

Bio-Entrepreneurship Opportunities in Meghalaya



September 07, 2022: The opening ceremony of the blended mode sensitization series in “Bio-Entrepreneurship Opportunities at Meghalaya” organized by BioNEST Bioincubator Facility, NEHU, Tura Campus in collaboration with PRIME Startup Hub Meghalaya was held at PRIME Hub on the 7th of

September 2022 with 48 virtual and 60 physical attendees. Mr. Flo Oberhofer, Program Head, PRIME, Shillong welcomed the gathering and highlighted the prospective sectors of Bio-resources in Meghalaya such as Floriculture, Food Processing, Medicinal & Aromatic Crops, Spices, Nutrition, etc. in which Bio-entrepreneurship in Meghalaya can flourish. In the keynote lecture, Dr K Karthikeyen, Chief Executive Officer (CEO), North-East Agriculture Technology Entrepreneurs Hub (NEATEHUB) discussed the opportunities and scopes of Start-ups in Agricultural and allied sectors in NER being one of the mainstream livelihoods generating sector. Dr Karthikeyen further discussed the challenges of entrepreneurship in the initial stage especially in the hilly areas and the importance of incubation centres as enablers in promoting these enterprises and handholding emerging start-ups to create more jobs in this sector. He also voiced the need for innovative approaches for setting up sustainable enterprises and the kind of support available from various departments of the Government. This was followed by a prolonged interactive doubt clearing session. In the next session, Ms. Alva Margareth Kharkongor, Program Manager, BIRAC BioNEST Bioincubator (B3I) Facility, NEHU, Tura Campus introduced the participants about the goals and activities of B3I Facility, highlighted the focus areas, role of B3I in Business Development, and the service they offer.

In the post-lunch session, Dr Suman Kumar Nandy, CEO, of BioNEST Facility, NEHU Tura Campus, elaborated the gathering about the various funding schemes of the Biotechnology Industry Research Assistance Council (BIRAC) with special mention to the ongoing



Biotechnology Ignition Grant for north-eastern Region (BIG-NER) opened for researchers, faculty members, students, and entrepreneurs with innovative ideas in Life-Science and Biotechnology sector. Dr Nandy also discussed the other funding schemes available from DST, MSME, PRIME Meghalaya etc. and the handholding program offered by the facility to transform innovative ideas into a sustainable and profitable business.

This was followed by a presentation from Mr. Jefferson Rani, Manager, PRIME Hub, IIMCIP, about the role of PRIME Hub in boosting the entrepreneurial ecosystem all over Meghalaya and various schemes and programs implemented by them to support entrepreneurs from various fields and



sectors. The final session was the My Story Session from Ms. Trinity Saioo, Padma Shree Awardee, 2020. Ma'am Saioo narrated her struggles, hurdles, determination, opportunities, partners, and eventual success in their collective journey of "Turmeric Trinity". Everyone was overwhelmed by Ms. Saioo's journey and applauded her efforts.

This was followed by a talk and demonstration session by Mr. Justman Synrem, an entrepreneur from Sohra who manufactured fuel through pyrolysis of plastic wastes. The session was very dynamic and accompanied by a massive interaction session between the achievers and the participants. At the end of the program, a few prospective entrepreneurs interacted with the BioNEST and PRIME representatives and pitched their ideas and discussed the opportunities of incubation.

