable Energy in Agro and Rural Sector, Geospatial Technologies in Agro-Rural Sector, Agribusiness Entrepreneurship, Food Technology and Value Addition, were added as core courses.
- Climate Smart Agriculture, Rural Marketing, Digital Agriculture and Advanced Analytics, Rural Waste Management, and Rural Electrification were added as elective courses, keeping in mind the need of the current demand in the society.
- Elective courses were equally distributed with two elective courses each semester.

Through these successive curriculum revisions, the M.Tech. programme at SART has evolved into a more comprehensive, future-ready, and multidisciplinary academic programme. Each modification has strengthened the curriculum by integrating emerging technologies, sustainability-oriented approaches, experiential learning, and entrepreneurship while retaining its core focus on rural development. The introduction of geospatial technologies, renewable energy, research analytics, food technology, climate-smart agriculture, and rural immersion reflects SART's commitment to preparing students for the changing needs of agriculture and rural systems. Overall, the curriculum has transformed from a multidisciplinary framework into a dynamic learning ecosystem that equips graduates with the technical knowledge, analytical skills, and field experience required to create impactful solutions for sustainable rural development.

Convocation

2025



2026



RESEARCH EXCELLENCE



Research Publications and Scholarly Contributions:

The School of Agro and Rural Technology continues to foster a vibrant culture of research, innovation and knowledge dissemination, with scholarly contributions spanning environmental sustainability, waste management, biotechnology, bioresource utilization, rural technology, ecological management and interdisciplinary applications.

Research at a Glance (2016-2026)

4 Book

Mitra, S., & Shaw, R. (2024). Disaster Risk Reduction and Rural Resilience: With a Focus on Agriculture, Water, Gender and Technology, Singapore: Springer Nature Singapore, pp 317.

Haq I, Kalamdhad A S, Khwairakpam M. (2024) Advancement in Solid Waste Management and Treatment, Springer Nature, pp 240.

Patra, S., Mitra, S., Singha, S., & Kalita, P. (Eds.). (2023). Technologies for Rural Development: Proceedings of NERC 2022. Springer Nature.

Alok Senapati, Nihal Gujre, Sudip Mitra, Latha Rangan (2019) Flora of IIT Guwahati. Pp 212.

56 Peer-Reviewed Journal Publications

Research published in national and international scholarly journals, reflecting the School's interdisciplinary contributions to sustainable agriculture, soil & water quality management, food science & biotechnology, agro-waste management, remote sensing, rural entrepreneurship, rural energy, applied biodiversity, and appropriate rural technology.

75 Conference, Workshop & Symposium Contributions

Research papers and scholarly contributions presented at national and international conferences, workshops, symposia, research conclaves and academic forums, demonstrating the School's active participation in knowledge exchange and collaborative research.

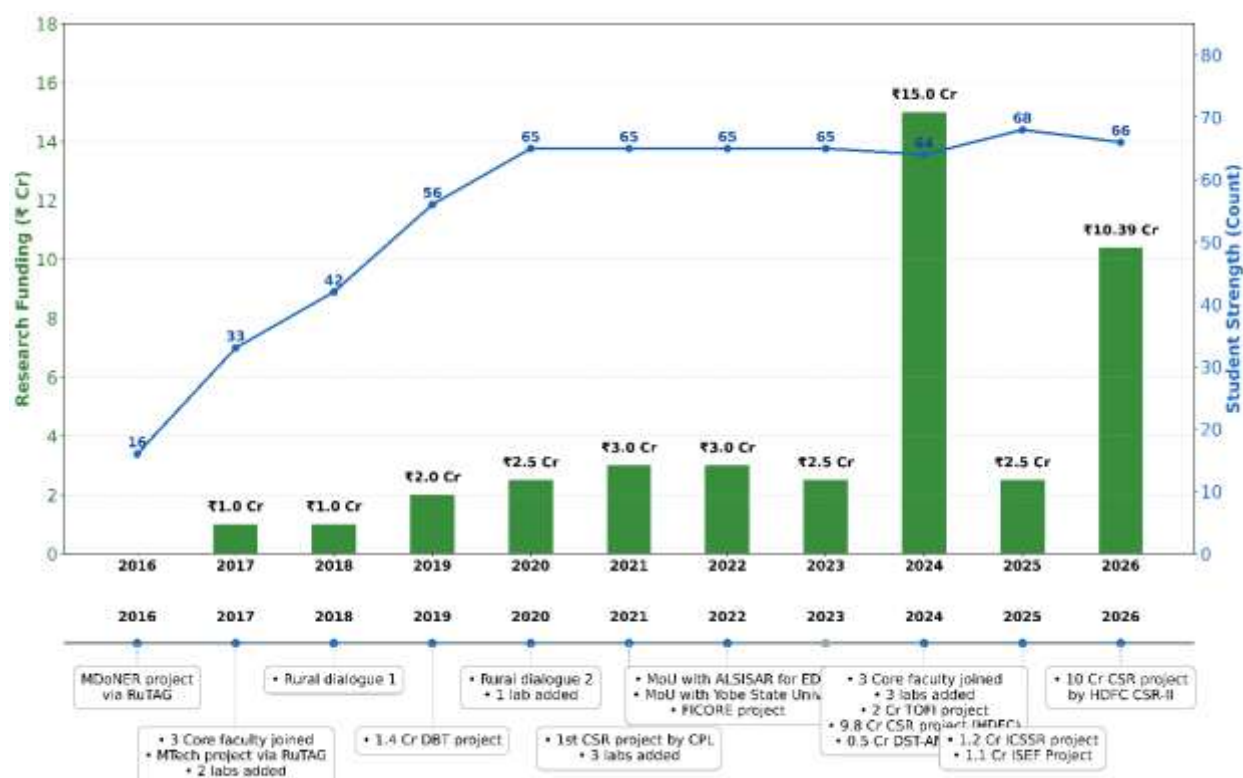
Sponsored Research Projects

Innovation, Collaboration & Impact

Research at SART is driven by the need to develop practical, sustainable and context responsive solutions to challenges relevant to the Northeast and beyond. The School's sponsored research portfolio spans diverse areas including rural technology, agriculture, biotechnology, environmental management and food processing, bringing together interdisciplinary expertise and collaborative partnerships.

