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# Abbreviations used

AC	Alternating Current		
ADBU	Assam Don Bosco University		
AEM	Anion exchange membrane		
AIC	Atal Incubation Centre		
AICSF	Atal Incubation Centre - SELCO Foundation		
AIM	Atal Innovation Mission		
AIR	All India Radio		
APART	Assam Agribusiness and Rural Transformation Project		
AREAS	Association of Renewable Energy Agencies of States		
ASTEC	Assam Science Technology and Environment Council		
ASTU	Assam Science and Technology University		
BIRAC	Biotechnology Industry Research Assistance Council		
BIRD	Bankers Institute of Rural Development		
BTC	Bodoland Territorial Council		
CEE	Clean Energy Enterprise		
CITK	Central Institute of Technology, Kokrajhar		
CS	Company Secretary		
DRE	Decentralised Renewable Energy		
EDC	Entrepreneurship Development Cell		
FDP	Faculty Development Program		
FICCI	Federation of Indian Chambers of Commerce & Industry		
FPO	Farmer Producer Company		
IEI	Institution of Engineers, India		
IIC	Institutional Innovation Cell		
IIE	Indian Institute of Entrepreneurship		
IIT	Indian Institute of Technology		
ITI	Industrial Training Institute		
KU	Kaziranga University		
LESDE	Labour, Employment, Skill Development & Entrepreneurship		
MASTEC	Manipur Science & Technology Council		
MIC	Ministry of Education's Innovation Cell		
MIMS	Manipur Institute of Managements Studies		
MISTIC	Mizoram Science, Technology & Innovation Council		
MNRE	Ministry of New and Renewable Energy		

# Abbreviations used

MoFPI	Ministry of Food Processing Industries		
MoU	Memorandum of Understanding		
MSDE	Ministry of Skill Development & Entrepreneurship		
MSME	Micro, Small & Medium Enterprises		
MSRLS	Meghalaya State Rural Livelihood Society		
MTFF	Mizoram Trade Facilitation Fair		
NAAC	National Assessment and Accreditation Council		
NABARD	National Bank for Agriculture and Rural Development		
NE	North East		
NEHHDC	North East Handloom and Handicraft Development Corporation		
NEHU	North East Hill University		
NEKF	North Eastern Knowledge Foundation		
NERFMTTI	North Eastern Region Farm Machinery Training and Testing Institute		
NGO	Non-Governmental Organisation		
NITI	National Institution for Transforming India		
NTTC	Nagaland Tool Room and Training Centre		
OPC	One Person Company		
OSD	Officer on Special Duty		
PEM	Proton exchange membrane		
PVT LTD	Private Limited		
RGU	Royal Global University		
RPM	Revolutions per minute		
RuTAG	Rural Technology Action Group		
SDG	Sustainable Development Goals		
SDGCC	Sustainable Development Goals Coordination Centre		
TERI	The Energy and Resources Institute		
TRTC	Tool Room & Training Centre		
UBA	Unnat Bharat Abhiyan		
USTM	University of Science and Technology, Meghalaya		
WEP	Women Entrepreneurship Platform		
WWF	World Wildlife Fund		

# 1. EXECUTIVE SUMMARY

During the financial year 2023-2024, AIC-SELCO Foundation made significant strides in fostering innovation and entrepreneurship in the North-Eastern region of India by onboarding twenty-six (26) new incubatees from the states of Assam, Manipur, Meghalaya, Mizoram, and Nagaland. This accomplishment was made possible through strategic partnerships with key regional organizations, including the Assam Science Technology and Environment Council (ASTEC), Tool Room and Training Centre, Assam (TRTC), Manipur Science and Technology Council (MASTEC), Manipur Institute of Management Studies (MIMS), Meghalaya State Rural Livelihood Society (MSRLS), Nagaland Tool Room and Training Centre (NTTC), YouthNet, and Mizoram Science, Technology & Innovation Council (MISTIC). The identification of these innovators was facilitated by targeted outreach activities such as Strategic Tech Challenges, Innovators' Meets in Manipur and Nagaland, and the Mizoram Trade Facilitation Fair (MTFF), all conducted in collaboration with the partner organizations. Additionally, these partners provided mentorship support and access to technical facilities, ensuring a robust incubation process.

The newly onboarded incubates have been identified from Assam (12), Manipur (05), Meghalaya (01), Mizoram (03) and Nagaland (05). Sector wise, six (06) are from Agriculture, two (02) are from Animal Husbandry, seven (07) are from Food Processing, three (03) are from Textile, three (03) are from Craft, two (02) are Clean Energy Enterprises and three (03) falls under other categories.

To strengthen the capacities of the incubatees, AIC-SELCO Foundation organized six (06) training workshops on different themes for knowledge-building and skill-enhancement. AICSF technical team supported development of three (03) new prototypes, modified three (03) products, conducted tests of nine (09) machines and conducted due diligence of nine (09) new innovators. To strengthen the incubation process, four (04) new Mentors have been onboarded and strategic partnership agreements have been signed with four (04) academic institutions and three (03) corporate partners.

Apart from the regular incubation activities, AICSF made its strong presence felt throughout the geography of Northeast by organizing fifteen (15) workshops, one (01) North East CatalyseTech Challenge, one (01) Green Tech Challenge, one (01) innovator's meet, and several idea challenges in Academic Institutions. AICSF also Co-organized three large events in Assam, Arunachal Pradesh and Mizoram. AICSF partnered with All India Radio to broadcast 4 radio discussions on tech entrepreneurship. AICSF this year launched an internship program for students, under which 6 student interns were mentored. AICSF provided Resource Person support to Indian Institute of Entrepreneurship, Unnat Bharat Abhiyan, IIT Guwahati Tech Incubation Centre, Assam Startup, and Royal Global University and participated in five external events. AICSF facilitated participation of its incubatees in five events including two national level events. For the ease of outreach, AICSF has also produced two short films and one brochure this year.

# 2. AIC - SELCO FOUNDATION : OVERVIEW

Atal Incubation Centre- SELCO Foundation (AICSF) is a joint initiative of NITI Aayog, Govt of India and SELCO Foundation. It was established in 2019 as a Section 8 Company with its Head Office at Don Bosco Technical School Premise in Maligaon, Guwahati, Assam and registered office at #690, 15th Cross Road, Jeewan Griha Colony, 2nd Phase, J. P. Nagar, Bengaluru. AICSF is providing management expertise, intellectual capital, and hand-holding support to enhance the capacities of local technology innovators and grassroots entrepreneurs in Northeast India. It looks for innovative and sustainable solutions that positively impact the livelihoods and well-being of people in hard-to-reach geographies and low-income regions of Northeast India. AICSF works with the clean energy entrepreneurs and grassroots entrepreneurs who innovate small-scale technologies that are climate-smart, energy-efficient and can preferably be powered by decentralized renewable energy. Atal Incubation Centre- SELCO Foundation (AICSF) is a joint initiative of NITI Aayog, Govt of India and SELCO Foundation. It was established in 2019 as a Section 8 Company with its Head Office at Don Bosco Technical School Premise in Maligaon, Guwahati, Assam and registered office at #690, 15th Cross Road, Jeewan Griha Colony, 2nd Phase, J. P. Nagar, Bengaluru. AICSF is providing management expertise, intellectual capital, and hand-holding support to enhance the capacities of local technology innovators and grassroots entrepreneurs in Northeast India. It looks for innovative and sustainable solutions that positively impact the livelihoods and well-being of people in hard-to-reach geographies and low-income regions of Northeast India. AICSF works with the clean energy entrepreneurs and grassroots entrepreneurs who innovate small-scale technologies that are climate-smart, energy-efficient and can preferably be powered by decentralized renewable energy.

# 3. OBJECTIVES

1

Create and deploy innovative solutions, involving technology and finance, that positively impact the well-being, health, education and livelihoods of the poor and the underserved.

2

Build sustainable social business models that use sustainable energy as a tool for poverty alleviation in an environmentally sustainable manner 3

Inspire and encourage participation of local entrepreneurs from remote regions, to take the lead in building enterprises, using sustainable energy technologies

4

Inculcate a design thinking process that is rooted in the realities and challenges of climate change and poverty alleviation, bringing out solutions that are context driven and promote environmental preservation.

