

# SUSTAINABLE MOUNTAIN DEVELOPMENT SUMMIT - VIII

4 - 6  
NOVEMBER  
2019



“ Sustainable Mountain Initiatives for  
Livelihoods, Entrepreneurship and Youth ”  
SHILLONG, MEGHALAYA

## SMDS VIII

*Making India Proud of our Mountains*













**EDITORIAL TEAM**  
MIMDI MEDIA  
GRASSROOTS OPTIONS  
IMI SECRETARIAT

**VENUE**


North-Eastern Council Auditorium,  
Shillong, Meghalaya

**ORGANIZED BY**

Meghalaya Integrated Mountain Development Initiative (MIMDI)  
Integrated Mountain Initiative (IMI)

**HOSTED BY**

Martin Luther Christian University, Shillong & North Eastern Region  
Community Resource Management Project, Shillong





# PROCEEDINGS **SMDS - VIII**

## **T H E M E**

SUSTAINABLE MOUNTAIN INITIATIVE FOR  
LIVELIHOODS, ENTREPRENEURSHIP AND  
YOUTH (SMILEY)





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## **P**RESIDENT'S NOTE

We are happy to share with you the proceedings of the 8th edition of IMI's annual flagship event- Sustainable Mountain Development Summit (SMDS).

SMDS VIII focused on 'Sustainable Mountain Initiatives for Livelihoods and Entrepreneurship for Youth' to address the call of the hour for mountain sustainability. The Indian Himalayan Region (IHR) not only faces low per-capita income, low capital flows, inadequate infrastructure facilities, geographical isolation, communication gaps but also carries a higher cost of climate change. Realising the potential of economic opportunities through entrepreneurship of the youth, while addressing the social and environmental challenges of the IHR in an integrated way, has been the effort IMI has worked on for a couple of years which was put into a sharper focus in this Summit.

The overall objective of the Summit was to build a link among entrepreneurs and other key stakeholders on the key challenges in mountain livelihood, with specific focus on Agriculture, Tourism and Alternative Energy. The two-day Summit had power-packed panel discussions in the line-up. The Chief Minister of Meghalaya inaugurated the event with a deep understanding of the theme and encouraging words. With noted entrepreneurs across the field of Agriculture, Tourism and Energy sharing their aspirational journey with our young audience and insightful panel discussions with esteemed bureaucrats, scholars and market players, they opened up a way forward for the sustainable development which can truly make India proud of our Mountains. The deliberations helped create a road map for targeted activities which is a part of the post SMDS work now for IMI and its state chapters.

The summit at Shillong was held in collaboration with Martin Luther Christian University (MLCU), an institutional member of IMI and Meghalaya Integrated Mountain Development Initiative (MIMDI), the state chapter. It was attended by 250+ people. A "Mountain Legislators Meet" was held on the third day in collaboration with the Swiss Agency for Development and Cooperation (SDC) where mountain legislators from across the Himalayan region were briefed of the output of the Summit and they shared their concerns and ideas on how to work together to achieve the common goals. We are thankful to our members, partners and stakeholders who organised and participated in the Summit at Shillong, Meghalaya to make both these events a grand success.



The eighth edition of the Summit followed the earlier ones in Nainital, Gangtok, Kohima, Itanagar, Leh, Aizawl and Solan. These Summits bring together diverse stakeholders to develop a common and integrated understanding of the complex issues of IHRs such as climate change, disasters, mountain livelihoods and growing cities towards cohesive action. Meet of the Mountain States (MOMS), convened in Delhi every year between the two SMDS', is used as an avenue for sharing the outcomes of the preceding SMDS with a wider audience to influence policy and action with cooperation from all mountain states and key central ministries. The reports of all previous events are available at IMI's website, [www.mountaininitiative.in](http://www.mountaininitiative.in). This year unfortunately the MoMS-VIII originally scheduled in March, 2020, had to be postponed due to the CoVID-19 pandemic.

IMI is a civil society initiative, guided by the values of integrative, inclusive, collaborative, voluntary, democratic and open working to bring diverse stakeholders, individuals and institutions together to work on issues of mountains and enable them to realise their potential and goals.

While we have made some progress we continue to raise the bar on our collective expectations and the potential of realising the opportunities which IMI is in a unique position to do. We need the continued support of our members and partners more than ever before to meet these challenging yet exciting goals.

With best regards,

**Sushil Ramola**

President, IMI  
New Delhi



# F O R E W O R D

On behalf of the local organising Committee, the Meghalaya Integrated Mountain Development Initiative (MIMDI), let me take this privilege of thanking everyone involved in planning, supporting and participating at the Sustainable Mountain Development Summit (SMDS VIII) held at Shillong, Meghalaya from 4th – 6th November, 2019.

I am very grateful to the IMI leadership for providing the much needed guidance in the formulation and finalisation of the Summit. Many emails and visits from IMI officials kept us on our toes as we prepared for the Summit. We also acknowledge the unstinted support of the Government of Meghalaya, the NERCOMP & the North Eastern Council, the Swiss Agency for Development and Cooperation, Delhi, the Himalayan Zero Waste, Sikkim and the Cement Manufacturers' Association, Lumshnong for financial and overall support.

The contribution of the Martin Luther Christian University, Shillong under the dynamic leadership of Dr. Vincent Darlong, with their faculty, office staff and students is gratefully acknowledged. They were the wind beneath our wings.

The Summit with the theme “Sustainable Mountain Initiative for Livelihoods and Entrepreneurship for Youth (SMILEY), brought people from all walks of life, deliberating on Sustainable Agriculture, Agri-business, Energy and Tourism. The Legislators Meet was well attended for which we are grateful to the sincere and serious Legislators from all over.

While reflecting on the successful conduct of the SMDS VIII, we also face the daunting challenge in all the mountain states, the need to act fast on the recommendations of the Summit, so that when we meet in Uttarakhand next, we would have many success stories to tell.