Sponsored Research Projects

The School's research portfolio comprises more than 25 sponsored projects supported by leading government agencies, national funding bodies, regional development organisations, CSR funds and institutional grants. These projects represent important milestones in SART's research journey and reflect its growing engagement in externally supported research and technology development.



Patents:

- Dr. Pranab Kumar Mondal, Mr. Dhruvkumar Wankawala, Dr. Sudip Shyam, “A Passive Droplet Formation And Splitting Microfluidic Device For Symmetric Or Asymmetric Droplet Generation And A Process Thereof” Indian patent 202231008005, 2023.
- Dr. Pranay Kumar Sarkar and Prof. Sashindra Kumar Kakoty, “Bell metal welding process”, Indian Patent Number: 523378.
- Mr. Sapunni Sebastian and Prof. Karuna Kalita "Inter Cum Intra Row Paddy Weeder For Wetland Cultivation" Indian patent 202331034628, 2024.
- Dr. Pranab Kumar Mondal, Mr. Kaushal Agarwal, Ms. Kushala Tatineni, “Qualitea: A Paper-Based Colorimetric Test Strip For Assessing Tea Purity/Quality” Indian Patent 202531070624, 2025.
- Mr. Amey Shriram Mindewar, Dr. Siddhartha Singha, Prof. Sashindra Kumar Kakoty, “A Low Operating Temperature Dehumidifier Based Agricultural Product Dryer With Faster Drying Low Energy Consumption”, Indian patent 202531074620, 2025.
- Mr. Nilkamal Kalita, Prof. Sashindra Kumar Kakoty and Mr. Dhritiman Bora, “Ginger Gripping Unit for Planter Assembly”, Design Number: 449572-001.
- Mr. Nilkamal Kalita and Prof. Sashindra Kumar Kakoty, “Unidirectional Drive Assembly for Agricultural Seed Planter”, Design Number: 466408-001.

Memorandum of understanding (MoU):

- CRT signed MoU with an International “not-for-profit” development organization Innovative Change Collaborative (ICCo) for development and dissemination of various technologies (2017-2018).



- Innovior signs an MoU with IIT Guwahati as a Technical partner for projects, innovations and for bolstering entrepreneurship, particularly in the northeastern states of India (2018-19)



- IIT Guwahati signed MoU with Cadila Pharmaceuticals Ltd. (2023-24).



- ALSiSAR IMPACT signs an MoU with IIT Guwahati to launch unique first of its kind 'Rural Technology Fellowship' to amplify social entrepreneurship ecosystem in North East India (2022-23).
- MoU with Yobe State University (2022-23).
- The Meghalaya Basin Management Agency (MBMA) signs an MoU to collaborate with IIT Guwahati on sustainable resource management, natural livelihoods, and climate resilience projects in the Northeast (2025-26).

INFRASTRUCTURE & FACILITY GROWTH

The center was initiated at the Transit Complex of the IIT Guwahati campus in 2016 with basic infrastructure with tin-shaded architecture and a few common lab and sitting space for faculties and students.



- Establishment of specialized laboratories, computing facilities were started as core faculties joined in 2017.
- Later, SART got its space at CORE-1A (Extension of CET building) in 2024. With new extended space and core faculty joined, research labs were further added.



Laboratory Facilities

1. Agro-Eco Technology Lab (PI: Prof. Sudip Mitra).

The central focus of the Agro-ecotechnology laboratory (AEL) is the dynamic integration of the knowledge culled from the field and laboratory. This amalgamation is being used to accelerate the development and customization of affordable, efficient and sustainable solutions. A cardinal balance of technological and human factors is essential for the transformation of this amalgamation in to viable outcomes. This vision is translated into the driving principle of the AEL lab “linking science and technology with society”.

2. Food and Bioprocess Lab (PI: Dr. Siddhartha Singha)

The Lab operates across several critical verticals, including the farm and forest product value chains, quality analysis and assay development for food and herbal products, scale-up and commercialization, and the food-health nexus. The group actively engages in value addition and impact assessment while cultivating an entrepreneurial ecosystem—currently incubating 12 startups and entrepreneurs. Additionally, numerous Self-Help Groups (SHGs) benefit from standardizing processes, developing new recipes, utilizing quality testing facilities, and participating in capacity-building training programs.

Under the food-health nexus initiative, the group investigates the complex interactions between food matrices and their in vitro and in vivo antioxidant activities. Key research pathways focus on the mechanistic relationships connecting gut microbiota, antioxidant activity, and inflammation, as well as evaluating the preventive and therapeutic efficacy of traditional and herbal food products on gastrointestinal disorders.

3. Water and Sanitation Lab (PI: Dr. Meena Khwairakpam)

The lab is equipped with cutting-edge instrumentation including the TOC Analyzer, BOD Incubator, and Digital Nephelometric Turbidity Meter. The mission is to advance research and innovation in water quality management and sanitation.

4. Agribusiness Innovation and Entrepreneurship Lab (PI: Dr. Sagar Surendra Deshmukh)

The research group drives practical research and innovation at the intersection of agriculture, value chains, and entrepreneurship to create scalable rural impact. The group focuses on building climate resilient systems, strengthening the market systems and promoting technology adaption through field-grounded, evidence-based approaches. By analysing the value chains and rural market behaviour, testing business and technological models in real world context, and supporting the startups and policy pathways. The lab aims to enable inclusive growth and sustainable agribusiness development.

5. Sustainable Energy Lab (PI: Dr. Risha Mal).

This is a one stop lab for all the sustainable energy needs for rural area. It encourages researchers for developing innovative sustainable renewable energy technology solutions and their effective implementation in rural areas. The major

aim is to increase the efficiency and affordability of low carbon and less emission energy sources.

6. Agro-geoinformatics Lab (PI: Dr. Dipankar Mandal)

The research group deals with digital agriculture by integrating digital technologies such as sensors, data collection systems, and analytic platforms. The lab focuses on translating the data into information and then practicing by involving public-private in connection with farmers. It also involves the development of methodologies and applications with Earth Observation Sensors (EOS) with particular focus on synthetic aperture radar (SAR) polarimetry and Optical sensing technologies.

7. Common wetlab and workshop: Facilities: Kjeldahl Digestion & Distillation Apparatus, Rotary Evaporator, Spectrophotometer, Digital Flame Photometer, Muffle Furnace.