# 4. AICSF BOARD OF DIRECTORS



# MR. BISWANATH SINHA,

#### Director

Biswanath Sinha is a social development specialist with over 28 years of diverse experience across strategy, partnership, grant making, program designing and scaling up, and policy formulation. His strengths lie in

deep understanding of Indian boarding social issues, on different stakeholders and creating successful development models which have been scaled up by mainstream agencies creating larger social impact.



MR. BULU PAUL MUKTIEH,

#### Director

CMD of NEDFi. He is a Board member in 11 Organizations Committee for Sanction of Central including AIDC, RGVN, and Assam Finance Corporation. He is Member of Several Central

Mr Bulu Paul Muktieh is a Former Govt Committees. Presently he is member of the Empowered Investment Subsidy to Industrial units under NEIPP.



MS. HUDA JAFFER,

### Director

Ms Huda Jaffer is the Director of SELCO Foundation. She holds a Master of Science in Business and Engineering from Institute Massachusetts of

Technology, Cambridge. joined SELCO Foundation as the Lead Designer in 2011 and took the over as the Director in 2020.



# MS. RACHITA MISRA,

### Director

Ms Rachita Misra is the Associate Director- Knowledge and Advocacy in SELCO Foundation. She holds a Master of Science in Regional and Urban Planning

Studies from The London School of Economics and Political Science. She joined SELCO Foundation in the year 2015.



# MS. SVATI BHOGLE,

#### Director

Ms Svati Bhogle is mentor of 2 social enterprises - TIDE and Sustaintech. Technology Informatics Design Endeavour (TIDE) is a nonprofit organization devoted to promoting sustainable development through technological interventions.

Sustaintech India Pvt Ltd (SIPL) is a leading startup company in the Green Energy area, promoted by a dedicated team of alumni from IITs and IIMs, and supported by a group of well-respected international investors.



# 5. AICSF IS SUPPORTED BY













# 6. IMPLEMENTATION PARTNERS OF AICSF

























# 7. SNAPSHOT OF INCUBATEES ONBOARDED IN THE FY 2023- 2024

A total of 26 incubatees have been onboarded in the financial year 2023-24, which includes 24 technology innovators (92%) and 2 Clean Energy Entrepreneurs (8%). Newly onboarded incubatees hail from 5 North Eastern states including Nagaland (5 incubatees), Mizoram (3 incubatees), Meghalaya (1 incubatee), Manipur (5 incubatees) and Assam (12 incubatees).



Figure 1: A scene from onboarding review meeting

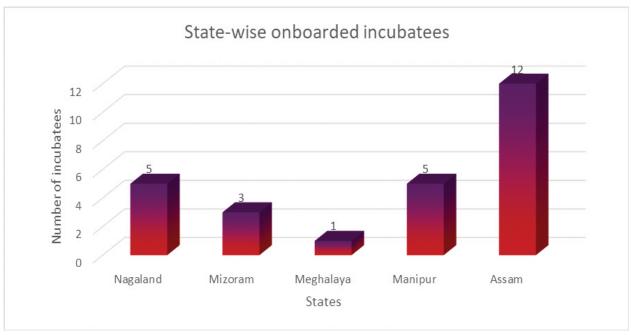


Figure 2: State-wise distribution of new incubatees



# A sector-wise list of technologies onboarded

# **AGRICULTURE (6)**

- 1. Multi-crop thresher
- 2. Chuff cutter
- 3. Power weeder
- 4. Paddy thresher
- 5. Mini crop thresher
- 6. Paddy transplanter

# FOOD PROCESSING (7)

- 1. Bamboo shoot slicer
- 2. Chana chatpata making machine
- 3. King chilly dryer
- 4. Beetle nut peeler
- 5. Dryer
- 6. Hybrid dryer
- 7. Electric dehydrator

# ANIMAL HUSBANDRY (2)

- 1. Feed cutter
- 2. Electric feed pellet mill

# TEXTILE (3)

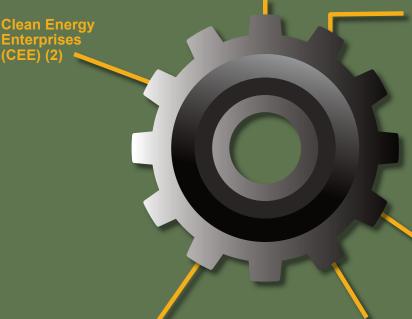
- 1. Vertical yarn swift
- 2. Reeling machine
- 3. Power loom

# OTHERS (3)

- 1. Black wire making machine
- 2. Hydraulic compressor
- 3. Intelligent solar lamp

# CRAFTS (3)

- 1. Bamboo wooden work machine
- 2. Table saw
- 3. Bamboo stick slicing machine



# 8. INCUBATION - SUPPORT ACTIVITIES AND KNOWLEDGE-BUILDING

# A. INDUCTION TRAINING PROGRAM



Figure 3: Induction training programme

The AICSF Incubation Program is a comprehensive initiative aimed at providing essential resources, guidance, and mentorship to early-stage startup enterprises, nurturing their innovative ideas into successful businesses. The induction training, a vital component of this program, acts as a catalyst for the Incubatees and their enterprises, offering a dynamic environment to grasp the program's objectives, guidelines, and expectations, enabling them to acquaint themselves with the available resources and connect with experienced mentors and industry professionals.

In the fiscal year 2023-24, AICSF organized 2 induction training programs, conducted in April 2023 and September 2023. These induction training programs were meticulously designed to provide Incubatees with an inclusive understanding of the program's goals and objectives, encompassing detailed meetings on Incubation procedures, available assistance, and the duration of the Incubation program to enable the participants to make the most of the program and its resources. Furthermore, the program involved in-depth discussions on the evaluation and support process for technology, focusing on market research, prototype development, testing, and crucial considerations regarding the integration of solar



energy into various technological advancements. Additionally, participants engaged in sessions where they introduced and discussed their enterprises' strengths and weaknesses, fostering open communication and a better understanding among them.

# B. TECHNICIANS' TRAINING PROGRAM (WOMEN CEE)

Pallabi Deka Saharia, representing Saharia Solar OPC Pvt Ltd, is a registered Clean Energy Entrepreneur in Morigaon District, Assam dedicated to providing solar based solutions. Over the past 4 years, Pallabi drove the business forward, but faced the challenge of shortage of skilled technicians for ensuring top-notch installations, a critical aspect for the enterprise success.

AIC-SELCO Foundation has been providing diverse capacity building initiatives to empower Incubatee/ enterprises and enhance their knowledge base. As part of this support framework, a two-day Technician Training Program was conducted for Saharia Solar Enterprise's Technicians. The training program incorporated both theoretical instruction and hands on practical sessions, allowing participants to optimize their learning experience. The training was organized with support from a seasoned CEE Enterprise Sangma Solar OPC Private Ltd. The training covered installation procedures and troubleshooting techniques for solar systems. Participants gained insights into installing Solar Home Lighting Solutions and Livelihood technology solutions, enhancing their skills and enabling Saharia Solar to deliver highquality installations.

Figure 4: Technicians' training

# C. EXPOSURE AND LEARNING

The AICSF Incubation Program offers its incubatees invaluable exposure trips to enhance their knowledge and expand their business networks. These exposures provide the incubatees with opportunities to visit successful enterprises, attend industry conferences, and engage with experienced professionals across various sectors. By immersing themselves in different business environments, incubatees gain practical insights, innovative ideas, and actual experience that are crucial for their entrepreneurial growth. AICSF incubatees were given the following exposures in FY 2023-24.



Figure 5: India CSR Summit 2023

# INDIA CSR SUMMIT, 2023 New Delhi

AICSF supported Seth Moirantham, of SNL Energy Solutions Pvt Ltd from Manipur, to take part in the India CSR Summit 2023 held in New Delhi. This summit offered a great opportunity for SNL Energy Solutions to increase visibility and establish valuable connections with industry experts,

potential investors, and key stakeholders, paving the way for future business partnerships and expansion. AICSF's assistance was vital in helping SNL Energy Solutions to grow and thrive in the renewable energy sector.



Figure 6: World Food India 2023

# WORLD FOOD INDIA EVENT, FICCI - 2023

#### New Delhi

During the World Food India – FICCI event in New Delhi organized by Ministry of Food Processing Industries (MoFPI), AIC SELCO Foundation presented three innovative technologies developed by its incubatees, highlighting their creativity and originality. One of the products included in the group was a Keshabsons Egg Incubator, which has transformed the poultry sector with its effective and

dependable egg hatching solution. Furthermore, the Chana Chatpata Making Machine provided by Deori Steel and Fabricators simplifies the preparation of a popular snack, meeting the increasing market demand. In addition, Imphal Machineries launched their Dryer, created to improve food preservation methods, especially in areas dealing with excessive moisture. These technologies showcase the various solutions developed by AICSF and emphasize their important role in advancing the food processing industry.