While we tried our best to make the stay of the participants comfortable during the Summit, there could have been uncomfortable lapses for which we apologise from the bottom of our hearts.

May God bless the IMI and help it to go greater heights in MAKING INDIA PROUD OF OUR MOUNTAINS!!

**Tony T. C. Marak**  
President, MIMDI  
Shillong



# A B B R E V I A T I O N

<b>ADB</b>	Asian Development Bank
<b>CoE</b>	Center of Excellence
<b>EA</b>	Entrepreneurs Associates
<b>GBPNIHESD</b>	Govind Ballab Pant National Institute of Himalayan Ecosystem & Sustainable Development
<b>HKH</b>	Hindu Kush Himalaya
<b>ICIMOD</b>	International Center for Integrated Mountain Development
<b>ICRISAT</b>	International Crops Research Institute for Semi-Arid Tropics
<b>IIE</b>	Indian Institute of Entrepreneurship
<b>IFAD</b>	International Fund for Agricultural Development
<b>IHCAP</b>	Indian Himalayas Climate Adaptation Programme
<b>IHR</b>	Indian Himalayan Region
<b>IIM</b>	Indian Institute of Management
<b>IMI</b>	Integrated Mountain Institute
<b>MIMDI</b>	Meghalaya Integrated Mountain Initiative
<b>MLCU</b>	Martin Luther Christian University
<b>NEC</b>	North Eastern Council
<b>NEDFi</b>	North Eastern Development Finance Corporation
<b>NERCORMP</b>	North Eastern Region Community Resource Management Project
<b>NMSHE</b>	National Mission for Sustainable Himalayan Ecosystem
<b>SMDS</b>	Sustainable Mountain Development Summit
<b>SDC</b>	Swiss Agency for Development and Cooperation
<b>TRIF</b>	Transform Rural India Foundation



## INTRODUCTION

The Indian Himalayan Region (IHR), constituting Jammu & Kashmir, Ladakh, Himachal Pradesh, Uttarakhand, Sikkim, Arunachal Pradesh, Nagaland, Manipur, Meghalaya, Mizoram, Tripura, and the hill districts of Assam (Dima Hasao, East Karbi Anglong and West Karbi Anglong) and West Bengal (Darjeeling & Kalimpong) covers over 16.2% of India's total geographical land area and host a rich diversity of culture with huge repository of traditional ecological knowledge. A substantial part of the region falls in "Biodiversity Hotspot" representing diverse ecological zones from tropical wet evergreen forest to alpine. The biodiversity provides essential ecosystem services to support people living downstream in the plains. Owing to their contribution in providing essential ecological services to the plains and the typical challenges faced by mountain communities, they need developmental schemes specific to the mountains for the sustainability of present and future generations.

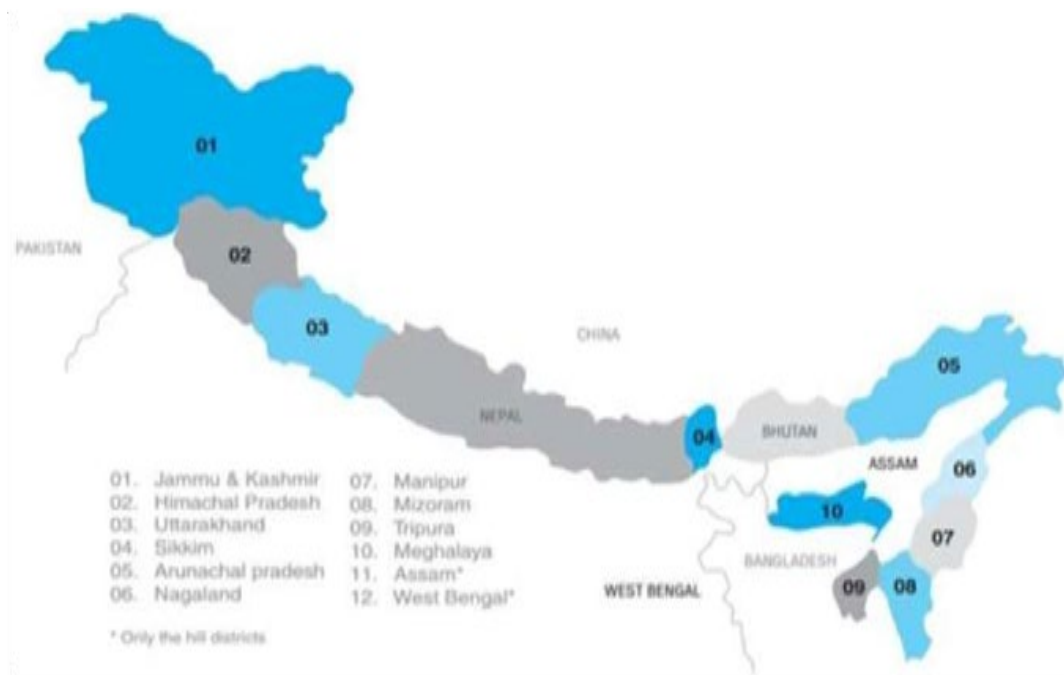
Northeastern region of India covers a portion of Himalaya and Indo-Burma biodiversity hotspots and is also among the 200 globally important eco-regions. The region is globally well acknowledged for its rich eco-cultural heritage with varied traditional ecological knowledge and practices refined over centuries for biodiversity conservation and sustainable management of natural resources.

The state of Meghalaya with a geographical area of 22,429 km<sup>2</sup> is situated in the northeastern part of India. The population of the state is 2.96 million and a rural-urban population accounts for 79.92% and 20.08% respectively. The recorded forest area and forest cover of the state is 16,022 km and 17,146 km, which is 71% and 76% respectively of the total geographical area of the State<sup>1</sup>. The state has 2 National Parks and 3 Wildlife Sanctuaries covering an area of 304 km<sup>2</sup> which constitute 1.36% of the total geographical area of Meghalaya.