8. School- Central Instrumentation Facility: HPLC, AAS, UV-VIS Spectrophotometer.

9. Microbiology: Facilities: Incubator, Trinocular stereo zoom and Compound Microscope with camera, deep freezer (80°C), centrifuge, autoclave, orbital shaker with incubator.

10. SART Common Computing Facility: This facility was operational from Winter 2025 semester for computing work and conducting practical lab classes/workshops. It has 10 computing workstations with installed software relevant to running courses.



Center of Excellence

Strategic funding partnerships and Corporate Social Responsibility (CSR) investments have enabled IIT Guwahati to establish vital Centers of Excellence (CoEs) and structured Memorandums of Understanding (MoUs). These collaborations drive rural development, technological innovation, and localized entrepreneurship.

HDFC Parivartan: A primary CSR funding partner supporting large-scale tech-based rural development and livelihood generation initiatives across Northeast India. Their grants focus on strengthening community organizations, agricultural resilience, and resource-based micro-enterprises.

Centre for Innovation in Agri & Aqua Voltaics (CiAAV): A specialized research and innovation center dedicated to dual-use technologies combining renewable energy generation (photovoltaics) with agriculture and aquaculture systems, optimizing land and water resource utilization. The center currently developed a 50kW agrivoltaic plant at Hailakandi, Assam for energy generation, herbal value addition. Additional 50kW (20kW Grid connected+30kW

Standalone) integrated agrivoltaic plant is established at Jalukbari village, Boko Block in Kamrup district with 200 members in a Farmer cooperative as beneficiary.



Integrated Facility for Wellness-Product Innovation (IFWPI): A dedicated technical facility designed to support research, prototype development, and commercialization of health, wellness, and bio-based traditional products leveraging local resources.

Tree-Based Enterprise Incubation Centre (TBEIC): An incubation hub inaugurated at IIT Guwahati to foster rural entrepreneurship, skill development, and value-chain enhancement focusing specifically on tree-based raw materials and forest/agro-residues.

TECHNOLOGY INNOVATION AND EXTENSION

2017-2018

- Sensitization Workshop on “Technological Empowerment of Women” by Prof. Latha Rangan.
- Stakeholders’ Consultation Workshop for Sustainable Agriculture in North-Eastern region, CRT in association with National Council for Science Museums (NCSM) and TIFAC, DST by Dr. Sudip Mitra (Co-ordinator).
- Technology Vision 2035 Dissemination workshop in association with National Council for Science Museums (NCSM) and TIFAC, DST by Dr. Sudip Mitra (Co-ordinator)

2018-2019

- Certificate training workshop on integrating ecosystem services and rural livelihoods by Dr Sudip Mitra from 10-14 September, 2018



- Short Term Course on Tailoring technologies for rural sector: development and dissemination by Dr Sudip Mitra, Dr. S. Singha, & Dr. Meena K. during the period from 29th Oct to 2nd Nov 2018



- Center for Rural Technology in association with Innovior and AIILSG organized a two-day event called 1st **Rural Dialogue** on 7th July 2018 to bring together representatives from rural communities, to understand their needs and their aspirations and leading policy makers, technocrats, village level entrepreneurs, financial institutions, district administration, village panchayats and renowned experts to discuss and exchange experiences and good practices on issues related to innovation in rural areas and provide awareness on various potential solutions.



- A training cum workshop on biomass dryer for rural people of Mizoram and Sikkim under STINER (A Ministry of DoNER initiative) by Prof. S.K. Kakoty.

- Department of BSBE and CRT in coordination with Plant Tissue Culture Association - India (PTCA-I) organized the ICTPA.



2019-2020

- Training on Feed Block Machine and Biomass Dryer Operation — Prof. S. K. Kakoty & Dr. S. Singha.
- Training on Biomass Dryer Operation — Prof. S. K. Kakoty & Dr. S. Singha.
- Training on Potter's Wheel Operation — Prof. S. K. Kakoty & Dr. S. Singha.
- Training cum Installation of Universal Biomass Dryer — Prof. S. K. Kakoty & Dr. S. Singha.
- Training cum Installation of Hank to Bobbin Winding Machine — Prof. S. K. Kakoty & Dr. S. Singha.
- Training cum Installation of Hank to Bobbin Winding Machine — Prof. S. K. Kakoty & Dr. S. Singha.
- Capacity Building of Tribal Youth through Agro-Processing — Dr. S. Singha.



- Training on Modified Feed Block Machine Operation — Prof. S. K. Kakoty & Dr. S. Singha.
- International Conference on Next Generation Plant Production and Bioresources Utilization Technologies (NGPPBUT 2019) was organized jointly by the Department of BSBE and Centre for Rural Technology.



- 4th Northeast Green Summit (1 st Nov to 3rd Nov 2019) was organized by Vibgyor media solutions & Vibgyor NE foundation in collaboration with IIT, Guwahati.



- Centre for Rural Technology (CRT) of Indian Institute of Guwahati (IIT-G) in collaboration with MS Swaminathan Research Foundation (MSSRF) and

Centre for Agriculture and Bioscience International (CABI) New Delhi organized a weeklong capacity building programme on 'Becoming a Plant Doctor' from 15 th July – 19th July 2019.



- A workshop was organised for discussion on a policy for Scientific Social Responsibility (SSR) in the country supported by Technology Information, Forecasting & Assessment Council (TIFAC), DST, GoI.
- Innovior and AIILSG in association with the Centre for Rural Technology (CRT) at IIT Guwahati organized the Second Edition of the Rural Dialogue on 20th & 21 st January 2020.



2020 - 21

- 3rd edition of RECYCLE 2020 '3rd International Conference on Waste Management' was organized by Waste Management Research Group (WMRG), Department of Civil Engineering and Center of Rural Technology under the banner of IIT Guwahati.