# **CROSS LEARNING EXPOSURE, 2023**

#### Guwahati

AICSF organized a cross-learning exposure visit for its new cohort of incubatees to an existing incubatee Amar Jyoti Chamuah from CEM Pvt Ltd.'s. production workspace to enhance their knowledge of operational complexities and production upkeep in entrepreneurial businesses. Attendees explored the complex workings of business procedures, acquiring valuable knowledge on maximizing production efficiencies and maintaining operations smoothly. This program encouraged a lively sharing of ideas and provided essential practical knowledge for new entrepreneurs to succeed in the ever-changing field of business innovation.

# **ENTERPRISE TRAINING - GLOBAL SDG7 HUBS**

### **Bangalore**

SELCO Foundation organized an Enterprise Training program in Bangalore, for the Entrepreneur from sub-Saharan African countries namely Sierra Leone, Tanzania, and Ethiopia where in AICSF arranged an invaluable exposure visit for two Incubatee entities: Keshabsons and Aicheng Innovation to showcase their innovative technologies and shed light on their respective business operations and encountered challenges. This exchange not only fostered cross-cultural learning but also facilitated potential collaborations and partnerships, further enriching the global landscape of sustainable energy and innovation.

# **BROODER TRAINING EXPEDITION**

### **Jharkhand**

With the joint initiatives of SELCO Foundation AICSF organized an experiential training session for Mr. Mridul Kumar, a tech Incubatee representing Keshabsons Incubator and Machinery in Jharkhand to learn about poultry farming operations and the crucial impact of integrating a Brooder technology on enhancing chicken production. This exposure enabled Mr. Mridul to gain valuable knowledge, resulting in the creation of an innovative standardized Brooder machine.

# **BHOGALI MELA- MSME, DIC**

### Morigaon, Assam

AICSF facilitated Ms. Pallabi Saharia's participation in the Bhogali Mela organized by DIC in Morigaon. This opportunity allowed her to showcase the enterprise's work in the clean energy sector and demonstrate sustainable, solar-operated livelihood technology solutions.

# NITI STATE WORKSHOP,

### Itanagar, Arunachal Pradesh

AIC SELCO Foundation and SELCO Foundation, in collaboration with Women Entrepreneurship Platform (WEP) OF NITI Aayog organized an innovation and sustainability corner as part of the NITI State Workshop on 'Enabling Women-led Development Through Entrepreneurship' in Itanagar on 24 Nov'23. The corner features 13 stalls, in those representing SF, AICSF, Grassroot Innovators and Entrepreneurs across the North East. Over 30 sustainably powered technologies, specifically designed to support women and enhance local livelihoods were showcased in the corner. List of AICSF Incubatees who were supported to participate and showcase their solutions during the events are below:

SL No.	Enterprise Name	Category	Product
1.	Aicheng Innovation and Research	Innovator	Paddy thresher
2.	Xenon Farm Tech	Supplier	Rice huller cum pulveriser & Maize sheller
3.	Keshabson Incubators and Machinery	Innovator	Egg incubator and Tray dryer
4.	Saraswati Hasta Tat	Innovator	Eri spinning machine
5.	Smart Power loom & Handloom Industry	Innovator	Power loom
6.	Deori Steel Fabrications	Innovator	Chana chatpata making machine
7.	Imphal Machines	Innovator	Hybrid dryer & Bamboo shoot slicer
8.	Sangma Solar OPC Pvt Ltd	Clean Energy Enterprise	Solar home lighting & DRE livelihood solution
9.	Saharia Solar OPC Pvt Ltd	Clean Energy Enterprise	Solar home lighting & DRE livelihood solution

# D. 4-DAY COHORT TRAINING PROGRAM FOR MIZORAM INCUBATEES

The Atal Incubation Centre - SELCO Foundation (AICSF) is dedicated to igniting the spirit of entrepreneurial risk-taking by offering comprehensive and sustainable support to energy-focused enterprises and tech entrepreneurs in India's North-Eastern region. In 2022, AICSF launched its incubation initiatives in Mizoram by welcoming 12 local entrepreneurs into its program, marking a significant milestone in its efforts to foster innovation and entrepreneurship in the state.

To achieve its mission, AICSF partnered with the SELCO Foundation Mizoram Team to conduct a 4-day Cohort Training program from August 22nd to 25th, 2023. The program was designed to equip the new cohort of incubatees with essential knowledge and skills, focusing on enterprise operations, technology design and development, and leadership qualities vital for success in their ventures. Tailored to meet the specific needs of the incubatees, this training program aimed to foster their growth and ensure their success in the entrepreneurial landscape.



# 9. TECHNOLOGY SUPPORT

# a) Prototype development

#### i. Foreme Kharsahnoh

Mr. Foreme Kharsahnoh was on-boarded at AIC SELCO Foundation with a mock-up model of an egg incubator. Based on the technical due-diligence of the innovator and upon a preliminary inspection of the mock-up model, AIC-SELCO Foundation supported the innovator to develop a prototype of the appliance.

#### ii.Touhid Khan

Mr Touhid Khan was onboarded at AIC SELCO Foundation with a mock-up model of a power weeder. AICSF team conducted a thorough technical due diligence of the innovator, inspected the mock-up model, and supported the innovator to develop a prototype of the machine.

# iii. Arup Pathak

Mr Arup Pathak was onboarded with an idea of an areca nut leaf dryer. Upon several discussions with the innovator, the idea was conceptualized and a design of the prototype was prepared using CAD. AIC-SELCO Foundation also supported the innovator for developing the collector of the prototype.

# b) Product modification



Figure 7: Egg incubator of Abhijit Dowarah

### i. Abhijit Dowarah

Mr Abhijit Dowarah is being incubated by AICSF for his innovation, an egg incubator. AICSF technical team supported Mr Dowarah to upgrade his egg incubator to address the issues of humidity and temperature regulation and ventilation system in the incubation chamber. Due to these issues, eggs weren't hatching in the previous iteration, which is now resolved in the upgraded iteration of the incubator.

#### ii. Ameet Baruah

Mr Ameet Baruah is being incubated in AICSF for his innovation, a Bobbin winder. In this year, AICSF technical team observed the issues of overheating of the motor, slippage of the spindle, and absence of yarn guide. Product



Figure 8: Bobbin winder of Ameet

Baruah

modification was initiated to resolve these issues in the upgraded version. The team also helped him to prepare a design blueprint.



Figure 9: Eri spinner of Satish Choudhury

# iii. Satish Choudhury

Mr Satish Choudhury is being incubated in AICSF for his innovation, an Eri spinning machine. In this year, AICSF tech team supported him to overcome the issue of overheating of the spindle motor, and slip in the rack and pinion. The team also supported him to simplify the circuit design. In the new version of the spinner, an advanced rack and pinion has been used which is resistant to wear and tear. Two versions of machine have been developed, one with a heat sink and the other without a heat sink.

# c) Testing of various innovations

### i. Field testing of Tung seed Decorticator

Mr. Lalhpiangliana Sailo has been onboarded at AICSF for his innovation named "Tung Seed Decorticator". Tung (Aleurits fordii) tree is widely distributed in China, Argentina, Paraguay, Africa, Japan, Taiwan, India and the United States of America. Tung trees are cultivated primarily for their oil.

The decorticator is at prototype stage. It is powered by a 0.5 hp, 1425 rpm, AC motor. The machine has been fabricated by using mild steel. The prototype was tested in-house to assess the overall working of the machine. The overall dimension of the machine is 76 cm  $\times$  44 cm  $\times$  90 cm [L  $\times$  B  $\times$  H]. The average efficiency of the machine is 55.57%.





Figure 10: Tung seed Figure 11: Tung seed decorticator



Figure 12: Field testing of portable paddy thresher

#### ii. Field testing of Portable paddy thresher

With the support of the AIC-SELCO Foundation, Aicheng Innovation and Research has developed a 0.5 hp solar-operated paddy thresher cum winnower (Rohedoi).

The designing and prototype development of the thresher resumed in March 2022. In April 2023, the final product (minimum viable product) was fabricated, which has been demo tested at Goalpara.