## BACKGROUND OF IMI

The Integrated Mountain Initiative (IMI) is a civil society movement working across the IHR for recognising the value of mountain regions and enabling the people to realize the potential. With a common vision of "Making India proud of our mountains", it works as a collaborative, open, voluntary and democratic platform for engaging multiple stakeholders across the IHR to realise the vision through influencing policies and catalyzing action by integrating knowledge and experiences of multiple stakeholders.





IMI brings mountain concerns centre-stage in regional, national, and global agendas through sustained and informed dialogue among all stakeholders. Since its inception in 2011, IMI has focused on assimilating knowledge and experience generated from practice in the field of scientific and social research, both at international and national levels, and also policymakers' perspective for enabling integrated action on issues relevant to the IHR. IMI works with the energy of its state chapters, individual and institutional members and partners to bring together the commitment and capabilities of diverse stakeholders for the common cause of sustainable development in IHR.

## SUSTAINABLE MOUNTAIN DEVELOPMENT SUMMIT (SMDS) - THE RATIONALE

In pursuit of this objective, IMI decided on an annual conclave under the name and title of 'Sustainable Mountain Development Summit'. Each year the challenges and opportunities of 3-5 salient themes relevant to the mountains and hills are discussed calling for action. It provides a functional discussion platform for all mountain states and collectively following up on what is agreed upon.

Each summit had 200-300 participants, representing a diverse mix of policymakers, eminent scientists, researchers, academics, research & educational institutions, government representatives, legislators, business & industry representatives, international, national & grassroots levels NGOs, field practitioners, consultants, experts and eminent citizens. The deliberations have resulted in specific policy briefings and recommendations, follow-up meetings and projects, which is helping development practices and policies for the mountain states.

The thematic focus of previous SMDSs held under the aegis of IMI is given below:



SMDS	THEMATIC FOCUS
SMDS-I (2011), Nainital, UK	Hydropower, Climate Change Adaptation, Rural Tourism, Community forestry
SMDS-II (2012), Gangtok, Sikkim	Water, Forests & Communities, Mountain Livelihoods
SMDS-III (2013), Kohima, Nagaland	Forests, Water: Rivers, Streams & Springs, Mountain Agriculture
SMDS-IV (2015), Itanagar, Arunachal Pradesh	Disaster Risk Reduction, Mountain Agriculture, Forests
SMDS-V (2016), Leh, Ladakh	Water Security, Skills
SMDS-VI (2017), Aizawl, Mizoram	Climate Change & Sustainable Mountain Cities
SMDS-VII (2018), Solan, HP	Well-being of Next Generation of Farmers in the Himalayan Region

The Sustainable Mountain Development Summit-VIII (SMDS-VIII) at Shillong in Meghalaya builds on the outcomes of previous summits which focused on issues such as climate change, forests, mountain agriculture and other livelihoods, water, disasters, sustainable cities and drivers of change which threaten the region's ecological, social and economic well-being.

## BACKGROUND OF MIMDI:

Meghalaya Integrated Mountain Development Initiative (MIMDI) based in Shillong is the state chapter of IMI, New Delhi and is hosting SMDS VIII. MIMDI was formally formed in February 2019, although the process started in 2018. Currently, MIMDI is anchored at Martin Luther Christian University, Shillong, which is also an institutional member of IMI. In its overall objectives, MIMDI is closely aligned with IMI. While its key task for 2019 is to organise the SMDS VIII under the aegis of the IMI with active collaboration of other IMI State Chapters, some other long-term specific objectives are:

- Build a Meghalaya-centric approach towards all the problems plaguing the state and its indigenous communities.
- Demonstrate and function as a think tank and help in the formulation of appropriate policies with regards to water security, spring shed development, breeding of indigenous species etc. utilizing the vast and rich traditional



- knowledge of the communities in combating the impact of climate change.
- Project itself as a professional and technical body endeavouring to influence policy decisions on complex environmental issues like waste management, air, soil, water and plastic pollution, biodiversity conservation among others.
- Partner with research and development institutions/ educational institutions in documenting and compiling climate change relevant data and sustainable development initiatives in the state for building an effective adaptive strategy.

## SUSTAINABLE MOUNTAIN DEVELOPMENT SUMMIT VIII (SMDS-VIII): SHILLONG, MEGHALAYA

### GENERAL INTRODUCTION AND THEME OF SMDS VIII

The SMDS-VIII will be hosted at North Eastern Council Hill (NEC), Shillong from 4th-6th Nov 2019 by MIMDI, the IMI's Meghalaya chapter. As a follow through on Policy interventions, a Meet of Ministers & Legislators would be held on 6th November at the State Convention Centre, Shillong. Detailed programme is under preparation and will be shared separately.

The chosen theme of “Sustainable Mountain Initiatives for Livelihoods and Entrepreneurship for Youth” (SMILEY) aims to find workable solutions and new opportunities by harnessing the aspirations of young entrepreneurs. It is the call for action to the mountain youth to shape the future they inherit and create a road map for building knowledge, technology, market and mentoring networks which can sustain them and lead to economic, social and environmental well-being of the region and its people. The sub- themes mentioned in the next section provide a holistic perspective of the challenges and opportunities that exists for the young entrepreneurs.

### THEME AND SUB - THEMES OF SMDS VIII:

The theme of “ Sustainable Mountain Initiatives for Livelihoods and Entrepreneurship for Youth (SMILEY)” will be understood from the twin perspectives of (a) Sustainable Mountain Initiatives (SMI) which explores the general dimension of entrepreneurship and (b) the Livelihoods and Entrepreneurship for Youth (LEY) through the 4 sub-themes, which can make the most impact on the well-being of the people in IHR.

The 4 sub-themes described below are inter-related and are part of the on-going initiatives of the mountain states including Meghalaya.