- 5th Edition NE Green Summit (Nov 2020)



- TEQIP-III Short Term Course (STC)/FDP on Role of Science and technology in Climate Smart Agriculture and Rural Development
- TEQIP-III Short Term Course (STC)/FDP on Challenges and opportunities in solid and liquid waste management
- TEQIP-III Short Term Course (STC)/FDP on Tools and practices for New Product Development for food and bio-Industries

2021-2022

- NRDC Industry Interaction Meet Bio-Pharma and Allied Technologies

- Food & Sustainable Development, NetProFan- north east chapter and FSSAI
- Importance of Dietary Diversification in the Present Time, NetProFan- north east chapter and FSSAI

2024-2025

- Farmers orientation workshop on Agrivoltaics: A Future-Ready Technology for Agriculture and Horticulture in Assam and the North Eastern Region was organised by SART under the HDFC CSR Project titled "Focused Development Program (FDP): Enhancing Agriculture and Agri Residue Based Enterprises via FPO".



- Farmers Training Program on Freeze-Drying unit for the Value Addition of existing Farm produce successfully organized at the SART under the HDFC CSR Project titled "Focused Development Program (FDP): Enhancing Agriculture and Agri Residue Based Enterprises via FPO".



- A training program entitled, "Basic Program on Financing Agri Startups" is scheduled from November 20 to 22, 2024 at SART. The program is sponsored by Bankers Institute of Rural Development (BIRD) Kolkata,

National Bank for Agriculture and Rural Development (NABARD) to train banking professionals on the nuances of financing new-age business ventures, especially in the agribusiness domain.



2025-2026

- A workshop on the solarization of Rural Feeders, 18 th September 2025.
- Soil Carbon Kit and Its distribution 'Empowering Farmers' funded by NEC 2026.





- The 5th International Conference on Waste Management- Recycle 2025 on June 5–6, 2025.



- SART & Centre for Technology Alternatives for Rural Areas (C-TARA) IIT Bombay first Bilateral Meeting 2026 on convergence of research and academic programs in rural technology and development sector.



- A capacity-building program on “Soil Organic Carbon (SOC) Kit and Their Distribution”, on 25 April 2026 at KVK Sonitpur by IIT Guwahati in collaboration with ICAR-ATARI, Zone VI.



- Farmers training at Morigaon on Biochar preparation and its application.



- Innovation, Design and Entrepreneurship (IDE) Bootcamp 2026



- Celebration of 20 years of impact, innovation, and inclusion at RuTAG, IIT Guwahati



- The 2nd Annual RuTAG 2.0 Review and Networking Meet, chaired by Prof. Ajay Kumar Sood, Principal Scientific Adviser (PSA) to the Government of India



OUTREACH ACTIVITIES

- IAS officers who have been inducted into the service very recently (2025 batch) visited SART and witnessed our ongoing research activities at various labs.



- 22 student council members and 2 guides from Sherbutse College, Bhutan's oldest higher education institution, visited SART as part of a 5-day educational tour to Guwahati from 12 to 16 March 2026.



- Faculty members and students from the University of Tsukuba visited SART as a part of the DOJO Program under the SOCIAL IMPACT TSUKUBA initiative



- 'Business Model Innovation for Rural Livelihoods' for students from Gifu University, Japan visited SART during 5th Spring School and 1st AI4GLOCAL Ideathon Program, organized by IIT Guwahati.



- In March 2025, undergraduate students from Gifu University, Japan, visited SART as part of the 4th Spring School Program.



- School children from different schools near Guwahati visited SART.



PROMINENT VISITORS

2018 - 19

- Dr. Arvinda Mitra, Scientific Adviser to Govt. of India - To attend a meeting with all the RuTAG centers and also to review the STINER progress
- Mr. Mihin Dollo, Director (NR), NERCoRMP - Signed MoU in between RuTAG-NE and NERCoRMP as a part of STINER programme
- Dr Masa Noguchi, University of Melbourne - Mass customization in housing
- Dr. Pawan Kaushik, Regional Director, Centre for forest-based livelihoods & extension, Tripura

2019-20

- Dr. Jagdish Mukhi, Governor of Assam - Interaction with students and faculties.



- Shri Sanjay Shamrao Dhotre Union Minister of State, HRD - Interaction with students and faculties.



2021 - 22

- Prof. Lalit Sharma, Director, Indian Institute of Entrepreneurship (MoSDE), Guwahati, Assam
- Shri. Shailesh Kotru, Smt. Tripti Khanna from Gramin Vikas Trust - Joint project development

2023-24

- Dr Joseph Kingston and Dr. Subramanian Perumal, Scientist, DFRL, DRDO - Discussion about ongoing projects of Food and Bioprocessing Lab
- Mrs. Manjula Saikia Bhuyan Former Administrative Secretary at Department of Industries & Commerce, Govt. of Assam - Importance of Technology in policy-making
- Ms. Tripti Khanna, National Program Head, Gramin Vikas Trust - Rural development and agriculture
- Sonam Dendup, Pema Wangdi and Sonam Tobgay, Sherubtse College, Royal University of Bhutan - Discussion about ongoing projects of Food and Bioprocessing Lab
- Prof Hiroyuki Koyama & Dr. Rao with a team of Japanese professors with Gifu University, Japan - Discussion about ongoing projects of Food and Bioprocessing Lab
- Dr. Michio Yamakawa, Professor, Gifu University, Japan - Discussion about ongoing projects of Food and Bioprocessing Lab
- Dr. Hebbar K .B., Director, ICAR-Central Plantation Crops Research Institute along with his colleagues Dr. Samsudeen K, Principal Scientist, Dr. Thamban C., Principal Scientist, Dr. Alpana Das, Principal Scientist visited the School of Agro and Rural Technology on 03.07.2024 to explore the possible areas of research collaboration between both institutions.



- Dr. Anandaramakrishnan, Director, CSIR-NIIST along with team members visited SART on August 26, 2024



- Dr. Kaushik Banerjee FRSC, FNAAS, Director, ICAR-NRC Grapes, Pune, India visited SART on September 16, 2024

2025

- UNEP country Head Dr Pisupati Balakrishnan



- Dr. Rajib Shaw, Professor in Graduate School of Media and Governance in Keio University, Japan and Dr. M. S. Lakshmi Priya, IAS who served as the Secretary of the Skill, Employment & Entrepreneurship Department and the Mission Director of the Assam Skill Development Mission.



- Dr Amit Kanta Mitra, Singapore who donated 3 crore to IIT Guwahati for establishing 4 Special Fellowships for SART and BSBE was visiting SART.



- JICA consultant team visiting SART to discuss the JICA sponsored project.



- Prof Harada, from Gifu University, Japan visited SART



- Dr Debapriya Dutta, Advisor, DST, and Dr Pradip Dey, Director, ICAR-ATARI, Kolkata, visited SART.