The average threshing efficiency of the paddy thresher is

95.46% and the cleaning efficiency is 67.315. The capacity of the thresher is about 118.03 kg/hr.



Figure 13: Chana Chatpata Machine

# iii. In-house testing of Chana chatpata making machine

M/S Deori Steel Fabrication has developed a chickpea pressing machine for flattening chickpeas. The enterprise owned by Mr. Bhabananda Deori has been involved in developing agro-tech based solutions including paddy threshers, mechanical sprayers, chickpea pressing machines etc. on a demand basis.

An inhouse test of the prototype of the Chana Chatpata Machine was conducted to determine the output quality and efficiency of the machine to flatten pulses like chickpeas. The machine lacked proper geometry of its components and the material was also not food grade. From the tests, the average output capacity of the machine for brown chickpeas was found to be about 23.6 kg/h, and for white chickpeas (big) is about 18.45 kg/h. The machine's average flatness varied from 1.9 mm to 2.1 mm.

### iv. In-house testing of Round incense stick-making machine

M. Lalbiaklzuala Ralte of Bison Engineers has developed the Round incense stick-making machine. This machine produces round sticks from thin bamboo rectangular pieces. The produced round sticks are used mainly for making incense sticks. The machine was inspected, where some of the parts were disassembled and dimensions were measured. The machine performance was tested using flat bamboo pieces of appropriate size. From the tests, it was found that the incense stick produced matches the sizes, which shows that it produces standard incense sticks. However, the machine has to follow standard parts for the manufacturing of the machine. A few more changes in the mechanism of the machine will simplify the machine and make it more user friendly.



Figure 14: Round Incense stick machine



Figure 15: Chain link fencing machine

#### v. On-site testing of Chain Linked Fencing Machine

Mr. Gauranga Sarkar has innovated a chain link fencing machine. A chain-link fence (also referred to as wire netting, wire-mesh fence, chain-wire fence, cyclone fence, hurricane fence, or diamond-mesh fence) is a type of woven fence usually made from galvanized or linear low-density polyethylene-coated steel wire.

The machine consists of a 3 HP, 1440 RPM, and 1 Phase AC motor to power the machine. From the preliminary test of the chain link fencing machine, conducted using 3 die sizes, the quantity of the output wire per minute was calculated to determine the output capacity from each die. It was observed that the 3-inch diameter (effective) die showed the highest output capacity. The average output capacity from every 1.5 inches, 2 inch and 3-inch die are about 10.59 m/min, 16.52 m/min and 19.95 m/min respectively.

#### vi. Demo testing of Eri-spinning machine

Mr. Satish Choudhury has innovated a solar run Eri silk spinning machine. Before onboarding at AICSF, Mr. Choudhury has sold more than 1500 units across different parts of Assam. The first prototype had technical problems like disengaging of motor, material breakage etc. With support from AICSF, after two more iterations, Mr. Choudhury developed the final product, which has been standardized. The demo testing was done at 2 different sites in Meghalaya. It was found that the machine was working well in both the sites.



Figure 16: Eri silk spinning machine



Figure 17: Banana stalk slicer

# vii. In-house testing of Banana stalk slicer

Mr. Chuanmawia has developed a banana stalk slicer, which is designed to produce thin slices from banana plant stems. The final product is used to feed in pig farms. Presently, the machine is designed for use in Mizoram where banana stems are typically used as swine feed. The machine is designed similar to a chaff cutter. The machine has a flat blade mounted on a motor shaft. The weight of the machine is about 30 kg. From the tests, it has been found that the blade of the machine has to repositioned and further material changes are required.

### viii. Automatic Water Pump Controller

Mr. F. Lalmangaiha has developed an Automatic Water Pump Controller, which is controlled by a toggle switch. Presently, the controller is used for small power pumps. The outer shell of the pump is made of plastic, which cannot withstand all types of weather conditions.



Figure 18: Water Pump Controller



Figure 19: 5-rows paddy transplanter

# ix. Paddy transplanter

Mr Amar Jyoti Chamuah developed a self-propelled 5-row walking-type paddy transplanter. The main objective of this test was to assess the overall performance of the paddy transplanter, which included both power and mechanical profile. The performance evaluation of the paddy transplanter was done at Morigaon. The performance of the transplanter under puddled field conditions was evaluated in terms of field parameters and transplanting parameters. The planting efficiency of the paddy transplanter is about 65.23%.

# d) Technical Due Diligence

#### i. Hiren Chetia

Mr. Hiren Chetia has been developing agricultural solutions through his enterprise, HVF Agency, since 2013. He was recently onboarded as an incubatee of AIC-SELCO Foundation for one of his innovations, a paddy thresher powered by a 10 HP petrol engine. He has applied for certification from NERFMTTI for the thresher. Technical due diligence revealed that he operates from a dedicated workspace equipped with a 3-phase connection and is supported by a workforce of 32 skilled individuals.

### ii. Repachiba Yaden

Mr. Repachiba Yaden from Nagaland has developed a feed pellet machine for piggery and poultry feed. He has been working with Nagaland Tool Room and Training Centre (NTTC) for design and development of the machine. The prototype has been powered by a 3 HP 1 Phase AC motor. The RPM of the machine is regulated by a gearbox. NTTC has also provided him with a dedicated workspace for development of his machine.

#### iii. Gaurav Borah

Mr. Gaurav Bora had developed a 3-in-one conventional machine assembly for bamboo crafts. The whole assembly is powered by a 1 HP 1440 RPM AC motor. The technical due diligence found that the innovator has his own workspace equipped with 3 Phase grid connection.

#### iv. Bhaskar Hazarika

Mr. Bhaskar Hazarika was onboarded to incubate for a chaff cutter. During the due diligence visit, the prototype was under development. The machine was equipped with a 1 HP 1440 RPM AC motor. The innovator was developing the prototype in the ITI Biswanath Chariali workshop, which has 3 Phase grid connections.

#### v. Touhid Khan

Mr. Touhid Khan developed a power weeder powered by a 50-cc petrol engine. The machine was in the prototype stage which was made of scratch parts from disposable machines. The technical due diligence found that He has a small workspace with 1-Phase connection.

#### vi. Uddhab Deori

Mr. Uddhab Deori is an innovator from Morigaon, Assam. He has been developing agricultural solutions in his own residence. The innovator has a small workspace for developing his projects. Till date he has developed a corn seeding machine and a two-row paddy transplanter. The machines are developed with scratch parts of different disposed machineries.

### vii. Imnayongdang Kichu

Mr. Kichu has developed an arecanut dehusker cum peeler to meet the daily needs of small scale arecanut businesses. He has rented a workspace in his locality equipped with 1-Phase connection for development of his machines. Till date he has sold approximately 337 machines in Nagaland.

#### viii. Veshepa Heise

Mr. Veshepa Heise has been involved with developing different technologies to meet the local demand under his enterprise, Turbo Engineering. He has been on-boarded to incubate for a solar dryer compatible with operating in solar, biomass as well as electric grid power. The due diligence found that he has his own workspace and he has been getting many government orders for different types of machineries.

#### ix. Bankithang Nongbri

Mr. Bangkithang Nongbri has been developing machinery involved with plastic product manufacturing. Till date he has developed a plastic shredder, plastic sheet press and an injection moulding machine. He has been supported by North Eastern Hill University (NEHU) with a dedicated workspace with 3-Phase connection. He also has an enterprise ECO RI registered at MSME Meghalaya. With his machineries, he intends to promote backyard plastic enterprises in the North-East.

# 10. MENTORS/ CONSULTANTS ONBOARDED



# **CS SUDHA SARMA**

CS Sudha Sarma, an eminent expert in company legalities and taxation, has been onboarded as a mentor by AICSF to facilitate knowledge sharing among incubatees. With extensive experience and a profound understanding of corporate law and tax regulations, Sudha Sarma provides invaluable guidance to budding entrepreneurs, ensuring they navigate the complex legal landscape with ease. Her expertise not only helps incubatees achieve compliance and optimize their tax strategies but also empowers them to build robust and legally sound business foundations, significantly enhancing their chances of success.