- Sub-theme 1:** Sustainable agriculture
- Sub-theme 2:** Sustainable energy
- Sub-theme 3:** Sustainable agri-business
- Sub-theme 4:** Sustainable Tourism



Improving rural livelihoods and alleviating poverty in mountain communities pose the most critical development challenge in IHR. The region's rural people live in remote and environmentally harsh areas with poor social and physical infrastructures and unfavourable market conditions. Traditional subsistence small-holder farming and migratory pastoral livelihoods in these mountain regions face increasing challenges from the impacts of climate change, human-animal conflicts, increased natural disasters, and the degradation of forests and rangelands. These factors contribute to a gradual decline in the productive labour force and an increase in the feminization of labour in the farming sector, eroding traditional knowledge and leading to agricultural land being left fallow.

Managing such disruptions requires innovative approaches and strategies for sustainable livelihoods. Given their relatively small and scattered populations, mountain communities often go unheard in political and policy discourse. Despite significant progress, technological advancement, and communication developments in lowland areas, economic growth in the Himalayan States has not translated into inclusive livelihood opportunities for the rural poor especially the youth. Poverty, vulnerability, and inequality are widespread, and access to resources and services and gainful employment opportunities are limited. An essential question is how poverty, gender, vulnerability, social inequality, and livelihood insecurity in the mountains can be better understood and addressed giving special emphasis to younger generation's aspiration. Strengthening skills for mountain livelihood opportunities, identifying innovative options, strategies and practices, and promoting mountain niche products and services for facilitating effective adaptation and building resilience, particularly for marginalised communities and younger generation will bring out sustainable development in the region.

## **SUB-THEME 1: SUSTAINABLE AGRICULTURE**

Objective: To identify approaches and strategies including policy options for new-age farming practices in view of climate and socio-economic changes.

E-Agriculture is a global community of practice that facilitates dialogue, information exchange and sharing of ideas related to the use of information and communication technologies (ICTs) and data ecosystems to support the development and delivery of timely, targeted information and services to make farming profitable and sustainable (socially, economically and environmentally) while delivering safe, nutritious and affordable food for all.

The agricultural business has experienced great transformation in recent years but still faces multiple hurdles. The supply chain faces non-transparent, inefficient and non-communicating network made up of processes, data, actors, and products. High input cost of non-reliable quality due to less know-how, poor post-harvest storage and management and lack of modern day farming information are some other challenges, which need to be addressed.

NASSCOM report suggests that in the years 2013-2017 around 53+ Agtech startups have raised \$350+ million funding and currently India ranks 6th globally based on the number of Agtech startups. This is an area where mountain states can explore possibilities of attracting investments and foster development of home-grown entrepreneurs.



Many Indian innovative app based e-commerce platforms have come up, keeping farmers need in mind such as better supply chain, artificial intelligence and machine learning for better post-harvest management, risk analysis and value realization for farmers and remote sensing services for farmer advisory. E-agriculture, using many of these developments can connect farmers to markets, finance, weather forecast, disaster alerts, new farming tips, inputs dealers and equipment services. Access to right information is the key to addressing many problems faced in the agriculture sector and many Indian companies have come up with solutions. As examples, Satsure Credit analytics has real-time crop monitoring, Pixuate developed tools to detect and manage pest and disease (now used by BigBasket's distribution centre for sorting fruits), Y-Cook provides soil data to all member farmers, Cropin Technology digitize farms and provide insights.

In the context of negative effects of climate change on agriculture world over, India's challenge is more intensified on account of large number of smallholder farmers. However, locally for Indian Mountain States these global and national challenges are further compounded by mountain specificities like fragility, remoteness, etc. Can the mountain states use e-agriculture as a tool to leapfrog from the current dormancy in our farm sector to cutting edge high value farming? E-agriculture combined with the appropriate niche high value farming and collectivization of farmers could even help overcome the challenge of small farm holdings. This would require government and farmers to improve their understanding of the current developments in E-agriculture and identify gaps and then engage actively with the tech community to develop mountain specific sustainable solutions. Governments may need to provide certain market building measures for this purpose in line with priority and need.

## **SUB-THEME 2: SUSTAINABLE ENERGY**

Objective: To promote specific renewable energy generation and energy efficiency enhancement through youth entrepreneurship.

India is one of the countries with the largest production of energy from renewable sources. In the electricity sector, renewable energy account for about 35% of the total installed power capacity. Indian mountain states have great potential for promoting renewable energy such as (a) small hydroelectric power; (b) wind power; (c) solar power; (d) biomass including biogas and bio-protein; (e) biofuel including biodiesel and ethanol; (f) waste to energy or energy from wastes.

While all of these activities could give immense opportunities for youth entrepreneurship, it is also imperative that there is urgent need to promote energy efficiency in all aspects. Energy efficiency will greatly contribute to energy use as also saving of resources in the mountain areas.

## **SUB-THEME 3: SUSTAINABLE AGRI-BUSINESS**

Objective: To encourage mountain youth to take up food processing and allied agri-business as sustainable entrepreneurship.

The mountain states have observed high production of fruits, spices and cashew in the recent past but could not fetch market prices that are on par with



markets in other states. The surplus produce is often wasted due to lack of transportation, sufficient & well- equipped cold storage facilities and processing of farm produce. It has high potential to be a sunrise zone for food processing and other agri-business.

The Indian food processing industry accounts over 32 per cent of the country's total food market, one of the largest industries in India. On the other, there is growing need for food processing in mountain states to minimize post-harvest losses as well as challenges of storage facilities for unprocessed foods. Building on the growing youth-friendly food policies of the country, and given the growing online food ordering business in

India, food processing could be an emerging opportunity for youth entrepreneurship in the mountain areas. Going forward, of course, it would be imperative to the adoption of food safety and quality assurance mechanisms such as Total Quality Management (TQM), Hazard Analysis and Critical Control Points (HACCP), Good Manufacturing Practices (GMP) and Good Hygienic Practices (GHP), environment-friendly packaging, etc. by the food processing industries.

