



# Brain Storming Conclave on Atmanirbhar North East through S&T Interventions

December  
21<sup>st</sup> – 22<sup>nd</sup>, 2021

Cotton University,  
Guwahati, Assam



Partners



North East Centre for Technology Application & Reach (NECTAR)



## About (NECTAR)

NECTAR is an autonomous organization under the Department of Science and Technology, Government of India that has the vision to be a leading centre to foster, nurture and ensure the delivery, sustenance and use of technology applications for public and social good; and to reach and expand the benefits of technology among people, communities, institutions and governments for equitable and inclusive social and economic development of the North-eastern region of our country.

## About UBA

UBA (Unnat Bharat Abhiyan) is a flagship national program of the Ministry of Education, Government of India that envisions a transformational change in rural development processes by leveraging knowledge institutions to help build the architecture of an inclusive India. The National Coordinating Institute for UBA is IIT Delhi which is implementing the program nationwide through a structured network of a large number of nodal participating institutions and regional coordinating institutions.

## About VIBHA

VIBHA (Vijnana Bharati) is a science movement with Swadeshi spirit and hence popularly known as the Swadeshi Science Movement of Bharat. Eminent scientists and institutes of excellence that are working for the development of science and technology in our country are closely associated with VIBHA. Together, they thrive to propagate science in society and create schemes to make use of science and technology for the overall development of the country.

## About Cotton University

Cotton University (formerly known as Cotton College) is a Public State University located in Guwahati, Assam, India. It was established in 2017 by the provisions of an Act enacted by the Assam Legislative Assembly to merge the Cotton College State University and Cotton College. The university made its way to become one of the top 200 institutions of the country. It is the oldest institute of higher education in Assam as well as in the Northeast region.



Beeboxes supported to beekeepers at Mokokchung, Nagaland



A phenomenal progress in the field of science and technology (S&T) has brought prosperity to millions in India. However, the fruits of these developments have yet not reached a large section of population, especially that residing in the villages.

Northeast India, comprising the seven sister states together with the brother state Sikkim, is known for its verdant beauty and an abundance of natural resources. However, the available livelihood opportunities and revenue earned from all the major livelihood sectors including agriculture by this part of the country is low, leading to drudgery and migration of the working population to other parts of the country.

Given the complexity of the challenges, there is a demand of interventions at several levels from multiple stakeholders such as research organizations, government institutions, academia, corporates, medium- and small-scale entrepreneurs, NGOs, voluntary organizations, grassroot-level workers, and the community who must come onboard for devising a collective action to address these challenges. The immense potential of catalyzing positive transformation in the NER through appropriate S&T interventions is well recognized. It is also realized that in today's rapidly growing knowledge economy, the mobilization of financial resources alone cannot ensure prosperity and development. The application of professional know-how, evolved through innovative research and development, and its adaptation to the local milieu is equally important. Further, it is important to support the effort through effective outreach and connections with the community so as to be able to impact the lives and well-being of millions of people of rural areas of India, especially the Northeast region.





NECTAR has taken an initiative in collaboration with Unnat Bharat Abhiyan (UBA) to bring about inclusive development in a holistic manner, including providing appropriate S&T technologies developed by research organizations and accelerating their outreach for fast-tracking livelihood opportunities in the Northeast region of the country. In addition, NECTAR aims to partner in demonstration and field transfer of technologies at the National Rural Technology Demonstration Centers set up by UBA.

Together with the UBA, NECTAR seeks to develop platforms to bring together all the concerned stakeholders with a view to facilitate collaborations among them for technology diffusion.

Taking a step in this direction, NECTAR-UBA-VIBHA-Cotton University are organizing a conference-cum-workshop entitled “Brain Storming Conclave on Atmanirbhar North East through S&T Interventions” at Cotton University, Guwahati Assam on December 21-22, 2021. The conclave will provide a platform to connect technology providers with technology seekers in the Northeast region. It will ensure not only knowledge exchange and cross-learning but also opportunity to seek long-term associations, among different stakeholders such as academicians, scientists and innovators working towards the development and adaptation of socially-relevant technologies for the Northeast region; entrepreneurs, startups and organizations to take solutions to the field; voluntary and other social organizations that are working with the community to bring forth the concern, issues and challenges of local people; and government schemes and CSR-conscious corporates to provide financial support in the gap areas of growth and development. Over the two days, the conclave will feature an exposition to showcase and demonstrate relevant potential technologies, products and solutions for the Northeast. The exposition will also provide one-of-its-kind opportunity to foster learning among the participating student community about developing technology solutions for the problems in NER.