# DR DEEPJYOTI BORA

Dr. Deepjyoti Borah, a crucial figure within AlCSF, embodying dual roles as both a mentor and consultant, enriching the incubation program with his expertise and vision. With an extensive background spanning theoretical and experimental domains across various disciplines, Dr. Borah brings over six years of specialized knowledge in PEM and AEM electrolysers, coupled with three years of groundbreaking work in new product development. Proficient in modelling, simulation, and porous media characterization, his skill set excels conventional boundaries, providing a robust toolkit for innovation. Driven by a fervent passion for technological advancement, particularly in hydrogen and energy transition sectors, Dr. Borah's guidance is instrumental in shaping the trajectory of emerging entrepreneurs



# DR VIKRAMJIT KAKATI

AlCSF onboarded Dr Vikramjit Kakati, Director Research and Development Cell and Professor of Mechanical Engineering Department at Assam Don Bosco University (ADBU) as a mentor. AlCSF has signed a MOU with Dr Vikramjit Kakati to support the incubatees especially on ergonomics of the products and making the products more presentable. Dr Kakati is a PhD in Design from Indian Institute of Technology (IIT) Guwahati, a Certified Professional Engineer from Institution of Engineers, India (IEI), an Innovator, a Bio Mechanical Engineer, and a Mentor. He is part of many patented technologies of Assam Don Bosco University.



# **PC LALNGILNEIA**

PC Lalngilneia, a Senior Scientist at MISTIC and the lead for managing the Innovation Facility Centre at Mizoram, has been welcomed as a mentor by AICSF, with a specific focus on Mizoram's geography. His role aims to enhance the development of Incubatees in Mizoram by providing tailored guidance and expertise in a designated technology field, troubleshooting technical challenges, offering improvement suggestions, and delivering hands-on support. Pu Lalngilneia has been supportive in providing the guidance to the Incubatees and recommending pertinent tools and resources, contributing to market research and idea validation by offering insights into market trends, consumer preferences, and potential competitors, thereby assisting in refining products or services effectively.





STRATEGIC PARTNERSHIP AGREEMENTS

# 11. STRATEGIC PARTNERSHIP AGREEMENTS

To strengthen the partnership with Ecosystem enablers from the NE region, AIC-SELCO Foundation signed MOU with the following institution in the year 2023-2024

#### A. YouthNet



Figure 20: Signing of agreement with YouthNet

YouthNet, an organization from Nagaland has a mission to help youth acquire knowledge, develop life skills and form attitudes to enable them to become self-directing, positive, productive, responsible and contributing members of society through active participation and involvement. AICSF and YouthNet signed a partnership agreement on 30 May, 2023 with the common objectives of -

- i. Jointly networking with relevant stakeholders in Nagaland and promote incubation program
- ii. Co-incubating entrepreneurs specially from Nagaland in setting up of the

enterprises and in scaling up of the enterprise businesses.

# **B. Nagaland Tool Room and Training Centre** (NTTC)

Nagaland Tool Room and Training Centre is an initiative of Govt. of Nagaland and supported by Ministry of MSME, Govt. of India. NTTC's objectives being to design & develop tools and equipment's for rural sectors, to support entrepreneurs/small scale industries bv providing common facilities and to develop appropriate technology for socio-economic development. NTTC with the adequate state of art and machineries have been actively working as a technology provider for various MSME schemes and Start up Nagaland under the flagship of Startup India to design and develop various technologies. AICSF and NTTC signed a partnership agreement on 30 May, 2023 with the common objectives of -

 Jointly conducting in-depth due diligence studies of the Innovators identified from Nagaland and to support in onboarding



Figure 21: Signing of agreement with NTTC

- the innovators into the AICSF incubation program.
- ii. Supporting technology development process and testing of Technologies.
- iii. Providing IPR services to the Incubatees (handholding through the process for filing IPR & Financial Assistance) as well as providing training to the innovators.
- iv. Jointly handholding innovators associated with NTTC and onboarding them into the AICSF incubation program.

### C. Assam Startup



Figure 22: Signing of agreement with Assam Startup

Assam Startup is an initiative of the Government of Assam with an objective to create a culture of entrepreneurship in Assam by promoting and empowering the youth to become job creators and pursue their entrepreneurial dreams thereby, transforming into a leading Startup hub in the country. It's a state-owned Incubator to anchor all its entrepreneur and develop a mechanism of problem solving and culture of entrepreneurship in the state. AICSF signed a MoU with Assam Startup on 5 June 2023 with the following objectives -

i. Supporting each other for networking

- ii. Jointly supporting Tech Entrepreneurship in NE.
- iii. Creating funding opportunities and connecting Incubatees with relevant funding institutions.

AICSF signed MOUs with Universities and Academic Institutions for ease of networking and to promote Tech Entrepreneurship in NE region with the following broad objectives -

- To jointly promote entrepreneurship in technology, energy and allied sectors of mutual interest by sharing resources like laboratories, makerspace, workshops, training halls, auditorium and other amenities.
- To jointly organize and conduct seminars, conferences, events, conclaves etc.
- To exchange human resources/ Technical mentors for the benefit of entrepreneurs
- To offer internship to students to create pipeline of innovators/ entrepreneurs/ researchers.



Figure 23: Signing of agreement with Kaziranga University

# D. Assam Kaziranga University (KU)

The Assam Kaziranga University well known as KU is one of the largest private universities in North-East India. The Assam Kaziranga University has been established under the Assam Private University Act offering state-ofthe-art education and research relevant to market needs. The University has been promoted by the Trust under the banner of The North Eastern Knowledge Foundation (NEKF) by the Khetan Industrial Group. Kaziranga University is trying to imbibe a culture of giving back the knowledge and experience to the society that the students and alumni have gathered over years of service to the nation. AICSF signed an MoU with Kaziranga University on 1 September 2023.

# E. University of Science and Technology, Meghalaya (USTM)

University of Science and Technology,



Figure 24: Signing of agreement with USTM

Meghalaya (USTM) is the first state private university of Science & Technology in the entire North East India. USTM is a university that has been awarded the accreditation rating of "A Grade" in its first cycle of assessment by the National Assessment and Accreditation Council. It is contributing to the society by nurturing



leaders and unlocking potential of youth through excellence in education, innovation and entrepreneurship. AICSF signed an MoU with USTM on 16 September 2023.

# F. Assam Don Bosco University (ADBU)

Assam Don Bosco University is a state-private, multi-disciplinary non-profit, co-educational, university located in Assam. The university was set up as a response to the educational needs of the people of North-East India by an educational society -Salesians of Don Bosco. ADBU is accredited 'A grade' by NAAC and it offers academic programmes in Engineering, Management, Social Sciences, Applied Sciences. Research Sciences. Life and Distance/Online Learning. Community Engagements is strong feature of the university. To make community engagement an integral part of education, the university have introduced a mandatory course in Service Learning for all the students of the university. AICSF signed an MoU with ADBU on 04 October 2023.



Figure 25: Signing of agreement with Assam Don Bosco University

# G. Central Institute of Technology, Kokrajhar (CITK)



Figure 26: Signing of agreement with Central Institute of Technology, Kokrajhar

The Central Institute of Technology Kokrajhar (CITK) is a public technical university established in 2006 by the Government of India. The genesis of this Institute was the Memorandum of Settlement on Bodoland Territorial Council (BTC) signed between the Assam Government, the Government of India and the Bodo Liberation Tigers Force. The CIT Kokrajhar envisions to be an institute of Excellence in Technical and Vocational Education, which would foster Industry-Institute partaking to build synergies in entrepreneurship, market-oriented programmes and employability participants in technology intensive enterprises, thus creating vibrant environment for education with an ethos for research and development, leading to its contribution to the socioeconomic development of the region. AICSF signed an MoU with CITK on 12 October 2023.

# PARTNERSHIP AND OUTREACH PROGRAMS & EVENTS



# 12. PARTNERSHIP AND OUTREACH PROGRAMS & EVENTS

# a) CatalyseTech North East Chapter 2023

AICSF launched a Tech Challenge especially targeting the innovators from North East India to give a platform to the innovators, youths, technology entrepreneurs to present their innovation and ideas to AICSF's Tech Entrepreneurship program. This was a medium to encourage the innovators and partners to associate with AICSF and leverage the partnership in promoting grassroot level innovators and entrepreneurs to come up with their innovation which can be transformed into a business. This CatalyseTech challenge was launched with the following objectives -

- To generate high-value actionable business ideas and product concepts
- To focus on key development in the technology industry that are essential to uplift the livelihood activity in the context rural NE India.

To promote this program AICSF has collaborated with 15 institutions and organised physical workshops to aware the target group to participate and avail the support provided under this program. And 30 innovators presented their ideas and prototype stage innovations for further support and development under Tech Challenge 2023.