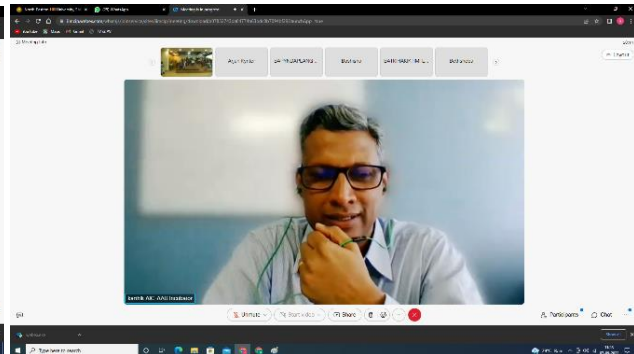
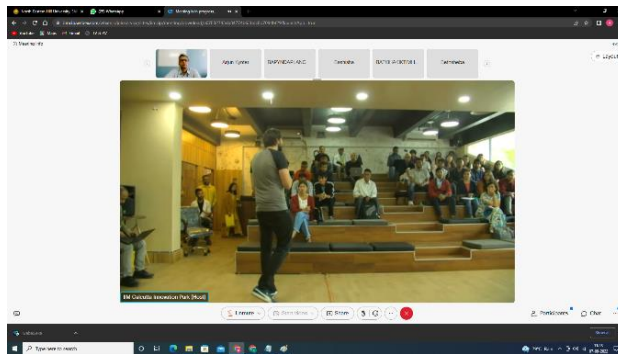
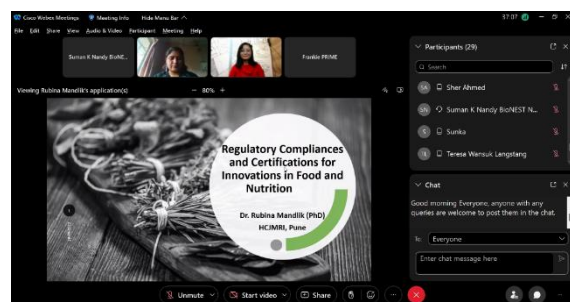
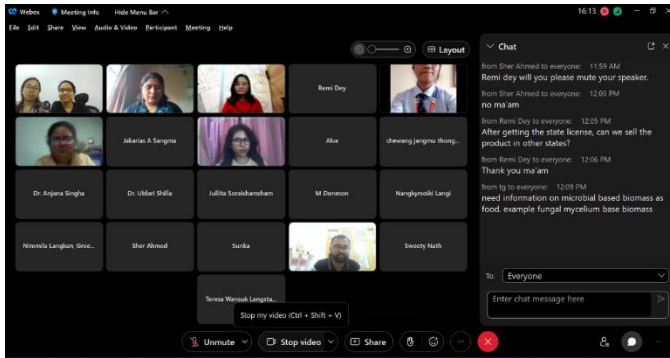


Fig. Memories from the Inaugural Bio-Entrepreneurship Development Program.

1. THEME 1: REGULATORY COMPLIANCES AND CERTIFICATIONS FOR INNOVATIONS IN FOOD & NUTRITION

September 28, 2022: A webinar on "Compliances & Certifications in Food & Nutrition" as a part of the sensitization series on "Bio-entrepreneurship opportunities in Meghalaya" jointly organized by BIRAC BioNEST Bioincubator (B3I) Facility, NEHU, Tura Campus & PRIME Start-up Hub, Government of Meghalaya held on September 28, 2022, from 11 am onwards with 87 participants mostly from academia and start-ups. Mr. Franky Ryntathieng of PRIME Start-up Hub, Government of Meghalaya warmly welcomed the participants and resource persons and presented an overview of PRIME activities. Dr. Rubina Mandlik, Research Officer, Hirabai Cowasji Jehangir Medical Research Institute, Pune vividly explained the regulatory compliances needed by food and nutrition start-ups in India along with a detailed summary of respective FSSAI Acts. Dr Mandlik also demonstrated the step-by-step procedure of FSSAI registration and licensing. The need for such a session was obvious from the elaborate