The Conclave will observe participation and provide a platform to knowledge institutions, state government officials, civil society, entrepreneurs, investors, venture-capitalists, startups, community organizations, self-help groups, and students to participate, network, disseminate, ideate, collaborate, and identify opportunities to achieve inclusive development of NER through promotion and application of technology solutions.



## Objective of the Conclave

The Conclave is an initiative to provide a platform to the major stakeholders of social change - corporate, scientific and research institutes and social organizations, to exchange information, share knowledge and diffuse appropriate technologies so that society can derive benefit in terms of reduced drudgery, enhanced income, better education and improved quality of life.

## Expected outcome of the Conclave

- Exchange of information, sharing of knowledge, and promulgation of the right kind of technologies that help in public wellbeing and sustainable development.
- Public sensitization about NECTAR’s work in promoting appropriate technology for community empowerment and societal benefits in the NE region
- Cross-learning about utility of proven technologies for livelihood generation and inclusive development of the NE region.
- NECTAR’s renewed role and action plan on technological service provisioning for the well being of the NE region.

## Events during Conclave

- Technical Sessions
- Startup Ideations
- Events for students in **animation, traditional knowledge of NE, IoT based innovation in Natural Resource Management**
- Ideation on Climate Change
- Workshop for artisans and live demonstration
- Felicitation of NER based award winning artisans
- **Press Conference**
- Exhibitions displaying various technologies and products of NER
- Cultural events



# Agenda

Day 1: December 21, 2021	
Session 1: Inauguration Session	
10:00 – 10:05 AM	Lighting of the lamp National Anthem
10:05 – 10:15 AM	Welcome address by Prof. Arun K. Sarma, Director General, NECTAR
10:15 – 10:18 AM	Address by Prof. Virendra K. Vijay, National Coordinator, Unnat Bharat Abhiyan
10:18 – 10:21 AM	Address by Prof. Bhabesh Ch. Goswami, Vice Chancellor, Cotton University
10:21 – 10:24 AM	Address by Dr. T. G. Sitharam, Director, Indian Institute of Technology, Guwahati
10:24 – 10:27 AM	Address by the Guest of Honor Shri Jayant Sahasrabudhe, National Organizing Secretary, Vijnana Bharati
10:27 – 10:30 AM	Address by Dr. M. Ravichandran, Chairman, NECTAR & Secretary DST/Earth Sciences
10:30 – 10:45 AM	Presidential Address by the Guest of Honor Dr. Himanta Biswa Sarma, Hon'ble Chief Minister of Assam
10:45 – 11:00 AM	Address by Chief Guest Dr. Jitendra Singh, Hon'ble Union Minister of State (IC) Science & Technology
11:00 – 11:05 AM	Vote of thanks
11:05 AM	Inauguration of Expo by: - Dr. Jitendra Singh, Hon'ble Union Minister of State (IC) Science & Technology & Dr. Himanta Biswa Sarma, Hon'ble Chief Minister of Assam
High Tea	
Press Conference	
12:00 – 14:00 HRS	Session 2: Technical session - Technology diffusion in the Northeast: Stakeholder perspectives, initiatives, and opportunities
Lunch	
14:45 – 16:25 HRS	Session 3A: Technical session on S&T innovations to provide livelihood opportunities in the Northeast- Technology solution on Bamboo & Allied Activities
14:45 – 16:25 HRS	Session 3B: Technical session on S&T innovations to provide livelihood opportunities in the Northeast- Technology solution on Agriculture & Food Processing
14:45 – 16:25 HRS	Session 3C: Technical session on S&T innovations to provide livelihood opportunities in the Northeast- Technology Solution on Geospatial & Communication
16:25 – 18:25 HRS	Session 4: Technical session -Brainstorming on Flood/Erosion management in Assam
16:25 – 18:25 HRS	Session 5: Technical session - Technology development for the Northeast
Cultural Event followed by Dinner (7pm onwards)	
Day 2: December 22, 2021	
09:30 – 11:30HRS	Session 6A: IOT based Innovation in Natural Resources Management
09:30 – 11:30 HRS	Session 6B: Startup Ideations for North East Region
Tea	
12:00 – 14:00 HRS	Session 7A: Ideation on addressing climate change in the Northeast
12:00 – 14:00 HRS	Session 7B: Quiz on S & T intervention for NER
12:00 – 14:00 HRS	Session 8: NECTAR's success stories -two-way communication
Lunch	
14:45 – 16:45 HRS	Session 9: Workshop for Artisans
14:45 – 16:45 HRS	Session 10: Heritage through the lens of science – competition for the NER
16:45 – 18:15 HRS	Session 11: Valedictory & Felicitations Prize distribution
High Tea	