The severity of unemployment is worst in urban areas, and especially for women. In this gruesome condition, the food processing industry can act as a boon for the economy provided the enablers of farmer link, capital, capability and market channels can be put in place. Initiatives have come up in some mountain states such as in Himachal, Bhujra-a women farmers collective produce fruit jams, SOS Organics from Uttarakhand make various agro and food products, Clover Organics in the North East promotes organic farming.

## **SUB-THEME 4: SUSTAINABLE TOURISM**





Objective: To promote sustainable tourism in the IHR focusing on youth employment retaining socio-environmental-cultural heritage.

In tune with the ongoing policy of the governments, the SMDS VIII will focus in making tourism sustainable in the Indian Himalayan Region (IHR). According to the Report of Working Group II on 'Sustainable Tourism in the Indian Himalayan Region' sponsored by NITI Aayog the tourism and hospitality sector is highly lucrative in IHR. The sector directly contributes about US\$ 71.5 billion to the nation's GDP and there is great potential for growth. However, it must focus on marginalized areas and groups, ensure jobs, promote local culture, tourism products and also contribute to achieving the Sustainable Development Goals (SDGs), particularly Goal 8 ('Decent work and economic growth') and Goal 12 ('Responsible consumption and production').

While IHR region provides opportunities for pro-poor tourism together with youth entrepreneurship and employment generation, the overall investment on tourism by Himalayan States (except for Sikkim) remain less than 1% of GDP. On the other hand, World Bank report in 2015 suggests that the environmental index of Himalayan states is overall very low, implying that there is the need to promote sustainable environmental tourism rather than focusing only on revenue generation from tourism.



# SESSION PLANS AND STRUCTURE OF THEMES, SUB-THEMES & KEY PARAMETERS FOR DELIBERATIONS/RECOMMENDATIONS

KEY PARAMETERS	LIVELIHOODS & ENTREPRENEURSHIP FOR YOUTH (LEY) (Plenary-1)			
	SUB-THEMES			
	E-Agriculture with Water Security &CC (Breakout-1)	Renewable energy & energy efficiency (Breakout-2)	Food Processing & Agribusiness (Breakout-3)	Sustainable Tourism (Breakout-4)
Building Youth Entrepreneurship and Call for Action on Mountain Priorities (Plenary-2)				
	Side event: Zero Waste for Sustainable Mountain Communities			
VALEDICTORY SESSION: SUMMARISATION AND FOLLOW-UP ACTIONS (Plenary-3)				

The cross-cutting theme of Building Youth Entrepreneurship and Call for Action on Mountain Priorities will cover all aspects of how to build youth entrepreneurship around the enablers such as community and supply linkages, capability building and mentoring, market access and financial support. Good case studies and expert talks will cover this subject comprehensively.

International Centre for Integrated Mountain Development (ICIMOD) has recently concluded a comprehensive study report for the Hindu Kush Himalaya (HKH) region which deals with major issues such as climate change, biodiversity, energy, water, food security, poverty, disasters, gender and migration. HKH Assessment and its Call to Action envisions a future for the region in which its societies and its people are prosperous, healthy, peaceful and poverty-free, food, energy, water and environment secure and climate/disaster resilient. The Report points to 9 mountain priorities consistent with Sustainable development goals, which inter alia cover:

- End poverty in all its form everywhere in the mountains and ensure that women, men and children lead healthy lives in an inclusive and equitable environment.
- Build resilient, equitable and inclusive mountain communities empowered by economic opportunity and investment in mountain infrastructure and connectivity.



- Achieve gender and social equity through inclusive and transformative change in the mountains.
- Promote sustainable production systems to assure food security, nutrition security, and income for mountain people, with particular attention to women's changing roles in agriculture.
- Universal access to clean energy in the mountains from sources that are affordable, reliable, and sustainable.
- Ensure a year-round secure water supply in the mountains with universal and affordable access to safe drinking water, sanitation, and water for productive purposes.
- Halt biodiversity loss, land degradation and sustainably manage forests and other ecosystems in the mountains to enhance ecosystem resilience for sustained flow of services.
- Ensure integration between adaptation to climate change, disaster risk reduction, and sustainable development for the mountains through evidence-based decision making. Promote a mountain-specific agenda for achieving the SDGs through increased regional cooperation among and between mountain regions and nations.

In the summit, a focused discussion on some of these in the context of IHR will be carried out, facilitated by the team of experts from ICIMOD. This session will be conducted under the framework of SDGs and their key indicators. The role of policies and ways of strengthening them will also be discussed.

It is envisaged that the deliberations and emerging recommendations will focus on the above inter-related parameters. Keynote speakers on each sub-theme will draw examples from Himalayan states keeping in mind the key objectives of each sub-theme and conclude with recommendations highlighting opportunities for youth entrepreneurship and call for action. Similarly, the Youth Entrepreneurs will relate their experiences and success stories including how they overcame challenges realised opportunities. Their life stories are intended to inspire and show directions to Himalayan Youth on their pathways to finding sustainable livelihoods through entrepreneurship.

## **ZERO WASTE - A SPECIAL SIDE EVENT OF SMDS VIII**

### **A CALL FOR ACTION FOR SUSTAINABLE WASTE MANAGEMENT IN THE MOUNTAINS**

Within IMI's priority themes, the issue of solid waste management falls within the ambit of the Sustainable Mountain Cities. IMI subscribes to the principles of zero waste as the best approach for sustainable waste management. Zero Waste strives to reduce waste at source through rethinking and redesigning products so that nothing is sent to the landfill in the long run. In the intermediary zero waste promotes diverse solutions of



waste reduction through policies and practices at individual and community levels that includes reducing, reusing and recycling so that the load on the landfill is reduced. To put zero waste into practice IMI has strived to organise all its Sustainable Mountain Development Summits with minimum waste generation and by eliminating the use of disposable plastics. A similar approach shall also be followed for the SMDS VIII - Shillong Summit, which has decided to Zero Waste in the entire event with diligent planning and preparation. A presentation to the participants of the Legislators Meet will be held in SMDS VIII to enable informed discussion and delineation of a road map to sustainable waste management in the Indian Himalayan Region. The special side event on Zero Waste would be led by Sikkim Chapter of IMI in association with MIMDI (Meghalaya Chapter of IMI) and the local institutional members of IMI, viz. Martin Luther Christian University and NERCORMP, Shillong.