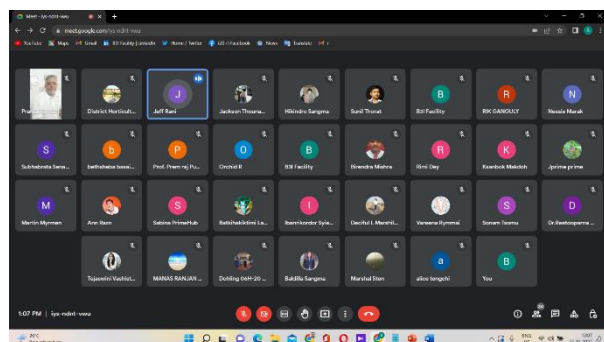


doubt clearing session hugely applauded by the participants. Dr Suman Kumar Nandy, CEO, BioNEST Bioincubator Facility, NEHU, Tura Campus, took the opportunity to inform the gathering about the role of B3I Facility in enabling the

entrepreneurship ecosystem in Meghalaya by offering the infrastructural, mentoring and funding support to the innovators. Dr Nandy also motivated the participants to apply in the ongoing Biotechnology Ignition Grant for north-eastern Region (BIG-NER). Ms. Tage Rita, India's First Organic Wine Brewer & Nari Shakti Puraskar 2021 awardee from Arunachal Pradesh shared her journey and the challenges she faced in every step to make the of the Kiwi Wine Brewing a success. Ms. Rita also given a tour of her wine factory and navigated us through the wine brewing and packaging procedure. Participants were very keen to understand the planning needed for setting up a sustainable business and the quality management system of the wine brewing in the interaction session followed. The program was summed up with a vote of thanks by Ms. Alva Margareth Kharkongor, Program Manager, BioNEST Bioincubator Facility, NEHU, Tura Campus.

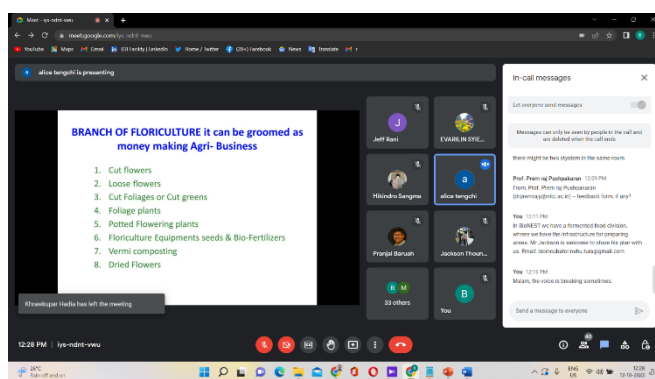
3. THEME 02: PROSPECTS OF FLORICULTURE IN MEGHALAYA

October 12, 2022: The third session of the webinar series on “Bio-entrepreneurship opportunities in Meghalaya” jointly organised by BIRAC’s BioNEST Bio-Incubator (B3I) Facility, NEHU, Tura Campus & PRIME Startup Hub, Government of Meghalaya was conducted on 12th of October, 2022. Focused on "Floriculture," the session garnered participation from more than 80 attendees, including academia and startups from various districts of Meghalaya and neighboring northeastern states.



Mr. Jefferson Rani, Manager of PRIME Hub Shillong, welcomed the audience and the resource persons for the day. He provided insights into PRIME activities and initiatives, setting the tone for the informative sessions ahead.

The first session was led by DR. JUNIE PEARL LYNGDOH, Senior Scientist & I/C of Bio-Resources Development Centre, Shillong. She explored the entrepreneurial prospects of Floriculture in Meghalaya, covering various sectors such as cut flowers, dry flowers, saplings, bonsai, cosmetic production, and landscape gardening. Dr. Lyngdoh emphasized the therapeutic and aesthetic values of floriculture and its potential contribution to the state's economy. Considering Meghalaya's rich biodiversity, ideal climatic conditions, and suitable soil types, she highlighted the state's potential to become a Floriculture hub. Dr. Lyngdoh also underscored the prospects of indigenous orchids in the global floriculture market, encouraging budding entrepreneurs to explore floriculture ventures.