2026

- Ajay Kumar Sood is the Principal Scientific Advisor to the Government of India (PSA to GoI) 2026.



SART TALK AND INVITED LECTURES

- An enlightening talk on the topic “Sustainable Soil Management: A key to Climate Smart Agriculture” was delivered by Dr Ashok Kumar Patra, ex-Director of Indian Institute of Soil Science, Bhopal and current Vice Chancellor of Bidhan Chandra Krishi Viswavidyalaya, West Bengal on 6th November 2023



- An exciting talk on “Entrepreneurship” was delivered by Mr. HIMANSHU BARMAN, Manager- Project NEC-EDC IC from the Indian Institute of Entrepreneurship (IIE) on February 22, 2024.



- A captivating talk was delivered by Dr. Swapnil Sinha, an Innovator and Entrepreneur, CEO of Bio Incubator TIDF BioNEST-IITG on 12th January 2024



- Mr. Anuj Sharma, Founder Director of ALSiSAR IMPACT on 25th August 2023 for his insightful talk on the topic “Empowering Northeastern Entrepreneurs: Local Products, Packaging, and Market Expansion”



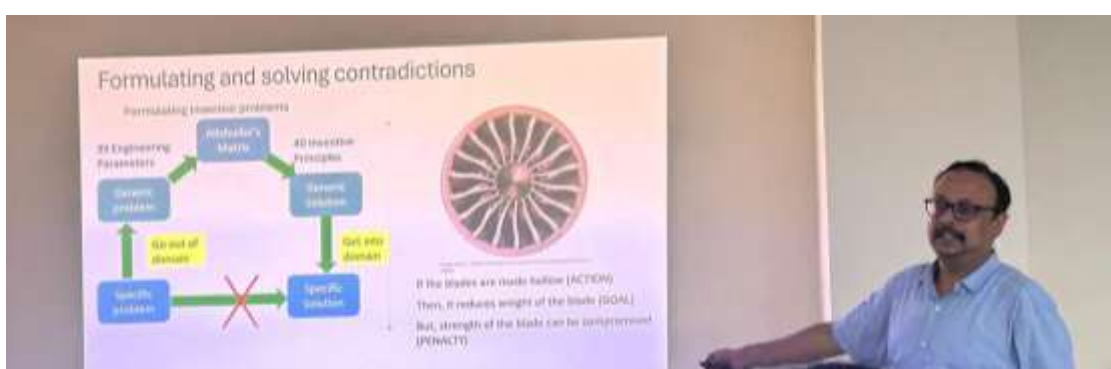
- A talk on “Floristic wealth of Western Himalaya with special reference to Orchids: A critical concern” by Dr. Jintu Sarma, Asst. Professor, Gauhati College, Assam was held at SART on August 12, 2024.



- Dr. Aditi Kapoor, Co-Founder, Alternative Foods & Fellow, Leadership for Environment and Development delivered a talk on " Just Transitions: Towards a Gendered National Mission on Natural Farming on August 27, 2024.



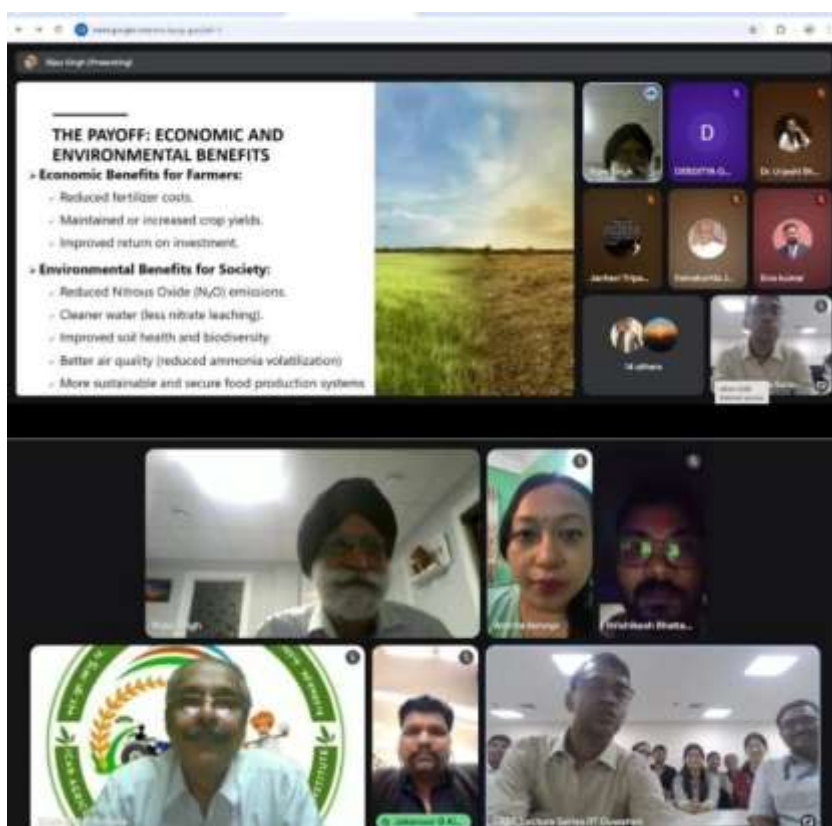
- Mr. Rohit Kumar, National Institute of Disaster Management, GoI spoke on the "Institutional Framework for Disaster Risk Reduction in India" during the SART talk on September 23, 2024
- A talk on "TRIZ-innovation based problem-solving tool" was delivered by Mr. Abhishek Choudhury, Vice President, Indo Japan Business Council, Director Nanobiz India Pvt Ltd, Director Concrete Consulting Pvt Ltd.



- Guest speaker, Dr. Kh. Premlata Devi (Senior Scientist and Head, KVK Thoubal, Manipur), shared her extensive expertise on "Creating Sustainable Livelihood through Extraction of Pineapple Leave Fiber" (2025)
- The Sustainability of Allotment Gardens by Prof. Lau Langeveld



- SART Talk on Climate-Smart Management of Nitrogen Fertilizer in Crop Production by Dr. Bijay Singh, Honorary Scientist, INSA & Former ICAR National Professor (PAU)



- “India–Japan Convergence in the Northeast” by Dr. Sarbani Roychoudhury, Professor at the Japanese Studies Centre for East Asian Studies, School of International Studies, Jawaharlal Nehru University.