## PROGRAMME SCHEDULE

### Session 1 Inaugural Program (NEC Auditorium)

#### Welcome and Setting the Agenda

Guest of Honour: Prof. B.K. Dutta, Member, NEC

Chief Guest: [Shri Conrad K. Sangma, Chief Minister of Meghalaya](#)

11:00	Participant Registration: Tea and Networking
11:55	Participants to be seated in the Auditorium.
12:00	Arrival of Chief Guest
12:00	Welcome song: By MLCU Music Department
12:05	Welcome address & felicitation of the Chief Guest: Shri TTC Marak, Convenor, SMDS VIII
12:15	IMI and SMDS: Shri Sushil Ramola, President, IMI
12:25	Key Note Address: Call for Action on Mountain Priorities – focus on Youth and Entrepreneurship: Dr Eklabya Sharma, ICIMOD
12:40	Address by the Guest of Honour: Prof B.K. Dutta, NEC
12:50	Address by the Chief Guest, Shri Conrad K. Sangma, Chief Minister of Meghalaya
13:10	Vote of thanks by Smt Fantry Mein Jaswal, Secretary, IMI
13:15	Group photograph with Chief Guest

**13:15 Lunch and Networking (NEC Dining Hall)**

### Session 2 Setting the Agenda (Continued)

#### Partners' Remarks on SMDS VIII

14:15	Dr Mustafa Khan, Swiss Agency for Development and Cooperation (SDC)
14:22	Dr Rajesh Joshi, GB Pant Sikkim
14:29	Shri Mihin Dollo, NERCORMP
14:36	An Entrepreneur's Life Story - Shri Vilas Shinde, Sahyadri Farms
14:55	Concluding Remarks and Introduction to next Session: Dr Vincent Darlong



### **Session 3 NEC Auditorium - Chairperson: Shri P.D. Rai, Councillor IMI**

15:00	Opening remarks by the Chairperson
15:10	Mobilizing Youth and Entrepreneurship in Himalayan Zero Waste Initiative: Ms. Priya Shrestha, Jt. Secretary, IMI
15:25	Embassy of Israel's Work in Creating COEs in Agriculture in India: Shri Dan Alluf, Mashav by Video
15:35	Sessional arrangements & logistics: Dr Subhasish Das Gupta, Organising Secretary, SMDS VIII
15:40	Tea

Participants move to respective halls for concurrent sessions

### **Session 4 Concurrent Thematic Sessions**

#### **Sub-theme 1: Sustainable Agriculture (NEC Auditorium)**

##### **Session Chair:**

Shri Alemtemshi Jamir,  
IMI

##### **Co Chair:**

Shri Ramesh Negi, IMI

#### **Sub-theme 2: Sustainable Energy (NEC Conference Hall)**

##### **Session Chair:**

Shri Rajendra Dobhal,  
IMI

##### **Co Chair:**

Dr Lalbiak Ngente, IMI

16:00	Introduction of the Theme & Speakers by Session Chair	
16:10	Dr Suhas P. Wani, Former Director ICRISAT	Shri Roshan Mascarenhas, SELCO
16:20	Shri Karma Bhutia, Founder & CEO, iShippo	Shri Fazle Muztaba, Envo Renewable Energy Services
16:30	Shri Raghuram Lanka AI Centre of Excellence, Reliance Jio	
16:40	Panel Discussion Shri Iboyama Meitei, Advisor Horticulture, NEC	Panel Discussion Shri Thomas Pullenkav SELCO Foundation
	Shri Devakishor Soraisam, Mangaal	Shri Ashish Gupta, NASSCOM Sustainable Solutions
	Shri Anirban Ghose, TRIF	Shri L. Niranjan Singh, Imphal Angels
	Shri Brij Rathore, ICIMOD Shri Kenneth Pala, GIZ	Shri Reuben Gergan, LREDA



17:40 Concluding remarks by Session Chairperson/Co-Chair  
 18:00 Tea and Networking  
 18:30 Cultural Programme (NEC Auditorium)  
 19:30 Dinner (NEC Dining Hall)

## 5th Nov 2019

### Session 5 (NEC Auditorium)

**Chairperson:** Shri P.D. Rai

9:30 Recap of Day 1: Chairperson  
 9:40 Journey of an Entrepreneur: Shri Neichute Doulo, Entrepreneurs' Association (EA), Nagaland  
 9:55 Participants move to respective concurrent sessions

**Sub-theme 3:**  
**Sustainable Agri-business**  
 (NEC Auditorium)

**Session Chair:**  
 Shri Anirban Ghose,  
 TRIF

**Co-Chair:**  
 Shri Amba Jamir, IMI

**Sub-theme 4:**  
**Sustainable Tourism**  
 (NEC Conference Hall)

**Session Chair:**  
 Shri Ramesh Negi, IMI

**Co-Chair:**  
 Shri Rigzin Spalbar, IMI

10:00 Introduction of the Theme & Speakers by Session Chair

10:10 Shri Krishna Rautela,  
 Asian Development Bank  
 10:20 Ms. Elizabeth Yambem,  
 Dweller Tea  
 10:30 Shri Siddharth Sharma,  
 StartUp Grind