MS. ALICE TENGCHI A. SANGMA, Horticulture Development Officer (VFS), Williamnagar, East Garo Hills, conducted the second session. She provided insights into different methods of flower cultivation, types of flowers at different seasons, and the necessary

management practices. Additionally, she discussed vermicomposting and its benefits, shedding light on the government's support available for setting up agri-business ventures.

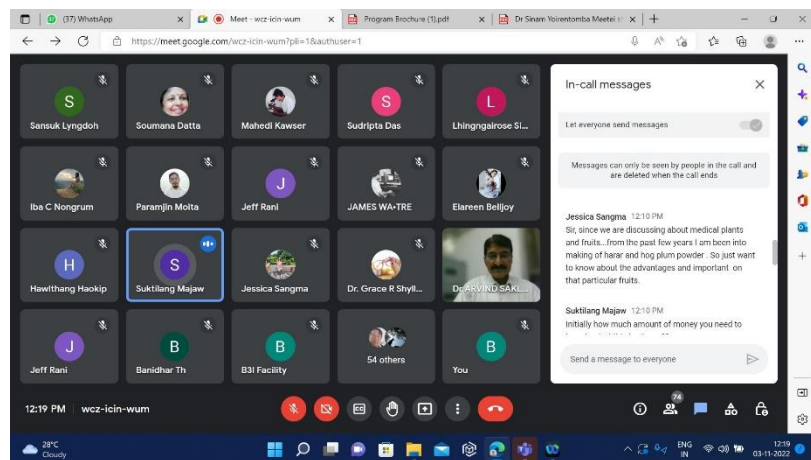
In the "My Success Story" session, Mr. Pranjali Baruah, a Social Entrepreneur and General Secretary of the Mushroom Development Foundation, shared his entrepreneurial journey. He highlighted the opportunities in mushroom cultivation for diverse individuals, from landless farmers to city residents. Mr. Baruah also spoke about social innovative entrepreneurship ventures that have made a significant impact on women empowerment.

In the concluding remarks, Dr Suman Kr. Nandy briefed the participants about the ongoing BIG NER call and the MSME Idea Hackathon 2.0 providing budding entrepreneurs with opportunities to kick-start their venture. The webinar concluded on an enthusiastic note, featuring engaging Q&A sessions and equipping participants with valuable insights into the flourishing field of Floriculture and its entrepreneurial possibilities in Meghalaya.

4. THEME 03: PROSPECTS OF MEDICINAL PLANTS, AROMATIC CROPS CULTIVATION & EXTRACTION OF BIOACTIVE COMPOUNDS IN NER IN INDIA