Among the institutions who partnered in this Tech Challenge were Assam Science and Technology University (ASTU), RUTAG of IIT Guwahati, Royal Global University, USTM, Assam Don Bosco University, CIT Kokrajhar, and several ITI's. Through the CatalyseTech Challenge North East 2023, a good number of ideas and prototype applications have been received.

Under the CatalyseTech North East 2023 initiative, a series of awareness workshops and challenges were organised for grassroots innovators, entrepreneurs and student innovators from North East India covering 15 institutions.



27. Awareness workshop for Innovators of RuTAG IIT Guwahati and ASTEC

An awareness workshop was organized in AICSF on 30th of August 2024 to engage with vernacular innovators and entrepreneurs associated with Assam Science Technology and Environment Council (ASTEC) & RuTAG IIT Guwahati and students of IIT Guwahati who are potential innovators. The participants have developed prototypes to address the problem statements they have identified. The workshop tried to provide an understanding about inclusive innovation, a platform for inclusive innovation and develop an understanding about their growth needs. A total of thirty innovators (30) participated in the workshop who are from the rural parts of the NE region. The CatalyseTech Challenge NE 2023 was launched in this workshop.

Similar awareness workshops and idea-pitching sessions with students were organized in the following institutions as well -

- In Tezpur University on 15 Sep'23
- In University of Science and Technology, Meghalaya on 16 Sep'23
- In Biswanath ITI on 26 Sep'23
- In Tezpur ITI on 27 Sep'23 and 21 Dec'23
- In CIT Kokrajhar on 12 Oct'23
- In Assam University, Silchar on 18 Oct'23
- In Nagaland Tool Room and Training Centre on 19 Oct'23
- In ITI Nagaon on 16 Nov'23
- In Chirang Polytechnic on 21 Nov'23
- In Royal Global University on 30 Nov'23
- In Women ITI Guwahati on 08 Dec'23
- In Dhekiajuli ITI on 22 Dec'23
- In TRTC Guwahati on 04 Jan'24



Figure 28: Awareness workshop in USTM



Figure 29: Awareness workshop in CIT, Kokrajhar



Figure 30: Awareness workshop in Chirang Polytechnicp.



Figure 31: Awareness workshop in NTTC, Dimapur



Figure 32: Awareness workshop in ITI Nagaon



Figure 36: Winners of the pitching session in CIT



Figure 38: Pitching by student innovators during the Regional Meet of Ministry of Education



Figure 33: Awareness workshop in Women ITI, Guwahati



Figure 37: Winners of the pitching session in Royal Global University



Figure 39: Pitching in Nagaland Green Tech Challenge



Figure 34: Awareness workshop in Biswanath ITI



Figure 40: Nagaland Green Tech Challenge participants



Figure 35: Awareness workshop in NTTC



Figure 41: One-day workshop on Technology Entrepreneurship with RuTAG

## B. Mizoram Innovators fair PUM 2023

In a significant step towards fostering innovation and skill development, the 3rd Mizoram Innovation Competition & Exhibition Fair, known as 'PUM -2023' was organized from 20 September 2023 to 22 September 2023 at the Industrial Training Centre in Aizawl. It was a joint initiative of the Department of Labour, Employment, Skill Development, and Entrepreneurship (LESDE), Atal Incubation Centre – SELCO Foundation under the aegis of the Ministry of Skill Development & Entrepreneurship (MSDE), Govt. of Mizoram

'PUM' in Mizo language refers to the blacksmith or the craftsmen in the community. PUM traditionally has a high regard in the society and it is believed that they were the first innovators or the people who would give a shape to any ideas. The Government of Mizoram has very willingly named the event as "PUM" to safeguard the age-old traditions and at the same time to encourage the young minds to innovate and pursue entrepreneurship.

The workshop was a collaborative three-day event in collaboration with the Department of Labour, Employment, Skill Development and Entrepreneurship, Govt. of Mizoram to establish a strong network in Mizoram. It was a three-day innovation fair to bring entrepreneurs from engineering and non-engineering categories who have been contributing to the entrepreneurship ecosystem in the state of

Mizoram. The aim of the collaboration was to explore various channels, organizations, and local innovators who are working towards



ATAL Incubation Centre-SELCO Foundation

Figure 42: AICSF stall in PUM



Fig 43: Hon'ble CM of Mizoram visiting innovators' stalls



Figure 44: A scene from the inaugural session of PUM

promoting innovations and entrepreneurship by looking at the gaps in the current ecosystem in the state.

As a pivotal step towards fostering innovation and entrepreneurship in the state of Mizoram, AICSF participated in the event with the primary objective of strengthening Technology Entrepreneurship Ecosystem in the state of Mizoram. AICSF collaborated with LESDE to ignite the spirit of innovations and entrepreneurship among the young and talented minds. Ms. Angela Zothanpuii MCS, Director of the Department of Labour, Employment, Skill Development, and Entrepreneurship inaugurated the program.

A specific focus on innovators belonging to the engineering category (dealing with technology and machine) were encourage and AICSF conducted on-the-spot due diligence to identify potential innovators for enrolment in its incubation program.

The last day of the 3rd Mizoram Innovation Competition & Exhibition Fair was graced by the esteemed presence of Hon'ble Chief Minister, Government of Mizoram, Mr. Zoramthanga. The Hon'ble Chief Minister shared his view on the importance of innovations and entrepreneurship and reiterated his government's commitment to strengthen the infrastructure and skill development mechanism of the state to ensure a strong platform for the budding entrepreneurs.

# C. Building Program Pipeline for DRE for Livelihoods in Northeast

A workshop with State Nodal Agencies of DRE and Livelihood Departments across 8 North East states was jointly organized by SELCO Foundation, Ministry of New and Renewable Energy (MNRE) and the Association of Renewable Energy Agencies of States (AREAS) at AIC-SELCO Foundation on 22nd Sept, 2014. The workshop brought together all the different State Nodal Agencies across the 8 North Eastern States in order to work together towards building the program pipelines for Decentralised Renewable Energy led livelihoods. The program aimed at building on already existing livelihood

improvement initiatives including trainings, capacity building & market / financial linkages to be able to scale DRE led solutions where the incubatees of AIC-SELCO Foundation had the opportunity to showcase a live demo of their DRE- Tech Solutions in the presence of Mr. Jeevan Kumar Jethani, Director, MNRE and other State Nodal Agencies. Additionally, the workshop provided AIC-SELCO Foundation with an opportunity to discuss collaborative scaling of DRE solutions with SNAs across the North East region.



Figure 45: A scene from panel discussion

# D. NITI State Workshop, Arunachal Pradesh

NITI Aayog conducted the Second State Workshop on Enabling Women-led Development through Entrepreneurship under the State Support Mission. The workshop was held in collaboration with the Women Entrepreneurship Platform (WEP) and the Government of Arunachal Pradesh at the Dorjee Khandu State Convention Center in Itanagar on November 24, 2023. The workshop's primary focus was on promoting and supporting women in the Northeastern region through entrepreneurship. Hon'ble Chief Minister of Arunachal Pradesh, Shri Pema Khandu graced the workshop as its Chief Guest. The workshop saw a participation of over 1500 individuals, comprising women entrepreneurs, self-help local groups, Government Officials, industry representatives, incubators/accelerators, financial institutions, philanthropic foundations, and others. Representatives attended from all eight northeastern states, making the event a comprehensive regional gathering.

As part of the workshop Hon'ble Chief Minister of Arunachal Pradesh, Shri Pema Khandu, Mission Director-WEP and Senior Advisor at NITI Aayog, Ms Anna Roy, Mission Director of Atal Innovation Mission, Dr Chintan Vaishnav and Hon'ble Chief Secretary, Government of Arunachal Pradesh, Shri Dharmendra launched the CatalyseTech EntrepreneuHer Innovation Challenge. EntrepreneuHer Innovation Challenge is a

trailblazer initiative of AICSF, SF and WEP which aims to create awareness and solutions for sustainability and climate resilience among women entrepreneurs. AIC-SELCO Foundation, in collaboration with SELCO and WEP, organized the innovation and sustainability corner as part of the workshop. The corner featured 13 stalls, in those representing SF, AICSF, Grassroot Innovators and Entrepreneurs across the North East. Over 30 sustainably powered technologies, specifically designed to support women and

enhance local livelihoods were showcase in the corner.