- Dr. Eklabya Sharma, Padma Shri awardee and a distinguished expert in Himalayan ecology and sustainable development.



- SART talk on Design Thinking for rural applications, by Dr. Bibhuti Ranjan Bhattacharjya (2026)



- SART Talk on “A Roadmap for a Sustainable Community and World.” By Dr. Atul Bora, Chairperson, North East Foundation for Regional Sustainability (2026)
- SART Talk on: “Nano fertilizers and Nano remediation for Sustainable Agriculture and Environmental Protection” by Dr. Tapan Adhikari, Head of

Division, Environmental Soil Science, ICAR–Indian Institute of Soil Science (ICAR-IISS), Bhopal



STUDENT EXPOSURE VISIT

- Field trip 2016 to Noonmati dumping site



- Field trip 2017 to Grameen Sahara



- Field trip 2017 to Bethany society



- Field trip 2018 to Sonapur



- Field trip 2018 TO Dima hasao



- Field trip 2019 to Manash National Park and Aaraynak



- Field Trip 2021 to Assam TBI



- Sualkuchi Exposure Visit – Learning from Assam’s Silk Industry to understand the sericulture sector and human resource involved and prospects for rural development (4th Nov, 2024).



- Social & Rural Immersion - Boko, Assam, 2026. As part of the Social & Rural Immersion Courses, MTech students of SART, IIT Guwahati undertook an exposure visit to villages in Boko Development Block, Assam, supported by the Centre for Microfinance and Livelihood (CML).



SART UNWIND & CONNECT

- Performances at 1st Rural dialogue (2017)



- Chandubi Picnic (2018)





○ Farewell 2018



○ Kati Bihu celebration (2019)



- Campaign for ban on polyethylene bags at IIT Guwahati market complex



- Fresher's day (2019)



- Magh bihu (2019)



- Hahuwa's Picnic (2019)



○ Farewell (2019)



○ Manash National Park Picnic (2020)



- PhD Premier league 2020 (Cricket) (Quarter final)



- PhD Football league 2021



- PG Football league 2022 (Runners up)



- PhD Premier league 2022 (Cricket) (Quarter final)



- Vishwakarma puja (2024)



- Fresher's day (2024)



- An inauguration ceremony was conducted on 2th June, 2024. Prof. Devendra Jalihal, honorable Director, IITG also visited SART on 10th June, 2024 to interact briefly with all of us.



- SART get together on Biswakarma puja (2025)



- Independence Day celebration (2025)



- Fresher's day (2025)



- Teacher's day celebration at SART



- Holi Celebration at SART



- Picnic at the Aaxhi Farm, a serene retreat located in the Bhitarkhola village, Kamrup district of Assam in 2025.



○ Farewell (2025)



○ Farewell (2026)



- Informal Orientation of students (2026)



- Fresher's Day (2026)



AWARDS AND ACCOLADES

Featured Recognition

Prof. Sudip Mitra received the **NASI Fellow** Certificate from the hands of President NASI, Dr. Balram Bhargava, Ex DG-ICMR, on 02 December 2024 at IISER, Bhopal, during the 94th Annual Convention of NASI, the oldest Science Academy of India, for his contributions to plant and soil ecology and its interpretation with climate change. His contributions to the understanding of heavy metal pollution and its interactions with plant and soil ecologies have provided valuable insights.



Institutional Recognition

IIT Guwahati was awarded the Best Interactive Pavilion Award at IISF 2024, with the School of Agro and Rural Technology (SART) team contributing significantly to the achievement.



Awards and Honours

- Prof. Latha Rangan elected as Fellow for pioneering work in Plant Biotechnology / Medicinal Chemistry / Genome Mining by the National Academy of Sciences, India (NASI) (2017).

- Prof. S. K. Kakoty and Bibhuti Ranjan Bhattacharjya received the Distinguished Paper Award at the 7th International Conference on Research into Design, Indian Institute of Science, Bangalore (2019).
- Prof. S. K. Kakoty received the Education Leadership Award from Business School Affaire & Dewang Mehta National Education Awards.
- Prof. Rakhi Chaturvedi featured in the “Women in STEM: Vanguards of India@75” compendium at the first CII Women in STEM Summit (2022).
- Prof. Rakhi Chaturvedi received the Distinguished Service Award from the Society of In Vitro Biology (SIVB) for outstanding achievements in plant tissue culture and in vitro biology (2022).
- Prof Latha Rangan received the "IIT Guwahati Woman Faculty Research and Innovation Award" (2022).
- Dr. Pranab Kumar Mondal received the First Prize for Oral Presentation at Mizoram University for the presentation “Gravitropism on Plant Root Dynamics: The Role of Microfluidics.”
- Dr. Pranab Kumar Mondal featured on the Front Cover of ACS Langmuir for the article “Salinity Gradient-Induced Power Generation in Nanochannels: The Role of pH-Sensitive Polyelectrolyte Layers.”
- Dr. Pranab Kumar Mondal featured on the Front Cover of ACS Langmuir for the article “AC Electrothermal Effect Promotes Enhanced Solute Mixing in a Wavy Microchannel.”
- Prof. Ramagopal Uppaluri secured the Best Oral Presentation Award at the 5th International Symposium on Processing of Food, Vegetables and Fruits (ISPFVF 2023), University of Nottingham, Kuala Lumpur, Malaysia (2023).
- Prof. Ramagopal Uppaluri secured the Second Prize for Poster Presentation at the Symposium on Advancements in Staple Food Fortification (FortiSF2024), IIT Kharagpur (2024).
- Dr. Dipankar Mandal received the National Geospatial Award (Emerging Faculty) under the FOSSEE-GIS-IIT Bombay Project, supported by NMEICT, Ministry of Education (2025).
- Dr. Dipankar Mandal received the Indian Society of Remote Sensing (ISRS) I-CON (Silver) Award for contribution to the open-source “PolSAR tools: A Python package and QGIS plugin for processing Synthetic Aperture Radar data.”, 2025.
- Dr. Dipankar Mandal received the Best Oral Presentation Award at the IEEE-India Geoscience and Remote Sensing Symposium (InGARSS), Bhubaneswar, 2025.
- Dr. Pranab Kumar Mondal received the 1st Prize for Oral Presentation at the 4th Botanical Congress (2026) for the presentation “Root morphodynamics in Soil-on-a-Chip system: Role of Texture and Obstruction.”
- Prof. Ajay Kalamdhad conferred as the Gautam Barua NPTEL Chair Professor by IIT Guwahati, 2026.