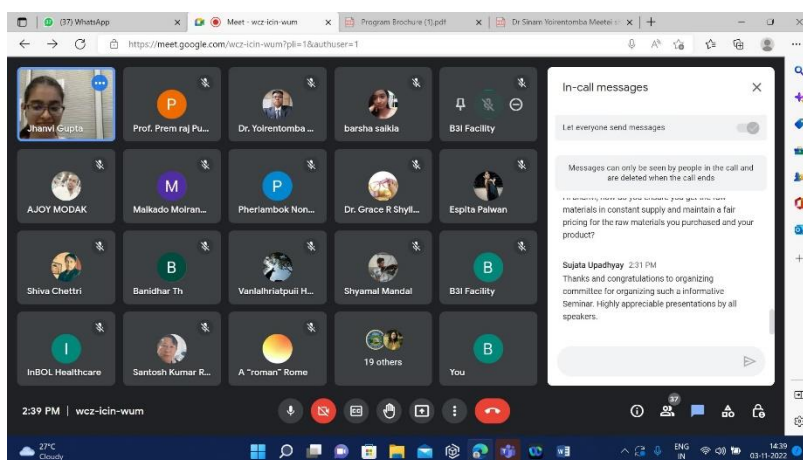
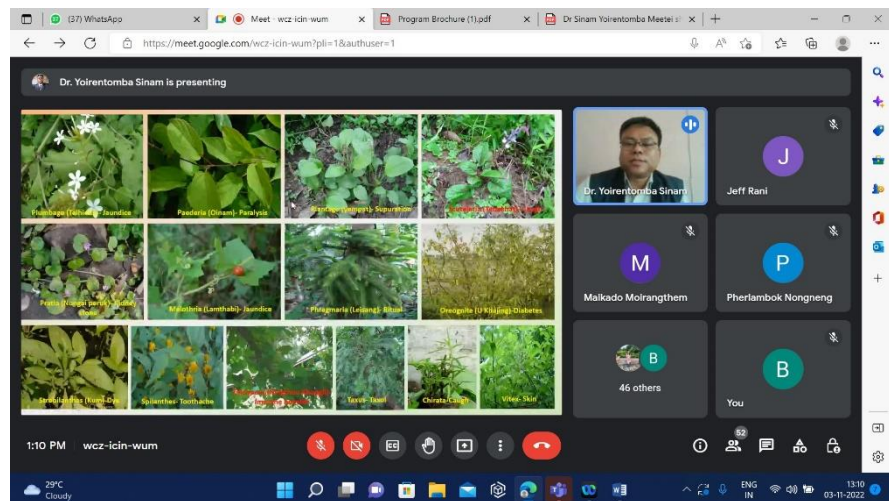
November 03, 2022: The fourth session of the Virtual Mode Sensitization Series on Bio-entrepreneurship Opportunities in Meghalaya took place on November 03, 2022, focusing on the theme “Prospects of Medicinal Plants, Aromatic Crops Cultivation & Extraction of Bioactive Compounds in NER in India” with a participation of 92 individuals. The session commenced with an opening remark from Mr. W. Jefferson Rani, extending a warm welcome to the participants and providing an overview of PRIME Startup Hub Meghalaya, its vision, role, and initiatives in shaping the entrepreneurial ecosystem in the state.

The session was taken forward by the first speaker, DR ARVIND SAKLANI, Vice-President - Agri Biotechnology, Sami-Sabinsa Group Limited, Bengaluru, Karnataka. Dr. Saklani shared his insights on the rich biodiversity of the



North Eastern Region of India and the availability of various valuable medicinal plants and aromatic crops rich in bioactive elements. He also highlighted the Lakadong Turmeric of Meghalaya, known for its higher curcumin content, and discussed the three critical aspects in agripreneurship: Critical volume, Consistency in quality, and Competitive price. The production volume needs to be sufficient to address the demand of the industry; the quality of the production is required to be maintained and the price is needed to be matched with the other producers in question. Dr. Saklani addressed the challenges faced in the hilly terrains of the North East region, underscoring the need for innovation and scope of entrepreneurship in cultivation, harvesting, and post-harvesting management. Dr. Saklani also identified prospective medicinal plants such as ginger, perilla, citrus fruits, monk fruit, passion fruit etc. suitable for North-East region. The session concluded with an engaging Q&A segment.

In the second session, DR SINAM YOIRENTOMBA MEETEI, Deputy Director, MSME Technology Centre, Imphal, Ministry of MSME, Govt of India acknowledged North-East India as biodiversity hotspot emphasizing the abundance of medicinal and aromatic plants in the hilly terrains. Dr. Yoirentomba also discussed the challenges of medicinal plant cultivation and stressed the importance of proper land and bioresource utilization for high yields. He also briefed the audience about the activities of MSME Imphal, a centre of excellence for Medicinal & Aromatic Plants of North East India.