Shri Hari Nair,  
 Holiday IQ  
 Shri Benjamin,  
 EA Homestay  
 Shri Neikedolie Hiekha,  
 Eco Tourism

10:40 Panel Discussion:  
 Shri Srinivas  
 Ramanujam, COO,  
 Villgro

Panel Discussion:  
 Dr Vijay Kr. D, Secretary,  
 Tourism, GoM

Shri Chinmoy Hait,  
 Foundation for  
 Development of Rural  
 Value Chain

Shri Himangshu Baruah,  
 FINDERBRIDGE

Dr Dhrupad Choudhury,  
 ICIMOD

Shri R P Gurung, ECOSS  
 Ms Rigzin Wangmo Lachic, Dolkhar

Shri Manish Shankar,  
 Intellecapp

Shri Rothell Khongsit, Village Development &  
 Promotion Tourism Cooperative Society



11:40 Concluding remarks by Session Chairperson/Co-Chair

Participants move to the Auditorium

**Session 6 Concluding Concurrent Sessions:  
Synthesizing to promote livelihoods and entrepreneurship for Youth**

12:10 Presentation by Rapporteurs on each sub-theme  
Sustainable Agriculture  
Sustainable Energy  
Sustainable Agribusiness  
Sustainable Tourism

12:50 Concluding remarks: Chairperson/Co-Chairs

13:00 Lunch & Networking (NEC Dining Hall)

Session 7 On Building Entrepreneurship Ecosystem  
(NEC Auditorium)

**Chairperson:** Shri Sushil Ramola

**Co-Chair:** Shri Gaigongdin Panmei,  
Financial Advisor, NEC

14:00 Opening remarks: Shri Sushil Ramola

14:10 Building Entrepreneurial Ecosystem: Villgro's Experience  
Shri Srinivas Ramanujam, COO, Villgro Innovations Foundation

14:30 Panel Discussion:

Funding: Shri S. Paul Muktieh, CMD, NEDFi

Support for Innovation: Shri Rajendra Dobhal

Value Chains: Shri Anirban Ghose

Incubation to Acceleration: Shri Pranjal Konwar, COO, IIMCIP

Learning from Successes: Shri Amba Jamir, IMI

Market and Networks: Shri Hari Nair, Holiday IQ

15:50 Concluding remarks: Chairperson/Co-Chair

16:00 Tea & Networking

**Session 8 Valedictory Program (NEC Auditorium)**

**Chairperson:** Shri Alemtemshi Jamir, Councillor, IMI

**Co-Chair:** Dr Vincent Darlong

**Chief Guest:** Prof. B.K. Dutta, Member, NEC

16:30 Arrival of Chief Guest

16:30 Seating of Chief Guest and other dignitaries on the dais

16:35 Welcome address by Dr Vincent Darlong, SMDS VIII

16:40 Presentation of outcomes and recommendations of SMDS-VIII:  
Shri P. D. Rai

16:55 State Chapter Actions for taking forward recommendations of SMDS VIII:  
Ms Priya Sreshtha and Shri Roshan Rai



17:10	Dr RS Tolia Award-2019: Smt Fantry Mein Jaswal
17:25	Passing on the baton: A few words from the host of SMDS-IX
17:35	Chairperson's Remarks
17:45	Address by the Chief Guest: Prof B.K. Dutta, Member, NEC
18:00	Vote of thanks: Dr Larilin Kharpuri
18:10	National Anthem
18:15	Tea and Networking
18:30	Cultural Program by MLCU (NEC Auditorium)
19:30	Dinner (NEC Dining Hall)

## **6th Nov 2019**

### **Annual General Meeting (AGM) - IMI members only**

10:00 – 13:00	Venue: NEC Conference Hall
13:00 - 14:00	Lunch (NEC Dining Hall)
Legislators' Meet - Participation by invite only	
14:30 - 15:30	Venue: NEC Conference Hall;
17:30 PM onwards	Dinner: Pinewood Hotel (Banquet hall)

## **7th Nov 2019**

### **Field Visit (Self-Financed)**

7:30 - 8:30	Departure for those who are not participating in the self-financed Field Visit
7:30	Departure for Field Visit (proposed site: Mawlynnong – Asia's Cleanest village + Living Roots bridge + Balancing natural rock) for Sohra & surrounding areas.
6:00	Return from field visit and stay in Shillong.

## **8th Nov 2019**

7:30 - 8:30	Departure of all participants
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# INAUGURAL PROGRAMME

## WELCOME AND SETTING THE AGENDA

Arrival of the Chief Guest Shri Conrad K. Sangma, Hon. Chief Minister of Meghalaya, and the Guest of Honour, Prof B.K. Dutta, Member, North Eastern Council (NEC). Shri Conrad K. Sangma, HCM Meghalaya was received by IMI President Shri Sushil Ramola, IMI Councilor Shri P.D. Rai and MIMDI Chairperson Shri Tony T.C. Marak. Before inauguration of the Summit, the Chief Minister visited the Zero Waste exhibition, presented by Shri Roshan Rai & Ms. Priyadarshini Shrestha. As the chief guest was ushered in on the dais, he and other dignitaries were treated with a rendition of a Khasi-Garo welcome song, presented by the students of MLCU Music Department.



### **WELCOME ADDRESS**

SHRI TTC MARAK, CHAIRPERSON MIMDI:

On behalf of the IMI and MIMDI, (Meghalaya Integrated Mountain Development Initiative), the local chapter of the IMI, he welcomed the Chief Guest, Hon. Chief Minister of Meghalaya, Shri Conrad K Sangma, the Guest of Honour, Prof B.K. Dutta, Member, NEC and, other dignitaries. He also welcomed all the delegates, from all the Himalayan states, particularly ICIMOD from Kathmandu, to Meghalaya, the abode of clouds.