Convener: Dr. Krishna Kumar (9899192757), Dr. Partha Jyoti Das (9435116558), Dr. Vivek Kumar (9412619735)

Contact: Expo: Dr. Abhinav Kant (7976779959)/ Mr. Simanta Das (7577944840), Accommodation and Logistics: Mr. Rohit Sharma (9810261503),  
Registration: Mr. Rajendra Jena (9873512021), Online Registration: Mr. Ankit Shrivastava (8882254572), Ideation: Mr. Rahul Choudhary (9015148486)

Link for Registration : <https://nectar.org.in/register-now>

## North East Centre for Technology Application & Reach (NECTAR)

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# **Brainstorming Conclave on Atmanirbhar Northeast through Science and Technology Interventions**

**Organized by North East Centre For Technology Application and Reach (NECTAR),  
Unnat Bharat Abhiyan (UBA) and Vijnana Bharati (VIBHA)**

## **Heritage through the Lens of Science: Competition for Northeast Region**

**22nd December 2021**

**Cotton University, Guwahati, Assam**

### **INSTRUCTIONS**

- **Interested participants are required to create and submit a video depicting the science behind the cultural heritage of the Northeast Region.**
- **Any one cultural heritage aspect should be chosen as the theme of the narrative and it could be anything ranging from folklore, traditions, food, art, monuments, books, clothes etc.**

### **ITEMS TO NOTE**

- **Participation:** School students of Northeast Region India
- **Language:** English or Regional languages (including Hindi) with subtitles
- **Video Duration:** 1-2 mins
- **Video Size:** 150MB (maximum)

**Entries open for Northeast India school students**

**Attractive Prizes for One & All**

**Last Date of Submission: 12 December 2021**

**Apply Here : <http://www.nectar-uba.com>**



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*in association with*

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**December 21-22, 2021**  
**Cotton University, Guwahati, Assam**

**Heritage through the Lens of Science: Competition for the  
Northeast**  
**December 22, 2021**

**About the competition:** As part of the “Brainstorming Conclave on Atmanirbhar Northeast through Science and Technology Interventions”, NECTAR-UBA-VIBHA are organizing “Heritage through the Lens of Science: All India Competition.”

We welcome entries **depicting a scientific basis to the cultural heritage of Northeast India.**

**Participants:** Entries are welcome from school students in the Northeast Region only

**How to participate:** Interested participants are required to create and submit a video depicting the science behind the cultural heritage of NER. Any one cultural heritage aspect should be chosen as the theme of the narrative and it could be anything ranging from folklore, traditions, food, art, monuments, books, clothes etc.

Entries should be submitted at the link - <http://www.nectar-uba.com/>

The video size should be less than 150MB and the duration should be restricted to a maximum of two minutes. The video can be made in English or regional languages (including Hindi) however, it is must include English subtitles in the latter case.

**Last date to submit entries: December 12, 2021**

**Prizes:**

- Top 30 entries will receive an appreciation certificate
- Top 3 entries selected by an eminent jury will win attractive prizes and an opportunity to visit a research laboratory in their region





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## **Ideation on addressing Climate change in the Northeast: All India Competition**

**22nd December 2021**

**Cotton University, Guwahati, Assam**

**Working models on innovative science and technology (S&T) ideas with a potential to tackle the climate crisis in the  
Northeast Region (NER) of India are welcome**

### **THEMES**

- **Limiting global warming**
- **Alternatives to coal and other fossil fuels**
- **Cutting greenhouse gas emissions/ achieving carbon neutrality**
- **Environment protection and restoration**
- **Sustainable agriculture and animal husbandry practices**
- **Miscellaneous ideas on climate change mitigation and adaptation**

### **ITEMS TO NOTE**

- **Participation:** Open to All
- **Language:** English or Regional languages (including Hindi) with subtitles
- **Video Duration:** 1-2 mins
- **Video Size:** 150MB (maximum)