SART's academic footprint in neighbouring countries

Bimal Kumar Chetri

SART's First International PhD Scholar (Bhutan) receiving Ph.D. degree at Convocation 2025. A milestone marking SART's growing journey towards global academic excellence.



Dr. Bimal is with his wonderful family and coordinating thesis supervisor Prof. Latha Rangan and co-supervisor Prof. Sudip Mitra.

Students' Achievements & Honours

The students of the School of Agro and Rural Technology have consistently demonstrated excellence in research, innovation, entrepreneurship, academic achievement and professional engagement. Their accomplishments at national and international platforms reflect the School's commitment to fostering creativity, interdisciplinary research and impactful solutions.

Awards & Presentation Excellence

- Srimonti Dutta, Manoj Sharma & Suranjit Basumatary were declared winners of Ideathon 2017 for developing a solution to market-linkage

challenges in Assam's handloom sector, jointly organized by the Government of Assam and UNDP (2017).

- Anjali Narzary received the Best Student Poster Presentation Award for presenting “Biomass Briquetting using Grass & Sawdust with Taro (*Colocasia esculenta*) Tuber as Binder” at Research Conclave, IIT Guwahati (2018).
- Rama A. Shirwalkar received the Best Student Poster Presentation Award for presenting “A Practical Proposal for Utilization of Degraded Municipal Solid Waste: Recycling in Fired Bricks” at Research Conclave, IIT Guwahati (2018).
- Rama A. Shirwalkar, Prakash Singh & Vinny Kohli received the Best Student Poster Presentation Award at Recycle 2018 for their research on “Studying Properties of Bricks by Partial Substitution of Soil with Powdered Rice Straw.”
- Kauser, H. (PhD) received the First Prize for Oral Presentation at Research Conclave '19, IIT Guwahati (2019).
- Kauser, H. (PhD) received the Second Prize for Poster Presentation at the National Environmental Conference 2019, IIT Bombay (2019).
- Yunus, P.M. (M.Tech) received the Best Poster Award at Research Conclave '19, IIT Guwahati (2019).
- Rajendra Adak received the Best Oral Presentation Award at the 5th National Students Research Convention on Healthcare and MedTech, IIT Kanpur, for the presentation “Diagnostic Tools – Simple Sensing to Complex Conditions” (2023).
- Rashi Hazarika secured 3rd Place in Poster Presentation for her poster on “Gurukul in Emerging Areas in Modern Biology and Medicine” at Tezpur University, Assam.
- Jyoti received the Best Paper Award in the Bioremediation theme at the VII ISEES International Conference on Sustainable Energy and Environmental Challenges (SEEC-2022), IIT (BHU), Varanasi (2022).
- Silvia Saikia received the Best Oral Presentation Award at the 4th International Conference on Recent Advances in Bio-energy Research, organised by Sardar Swaran Singh National Institute of Bio-Energy, Punjab (2023).
- Silvia Saikia received the Best Paper Award at the International Conference on Environmental Sustainability and Climate Change, organised by the National Institute of Technology Meghalaya (2023).
- Debaditya Gupta secured 1st position in the Best Oral Presentation category at the Society for Fertilizers and Environment.
- Ankit Kumar received the Best Paper Award for an oral presentation at Waste Recycling & Environmental Technology (WRET 2024), Babasaheb Bhimrao Ambedkar University, Lucknow (2024).

- Kumudhini Akasapu secured 1st position in Oral Presentation at the 5th International Symposium on Processing of Food, Vegetables and Fruits (ISPFVF 2023), University of Nottingham, Kuala Lumpur, Malaysia (2023).
- Kaushal Agarwal received the 1st Prize in Oral Presentation at the 4th Botanical Congress for “Root Morphodynamics in Soil-on-a-Chip System: Role of Texture and Obstruction,” Raja Narendralal Khan Women’s College (Autonomous), Midnapore, West Bengal (2026).
- Rekha Sharma received the 1st Prize in Poster Presentation at the 95th Annual Session and Symposium of NASI for “In silico Insights into Insecticidal and Antiviral Potential of Karanjin from *Pongamia pinnata*” at IIT Guwahati.
- Anamika Ghose & Debaditya Gupta (SART) were recognised among the Top 7 finalists of the Vishwakarma Award by Maker Bhavan Foundation, receiving a cash prize of ₹10,000 and an E-Certificate.
- Pankhi Goswami, Stootie Baruah & Anshuman Ghosh were selected as finalists in the IFAMA 2025 Venture Building Challenge for developing an innovative agribusiness idea aimed at improving market access and income for smallholder farmers, competing with 27 teams from 8 countries.
- Arunima Dhar received the Young Scientist Junior Award at the 57th Annual Conference of the Nutrition Society of India for her research on the protective role of *Citrus macroptera* fruit in modulating intestinal inflammation.
- Rahul Kumar Sahu received the Best Paper Award at ICESETED’26 for “Study of the Business Incubation Ecosystem in Assam, India (Paper ID: ENT-207)” at Rajkiya Engineering College, Azamgarh.
- Kshitij Yashwant Umbarje received the Best Paper Award at ICESETED’26 for “Assessing Potential of Assam Lemon on the Economic Development of Assam.”
- Ranjana Deka received the 3rd Best Oral Presentation Award at the International Conference on Sustainable Agriculture and Food Safety 2026 for “Blockchain Technology: Driving a New Age Innovation in the Agri-Food Supply Chain System” at Parul University, Vadodara (2026).

Research Thesis & Innovation

- Arnab Paul Choudhury received the Best M.Tech Thesis Award from the School of Agro and Rural Technology, IIT Guwahati (2022).



- Amey Mindewar received the Best M.Tech Thesis Award from the School of Agro and Rural Technology, IIT Guwahati (2023).



- Heena Kauser received the Best Ph.D. Thesis Award from the School of Agro and Rural Technology, IIT Guwahati (2023).