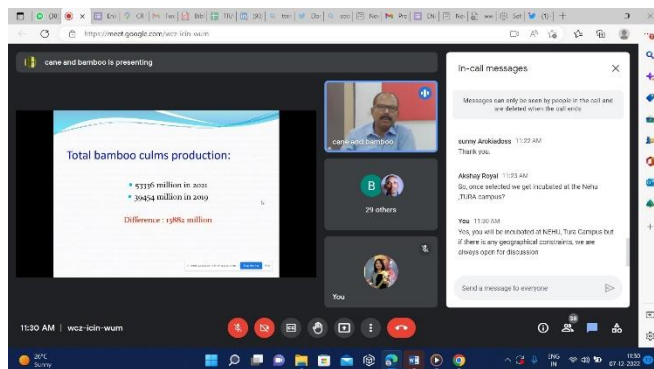
In the final session featured Ms. Jhanvi Gupta, Founder-Director-CEO of Aayusetu, Bathinda, Punjab, who shared her entrepreneurial journey including the challenges, step-by-step business establishment, and marketing and promotion

strategies. All the speakers witnessed enthusiastic participation in Q&A sessions by the participants. The program concluded with a brief discussion about the ongoing BIG NER Grant and MSME HI Ideathon by Dr Suman Kumar Nandy, CEO of B3I Facility, followed by a vote of thanks.

5. THEME 04: 'REPURPOSING OF TRADITIONAL BIORESOURCES-LIVELIHOOD FROM BAMBOO'

December 07, 2022: The concluding session of the Virtual Sensitization Series on “Bio-entrepreneurship Opportunities at Meghalaya” took place on December 07, 2022, focusing on “Repurposing Traditional Bio-resources – Livelihood from Bamboo.” The event attracted over 95 participants from various districts of Meghalaya and states across India.

The webinar commenced with a warm welcome from Dr. Suman K Nandy, CEO of BIRAC’s BioNEST Bio-Incubator (B3I) Facility at NEHU, Tura Campus. Following this, Ms. Alva Margareth Kharkongor, Program Manager of B3I Facility, provided insights into the role of BioNEST Facility in guiding innovators and entrepreneurs to transform their innovative ideas into sustainable, large-scale businesses.



In the subsequent session, Dr. T. C. Bhuyan, Consultant at the North East Cane and Bamboo Development Council, Burnihat, Assam, delved into bamboo-related topics. He covered the various types of bamboo, their geographical distribution across India, and the

potential for employment generation in this sector. Dr. Bhuyan highlighted the diverse applications of bamboo in the textile industry, road construction, food and beverages, as well as in crafting traditional utility and ornamental products.

The entrepreneurial experience-sharing segment featured Ms. Neera Sarmah, CEO and Design Consultant of Bamboo Village, Assam, renowned as the Bamboo Lady of India. Ms. Sarmah shared her journey, emphasizing the challenges she overcame and encouraging individuals in North East India to venture into entrepreneurship in the cane and bamboo industry. She also extended the opportunity for skill development training to enhance their artistic skills.

The final speaker, Dr Selim Reza, Program Manager at the International Bamboo and Rattan Organization (INBAR), Addis Ababa, Ethiopia, enlightened the audience on INBAR's initiatives, particularly the “Bamboo Bio-Enterprise Modelling.” This involves providing active support in developing business plans, offering financial and marketing assistance, and upgrading existing businesses while establishing new bamboo-based enterprises. Dr. Reza emphasized the importance of bamboo-based SMEs, urging individual entrepreneurs to collaborate for mutual benefit. He highlighted the positive impact of bio-based enterprises on

climate change mitigation, carbon neutrality, and zero carbon emissions, advocating the replacement of plastics with bamboo-based alternatives.

In the closing remarks, Mr. W. Jefferson Rani, Manager (EED) at PRIME Startup Hub, Government of Meghalaya, elaborated on PRIME activities and initiatives, encouraging market-driven enterprises through funding and handholding. He urged entrepreneurs to explore the potential of bamboo-driven businesses in Meghalaya.

All sessions were interactive, addressing participant queries extensively. The speakers encouraged ongoing correspondence and interaction, with participants expressing interest in residential skill development programs for bamboo-related businesses. The program concluded with a summary and a vote of thanks from Dr. Suman Nandy, CEO of B3I Facility.