Figure 47: Participants of the exhibition

### E. Innovators' Meet, Mizoram







Figure 49: Participants of the Innovators' meet

Under the flagship program "TechnoVation", AIC - SELCO Foundation organized Innovators' workshop in the states of Mizoram in partnership with Labour, Employment, Skill Development & Entrepreneurship, Govt of Mizoram (LESDE) on 01 December 2023. The aim of the workshop was to provide a platform for the innovators to discuss their ideas and product for better understanding and further association with the innovators in terms of scaling up as an efficient solution in Northeast India. Through these workshops, AIC - SELCO Foundation is building a vibrant startup ecosystem in Northeast states that fosters innovation, creativity, and collaboration. These programs focus on key sectors such as renewable energy, agriculture, and healthcare and encourage startups to develop solutions that address pressing social and environmental challenges. A total of 16 innovators and entrepreneurs from Mizoram participated and 3 innovators were onboarded into AICSF Incubation program.

# F. All India Radio (AIR) programmes



Figure 50: Participants of the first Radio discussion

AIC SELCO Foundation participated in four Radio discussions, three of which were part of the special broadcast under the 'India's G20 presidency. Three members from AIC SELCO Foundation, two members from SELCO Foundation Assam Team, Retired Director of Assam Energy Development Agency, two innovators, one Clean Energy entrepreneur and one end-user took part in these discussions. The series of discussion was broadcast between 6 June 2023 to 1 August 2023. Topics of the discussions were —

- 'Grassroots technology, Entrepreneurship and Environmental sustainability' broadcast on 6 Jun'23
- 'G-20 Presidency of India and its impact on Entrepreneurship' broadcast on 4 Jul'23
- 'Impact of Green Energy in G-20 Countries' broadcast on 18 Jul'23
- 'Women entrepreneurs in Assam and the contemporary trend of entrepreneurship development' broadcast on 1 Aug'23.



# SUSTAINABLE GEALS DEVELOPMENT GEALS















# 13. PARTICIPATION IN EXTERNAL PROGRAMS

# A. Megha Startup Expo

The MEGHA START-UP EXPO was jointly Organized by: BIRAC's BioNEST Bio-Incubator (B3I Facility) NEHU, Meghalaya, Prime Startup Hub, Meghalaya & KIIT-TBI BRTC, Odisha on 3-4 October 2023 at Tura. This dynamic event gave a platform for Start-Ups, Agripreneurs, Rural Entrepreneurs, Innovators, and Industries to showcase their Farm Produces, Processed Creations. Advanced **Technologies** Services. AICSF participated in one of the Panel discussions "BOOSTING on ENTREPRENEURSHIP THROUGH ACADEMIA AND THE ROLE OF ENABLERS". This panel discussion focused on the symbiotic relationship between academia and enablers in fostering entrepreneurship. It explored the role of educational institutions in nurturing entrepreneurial talent and the contributions of enablers in supporting and accelerating the growth of start-ups.

An Ideathon was also organized to create A platform for budding entrepreneurs to brainstorm and idea presentations before the experts to assess their critical and creative thinking ability with the market touchstone. The best ideas were facilitated by the Organising Incubators for Business Development.

### B. World Food India 2023

During the World Food India - FICCI event in New Delhi organized by Ministry of Food Processing Industries (MoFPI) on 3-35 November 2023, AIC SELCO Foundation presented three innovative technologies developed by its incubatees, highlighting their creativity and originality. One of the products included in the group was a Keshabsons Egg Incubator, which has transformed the poultry sector with its effective and dependable egg hatching solution. Furthermore, the Chana Chatpata Making Machine provided by Deori Steel and Fabricators simplifies the preparation of a popular snack, meeting the increasing market demand. In addition, Imphal Machineries launched their Dryer, created to improve food preservation methods, especially in areas with excessive moisture. These dealing technologies showcase the various solutions developed by AIC SELCO Foundation and emphasize their important role in advancing the food processing industry.



Figure 51: AICSF-SF stall in World Food India 2023

# C. Resom Utsav in Rabha Hasong

SELCO Foundation, Axis Bank Foundation and Diva Foundation jointly organized a Resom Utsav (Silk Festival) in Chandubi, Kamrup, Assam on 6th November, 2023. Rabha Hasong Autonomous Council CEM, Mr. Tankeswar Rabha graced the occasion as the Chief Guest and inaugurated the exhibition. He also launched the Eri spinner machine innovated by AICSF incubatee, Mr Satish Choudhury. Other distinguished dignitaries of the program included the Axis Bank Foundation team led by Mr. Jaison Jacob, Assam Sericulture Department Team led by Deputy Director, Mr Jiban Chandra Deka, and Assam Agribusiness and Rural Transformation Project (APART) Sericulture Technical Lead Mr Alakesh Malla Baruah. AICSF CEO, Dr Simanta



Figure 52: Hon'ble CEM launching the Eri Spinner



Figure 53: Hon'ble CEM addressing the Open Session

Kalita addressed the silk entrepreneurs in the open session of the event. Three innovators incubated by AICSF showcased their innovations in the exhibition.

# D. IIE Faculty Development programs for Universities and Colleges of NE

Indian Institute of Entrepreneurship (IIE) organized a series of Faculty Development Programs for University and Colleges of North East India on Entrepreneurship Development. Faculty in-charge and Assistant in-charge of the Entrepreneurship Development Cells (EDC) and Incubation Centre (IIC) in Higher Education Institutions were the participants of this FDP. Two batches of trainees were trained in November 2023 and December 2023. AICSF CEO, Dr Simanta Kalita was invited as an expert to train the participants on Business Model Canvas in both the batches.



Figure 54: Participants of Nov'23 FDP Training

# E. CLEAN Round Table on Livelihoods in Assam through DRE

CLEAN organized a roundtable on Strengthening rural livelihoods in Assam through Decentralized Renewable Energy on 9 Nov 2023 at Guwahati and invited AICSF CEO, Dr Simanta Kalita, as an

Expert participant. Several organizations working in Assam for promotion of DRE based livelihoods participated in the discussion. CLEAN presented the findings of a survey including the major livelihoods sectors in Assam, energy used in each sector, energy gaps, and how DRE helps. It also discussed some policy suggestions for DRE integration. Participants of the roundtable included member organizations of CLEAN and Government Line Department representatives.



Figure 55: Mr Mrinal K Choudhury addressing in the CLEAN Roundtable

# F. TERI – Stakeholder consultation on Climate Change

The Energy Resources Institute (TERI) organized a stakeholder consultation on Climate Change Adaptation and Mitigation Strategies for the State of Assam on 17 Nov, 2023 at Guwahati and invited AICSF CEO Dr Simanta Kalita as an Expert Participant. Participants of the stakeholder meet included representatives of Government Line Departments, and leading NGOs like WWF India, Aaranyak, etc.



Figure 56: TERI stakeholder consultation

# G. Entrepreneurship Awareness Program of NEHHDC

North East Handloom and Handicraft Development Corporation (NEHHDC) organized an Entrepreneurship Awareness Program on 22 December 2023 at Guwahati. AICSF Partnership Manager, Ms Mousumi Khanikar participated in the event.



Figure 57: A panel discussion

# H. Institution Innovation Council Regional Meet at RGU

Assam Royal Global University (RGU) and Ministry of Education's Innovation Cell (MIC) organized the North East Regional Meet of Institution Innovation Councils in Higher Education Institutions on 9 January 2024 in the RGU Premise. Theme of the regional meet was 'Innovation and Entrepreneurship'. AICSF Partnership Manager, Ms Mousumi Khanikar participated in the event as a judge for the student innovators' pitching session.



Figure 58: Participants of the Regional Meet

# I. Unnat Bharat Abhiyan: Training of Master Trainers in IIT Guwahati

Unnat Bharat Abhiyan (UBA) organized training of master trainers from North Eastern States at IIT Guwahati premise on the 12-13 January 2024. AICSF CEO Dr Simanta Kalita was invited as a speaker to speak on the topic 'Grassroot technologies: from innovation to enterprise'. Noteworthy that IIT Guwahati is the Regional Coordinating Institute of Unnat Bharat Abhiyan for North East India.