- Rupendra Tiwai received the Best M.Tech Thesis Award from the School of Agro and Rural Technology, IIT Guwahati (2024).



- Prakash Singh received the Best Ph.D. Thesis Award from the SART (2025).



- Maitree Dutta received the Best M.Tech Thesis Award from the School of Agro and Rural Technology, IIT Guwahati (2025).



○

- Jyoti received the Best Ph.D. Thesis Award from the School of Agro and Rural Technology, IIT Guwahati (2026)



- Anamika Ghose, under the guidance of Prof. Sudip Mitra, developed BHEEMA, an innovative wastewater treatment prototype for antibiotic removal using mushroom waste, which received national media coverage, including *The Times of India*.
- Dr. Shantanu Bhunia, Institute Post Doctoral Fellow (IPDF) was recognised as a Scientific Editor / Editorial Board Member of Elsevier Next Research Journal for contributions to the environmental, agricultural and rural development domain.
- Surachita Das was featured in *India Today's* “My IIT, My Story” (2026) for her research under a DRDO-funded project developing innovative food solutions for soldiers serving in challenging border environments.

Fellowships & International Exposure

- Four students of SART (Urbashi Bordoloi, Rubeka, Akasapu Kumudhini, Ashmita Das) received the Prime Minister's Research Fellowship (PMRF).
- Kamal Narayan Baruah was the first SART student to be awarded with the joint Ph.D. program in Food Science & Technology between IIT Guwahati & Gifu University Japan.
- Kamal Narayan Baruah was awarded the JASSO fellowship. He also received the best oral presentation in the Young Scientist Conclave category at IISF 2024 and 2nd best poster presentation at FORTISF 2024.
- Four students of SART received PMRF fellowship for PhD.

- Arunima Dhar was selected for the international research visit to Gifu, Japan in 2024.
- Amey Mindewar was selected for the international research visit to Gifu, Japan in 2025 for studying structure–function relationships in dried tropical fruits.
- Jebin S Ahmed was the first to be selected for the LOTUS Fellowship 2025 at Keio University, Japan, and JST for three months of research on Assam’s floods and their linkage with Japan’s Society 5.0.
- Sagar Kumar (M. Tech 2024-2026) visited Kansas State University, USA for 4 months international research visit for precision agriculture in 2025.
- Dr. Shantanu Bhunia received International Travel Support (ITS) from ANRF, Government of India, to attend and present at the 4th International Symposium on Disaster Resilience and Sustainable Development, Asian Institute of Technology, Thailand, 2026.

FUTURE OUTLOOK: 2035 HORIZON

Looking onward toward the 2035 strategic target, resource allocation will focus on building a sustainable, globally connected, and innovation-driven institutional ecosystem. Strategic priorities are set as:

1. Strengthen Faculty Capacity

- Recruit and retain high-quality core faculty.
- Build interdisciplinary and international faculty networks.
- Promote faculty development, research, and industry exposure.

2. Develop Future-Ready Curricula

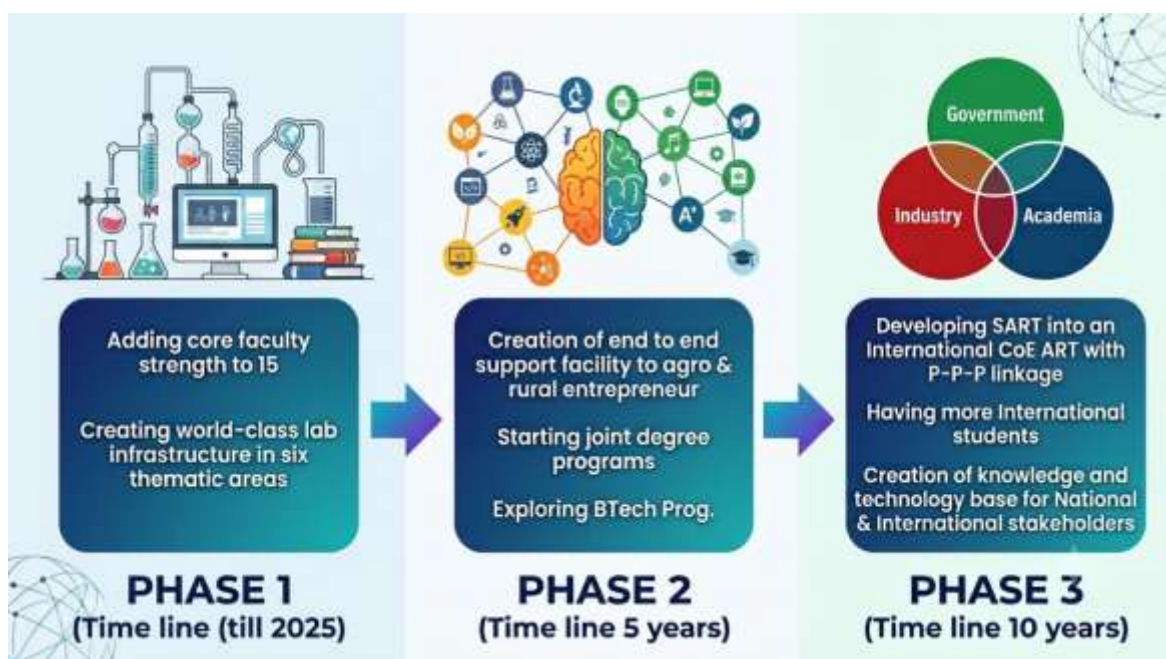
- Introduce new interdisciplinary and industry-aligned programmes.
- Regularly update curricula around emerging technologies and societal needs.
- Expand joint, dual-degree, and international academic programmes.

3. Establish Sustainable Cross-Training

- Create structured faculty–student cross-training frameworks.
- Facilitate knowledge exchange across thematic areas.
- Develop continuous professional development and lifelong-learning pathways.

4. Expand Stakeholder Engagement

- Strengthen Government–Industry–Academia partnerships.
- Increase international collaborations and student mobility.
- Build sustained communication with industry, alumni, entrepreneurs, and research partners.





2035 Vision

A globally connected, interdisciplinary institution with strong research capacity, future-ready education, sustainable partnerships, and an enduring ecosystem for research, innovation, entrepreneurship, and societal impact.”

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A DECADE OF EXCELLENCE (2016-2026)

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