**Entries open for All Indians citizens**

**Attractive Prizes for One & All**

**Last Date of Submission: 12 December 2021**

**Apply Here : <http://www.nectar-uba.com>**



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**December 21-22, 2021**  
**Cotton University, Guwahati, Assam**

**Ideation on addressing climate change in the Northeast:  
All India Competition**  
**December 22, 2021**

**About the competition:** As part of the “Brainstorming Conclave on Atmanirbhar Northeast through Science and Technology Interventions”, NECTAR-UBA-VIBHA are organizing “Ideation on addressing climate change in the Northeast: All India Competition.”

We welcome entries on **innovative science and technology (S&T) ideas with the potential to tackle the climate crisis in the Northeast Region (NER)** of India across the following themes:

- Limiting global warming
- Alternatives to coal and other fossil fuels
- Cutting greenhouse gas emissions/ achieving carbon neutrality
- Environment protection and restoration
- Sustainable agriculture and animal husbandry practices
- Miscellaneous ideas on climate change mitigation and adaptation

**Participants:** Entries are welcome from all Indian citizens having an innovative S&T idea with the potential to address the impact of climate change in the NER.

**How to participate:** Interested participants are required to create a working model depicting their idea. The participants should submit a video demonstration of the working of the model created by them at the below link.

<http://www.nectar-uba.com/>

The video size should be less than 150MB and the duration should be restricted to a maximum of two minutes. The video can be made in English or regional languages (including Hindi) however, it is must include English subtitles in the latter case.

Apart from explaining the working model, the entries must entail:

1. Why/how the idea is innovative/unique?
2. How is it relevant for the Northeast region?

**Last date to submit entries: December 12, 2021**





### Prizes:

- Top 30 entries will receive an appreciation certificate
- Top 10 entries will get to visit Guwahati and demonstrate their ideas at the techno-fair being organized as part of the brainstorming conclave. They will get to leverage the opportunity to network with representatives from leading S&T organizations in India, entrepreneurs, investors, state government, scientists from educational institutions, and other potential technology takers
- Top 3 entries selected by an eminent jury will win attractive prizes



## Brainstorming Conclave on Atmanirbhar Northeast through Science and Technology Interventions

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### Startup Ideation for the Northeast: All India Competition

22nd December 2021

Cotton University, Guwahati, Assam

*If you have an innovative startup idea suitable for Northeast Region, Grab the Opportunity now!!*

#### THEMES IN FOCUS

Health

Education

Energy

Agriculture

Food processing

Waste management

Infrastructure

Livelihood generation using locally-available resources

Miscellaneous ideas for societal benefits

*Entries open  
for  
All Indians  
citizens*

*Attractive  
Prizes  
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One & All*

***Last Date of Submission: 12 December 2021***

***Apply Here : <http://www.nectar-uba.com>***





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**December 21-22, 2021**  
**Cotton University, Guwahati, Assam**

**Startup Ideation for the Northeast: All India Competition**  
**December 22, 2021**

**About the competition:** As part of the “Brainstorming Conclave on Atmanirbhar Northeast through Science and Technology Interventions”, NECTAR-UBA-VIBHA are organizing “Startup Ideation for the Northeast: All India Competition.”

We welcome entries on **innovative startup ideas with the potential to bring about societal benefits in the Northeast Region** (NER) of India across the following themes:

- Health
- Education
- Energy
- Agriculture
- Food processing
- Waste management
- Infrastructure
- Livelihood generation using locally-available resources
- Miscellaneous ideas for societal benefits

**Participants:** Entries are welcome from all Indian citizens having an innovative startup idea relevant to the NER.

**How to participate:** Interested participants are required to submit the required information at the below link.

<http://www.nectar-uba.com/>

The entries will be screened and the top 10 entries will be selected for the next round of the competition scheduled on December 22, 2021 at Guwahati, Assam.

**Last date to submit entries: December 12, 2021**

**Prizes:**

- Top 50 entrants will receive an appreciation certificate
- Top 10 entrants will make it to the second round of the competition. They will get to visit Guwahati and present their ideas in front of leading experts and leverage an opportunity to network with a community of entrepreneurs, investors, state government, and other potential technology takers
- Top 3 entrants selected by an eminent jury in the second round will win attractive prizes