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Figure 59: Welcome address by Sandeep Sathe

# 14. OTHER ACTIVITIES

# A. Visit of Mr. Rajeev Kumar, AIM Point of Contact to AICSF

Mr Rajeev Kumar, Atal Innovation Mission (AIM) Young Professional and Point of Contact for AIC SELCO Foundation, visited AIC SELCO Foundation on the 27th June, 2023. He interacted with the AICSF team and AICSF team presented the progress of activities. He inspected the physical facilities of AICSF including the training hall, Conference Hall, Coworking spaces, Meeting rooms, Value chain labs, and makerspace. He also interacted with AICSF incubatees about their innovation,



Figure 60: Mr Rajeev Kumar interacting with AICSF Team

business models and the kind of support received from AICSF. Mr Kumar also tried his hands to spin Eri silk using the spinner machine innovated by Mr Satish Choudhury.





B. Visit of Precise team from Ethiopia to AICSF

A two-member team from Precise, a missiondriven firm dedicated to Private Sector Development with expertise in Off-grid energy, Policy Agro-industrial Innovation, and Transformation in Ethiopia visited the AIC SELCO Foundation Incubation Centre at Guwahati on 19 January 2024 and interacted with the Incubation Team. Mr. Henok Assefa, Managing Partner, and Mr. Girma Sileshi, who focuses on the incubation program at Precise had a detailed discussion on various aspects of AICSF's incubation activities. The AICSF team lucidly explained the end-to-end incubation process from scouting, onboarding, product development, institution building, business incubation to scaling up of the incubatee enterprises. In an open session with the AICSF team, Mr. Henok Assefa shared the experience of

Precise in Ethiopia in incubating similar grassroots innovations for livelihood generation. He also emphasized on the importance of DRE based livelihood solutions in Sub-Saharan countries like Ethiopia and in remote geographies of North East India where Grid power supply is not reliable.

Noteworthy that Mr. Henok Assefa, with over 16 years of experience, is a prominent advisor in economic development and business strategy in Ethiopia. As the founder and managing partner of Precise, he has spearheaded more than 200 strategic engagements with international development partners, investors, and the government. He said that entrepreneurship is the principal driver of economic growth in rural and sub-urban areas of developing countries.

# C. Internship of Agritech Students from Chirang Polytechnic



A team of 6 students from the Agricultural Engineering Department of Chirang Polytechnic, Bijni, Assam undergone an internship program from 3rd January 2024 to 30th January 2024 under the guidance of the AICSF Technical Team.

The internship program was designed to conduct market studies of technologies that are in the interest of the AIC SELCO Foundation. They were guided for technical understanding of the technologies and introduced to the method of selection of published literature for reference. Upon building a basic understanding of the technology, they were introduced to the online marketplaces for carrying out the detailed market study.

During the internship, the interns were exposed to technical testing of two technologies – a round incense stick maker and a paddy thresher, and the safety rules within the workshop including personal safety. They were briefed with the technical specifications of these technologies and parameters for tests were discussed. Furthermore, with the parameters being identified, the tools and equipment required to collect the data were identified.

Some of the precision measuring tools like Vernier Callipers and Screw Gauge were discussed and the procedure to make measurements using these tools were taught to the interns. Exercises to measure different dimensions of different objects were carried out.

# D. Exposure and training of NABARD trainees from BIRD, Kolkata

On 11th-12th March 2024, IIT Guwahati Technology Incubation Centre in collaboration with Bankers Institute of Rural Development Kolkata (BIRD Kolkata) and Assam Startup organized a 2 -day program on "Basic Program on Financing Agri-Tech Startups" at Assam Startup The Nest, Guwahati. The participants were from the banking sector, NGO and FPOs.

On 11th March 2024, AICSF Head of Technology, Dr Karabee Das took a session on "Role of agribusiness incubators in promoting agriculture start-ups", where Ms. Das provided an overview of the present scenario of agri-business incubators in India. She started her session by providing an understanding of Incubation Centers and their roles in providing a platform to innovators and entrepreneurs. She also pointed out the importance of ecosystem building in the



Figure 61: Dr Karabee Das taking a session

incubation environment and how it can impact entrepreneurs.

On 12th March 2024, AICSF hosted an exposure visit for the participants, where the AICSF team was introduced to them. The day started with a short presentation on the AICSF organization structure and how hand-holding support is provided to the incubatees, which was followed by a question-answer round. Finally, the participants were taken to the value chain lab to show the innovations done by our incubatees.





# 15. IEC MATERIALS

## A. AICSF brochure

AICSF developed a new brochure as a communication material to introduce AICSF's activity to entrepreneurs, partners, ecosystem enablers and other stakeholders to give an overview of the organisation.

# B. Walk through video of AICSF

AICSF has developed - A walk-through Video for outreach purposes that takes a viewer virtually through the incubation centre. The video captures the Incubation Centre with all facilities provided to the incubatees, the energizing workplaces for meetings and events, makerspace, along with SDG value-chain labs that have been set up to showcase the innovations developed by innovators.

This video documentary will help in outreach of AICSF and help innovators, entrepreneurs, partners, government, donors, sector experts and mentors to know more about AICSF and the facilities offered by AICSF in the technology innovation and clean energy solutions. This will widen the reach of AICSF within the North East as the video is being used and circulated to all AICSF Social Media handles, and partner networks.

# C. Ecosystem video on Nagaland

AICSF has produced a video documentary on "Enterprise Ecosystem Overview in the State of Nagaland - through the lenses of AIC - SELCO Foundation" with the core partners. The documentary captures the entrepreneurship ecosystem working in the state of Nagaland. Key points covered are role of SDGC Cell of Govt of Nagaland, AICSF's role in the Nagaland enterprise ecosystem and how it is collaborating with partner organizations like YouthNet and NTTC. Ms. Nayantara Sashikumar (IES, OSD, Planning) SDGCC, in the video, has focused on how AICSF supported SDGCC in ecosystem building and highlighted on stakeholders cum innovators' meet organized in Nagaland to strengthen the ecosystem players and platform provided to the Innovators and way forward.

Youth Net founder Director Ms. Nuneseno Chase highlighted on Role of the startup ecosystem and what role Nagaland Government can play to develop fund or grant for local startups and what is the current take that Industry and Commerce Department is looking for. YouthNet - being the partner organization of AIC-SELCO Foundation, highlighted on the need of co-incubation on business development. Mr Awalo of NTTC, another partner organization of AICSF, highlighted on the co-incubation potential for technology development, product modification, training & capacity building. Dr Simanta Kalita, CEO of AICSF highlighted on Startup ecosystem in Northeast, grassroot innovators, incubation support and organizational overview on promoting grassroots innovators and entrepreneurs in terms of Northeast context. He also mentioned how partnership play a crucial role on building enterprise ecosystem.

# BROCHURE









# ATAL INCUBATION CENTER SELCO FOUNDATION

**Incubating Technology Innovators and Enterprises** for Sustainable Development in the North East

AIC-SELCO Foundation is a joint initiative of SELCO Foundation a not-for-profit entity and Atal Innovation Mission (AIM), NITI Aayog, Government of India. It is situated at the Don Bosco Technical School campus, Maligaon, Guwahati, Assam.





It is acting as a one-stop incubation cum innovation centre in Northeast india and acting as a catalyst to achieve the Sustainable Development Goals, especially focusing on integrating "affordable and clean energy" (SDG7).

The incubation centre works on building the ecosystem for local innovators and entrepreneurs to develop technology-based enterprises that deliver need-based solutions primarily to rural communities.



# The incubation program aims to

Develop green technologies that can bring about transformative change in the realms of climate and social sustainability, creating assets, opportunities, services, and investment for the poor with long-term positive environmental and social impacts.















# **Event Highlights**

# Stakeholder meet Nagaland

A one-day meet was organized in Kohima on 11th August. 2022 to explore partnerships for providing technical and business development support to the innovators





# **Technovation Manipur and Nagaland**

State-level workshop cum exhibitions for technology innovators in Manipur and Nagaland was organized in Imphal on 22nd & 23rd September 2022 and in Kahima on 14th March 2023 to facilitate dialogue between Grassroot Innovators. Government Officials. Academia, and Civil Society The exhibitions provided platforms for innovators to showcase and pitch their technologies to the stakeholders

### Northeast trade facilitation fair

One-day trade facilitation fair organized in Maniram Dewan Trade Centre, Guwahati on 28th & 29th February 20 to showcase more than 100 scalable sustainable energy-driven Livelihood technologies in agriculture, dairy, and textiles sectors.





# **Catalyzed Tech Exit Event (Northeast)**

On 29th September 2022, with a goal to reach out and Identity local innovators from northeastern states who are working at the grassroots level.











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