He briefly spoke of the theme of the SMDS-VIII - SMILEY - Sustainable Mountain Initiative for Livelihoods and Entrepreneurship for Youth. He said under this broad theme – livelihoods and entrepreneurship for Youth – the summit would explore four different sub themes, which consist of Sustainable agriculture, Sustainable energy, Sustainable Agri-business and Sustainable tourism.

Speaking of Meghalaya's enchanting beauty, he invited the participants, especially those who are coming here for the first time, to a field visit, either to Mawlynnong, Asia's cleanest village and/or to a natural wonder, the living roots bridge or Sohra with all its limestone caves, on 7 November, after the conclusion of the Summit.

Shri Marak also profusely thanked all the sponsors and partners-the Government of Meghalaya, the North Eastern Council, the Jaintia Hills Cement Manufactures Association, SDC, Zero Waste, ICIMOD and others for their contributions to this Summit, which enabled the host to make sure that the Summit came to a grand fruition.

Shri Tony T C Marak, and office bearers of MIMDI felicitated the Chief Guest Shri Conrad K. Sangma, HCM Meghalaya, Guest of Honour Prof B K Dutta, Member, North Eastern Council, and other dignitaries on the dais.



## IMI'S CONTRIBUTION AND AN OVERVIEW OF SMDS-VIII

SHRI SUSHIL RAMOLA, PRESIDENT IMI



Shri Sushil Ramola addressing the gathering

Shri Ramola began by saying that on 11th of September, here in Shillong at the Pinewood Hotel, Chief Minister Shri Conrad K. Sangma had chaired the Legislators' Dialogue, organized for the legislators of Meghalaya, to understand how climate change was going to impact us and what legislators could do about it. The issue that was highlighted there was that we are already facing temperature rise, even though our goal is limiting it to 1.5 degree centigrade by 2100. We have already seen higher growth rate, and to top it, all the mountain states are likely to face the worst scenario by at least point 6 (0.6) degrees over and above what happens elsewhere. The Cherry blossom festival of Shillong has suffered because of that, and we are going to see many more such changes including the livelihoods of mountain people.

He also informed the august house that on 28th of July, Shri Conrad K. Sangma joined the Conclave of the Himalayan States at Mussoorie, where six Chief Ministers and other senior ministers from all the mountain states met to share their views on how the mountain states could strengthen themselves for long term sustainable development through funding from the Finance Commission mechanism. The Conclave was also attended by Smt. Nirmala Sitharaman, Hon. Union Finance Minister, Shri N.K. Singh, Chairman 15th Finance Commission and Shri Rajiv Kumar, Vice Chair of the Niti Aayog. Over the last one year, IMI did research, talked to Chief Ministers, the bureaucracy, and experts, and was able to come up with a working draft for submission to the 15th Finance Commission on the "Priorities of the Indian Himalayan Region" and to take action to mitigate the socio-economic vulnerability of the IHR states, and, the need to preserve and enhance ecosystem services provided by the mountains.

Shri Ramola also highlighted the international 'Water Futures' conference, at Bengaluru, in September 2019 organised by the Indian Institute of Science in collaboration with Divecha Centre on Climate Change and Future Earth. IMI was requested to curate two sessions – one on the technical issues facing water challenges in the mountain regions, where six paper presentations on both in terms of problems and solutions were presented from the Himalayan region. And more importantly, in the second session, a Legislators' Meet was held, which discussed the water issues faced by the mountain states and the



role legislators could play in resolving them. It was attended by legislators from across the mountain states. One of the outcomes of this Meet was the proposal to set up a water solution lab for the North Eastern states.

Shri Ramola also briefly spoke about IMI's mission and vision and explained that it works as a collaborative, open, voluntary, and democratic platform for engaging multiple stakeholders across the IHR to realize the vision through influencing policies and catalyzing action by integrating knowledge and experiences of multiple stakeholders.

The structure of IMI is totally decentralized and composed of mountain states, each having a state chapter affiliated to IMI. Each year, one of the state chapters hosts the Sustainable Mountain Development Summit (SMDS), as is the present one being held by MIMDI. Over the last nine years, the SMDS has travelled a long distance-right from the first one in 2011 at Nainital to Gangtok, Kohima, Itanagar, Leh, Aizawl, Solan and this is the eighth Summit in Shillong. And through this annual conversation, IMI arrives at a more holistic assessment of issues and works on solutions.

After explaining the IMI's vision, its structure, and its way of functioning over the years, Shri Ramola stated that SMDS-VIII is going to focus on sustainable livelihoods and entrepreneurship engaging the youth to deal with the challenges they face in terms of livelihoods and also the changes in aspirations of our youth; to engage youth with their livelihoods through entrepreneurship is a powerful way in which we can reconnect with youth and also deal with challenges that the mountain states are facing."

Under this broad theme, he elaborated on the four sub-themes that have been identified -the first is on e-agriculture and technologies: how can we use the communication technologies, the digital technologies and other agricultural technologies like precision farming to create new avenues for our youth to engage with agriculture for which they do have the land but their parents do not have the wherewithal to sustain in view of the changes happening around and, in view of the land holding systems that they have; so we have to find breakthroughs through e-agricultural and through new technologies.

The second sub-theme is Sustainable Tourism – the mountain regions have their own uniqueness, and how we can create differentiated and sustainable tourism avenues on the likes of many countries in the world, such as, Switzerland and Scotland who have achieved, right from policy to implementation. How can we create those models so that we can realize the aspirations of our youth through sustainable tourism?

The third sub-theme is food processing and agriculture value chains. Merely producing, whether horticultural produce or spices or organic farming is not enough. There are many unique opportunities, but value addition by creating downstream, small and medium enterprises is the way through which we can realize the value addition within the states.

And the fourth one is alternative energy, which was suggested and guided by the the HCM of Meghalaya, to create new avenues, new pathways through micro hydel, solar energy, wind energy, biomass, bio fuels, waste to energy. There are many new opportunities through which we can provide solutions which are local rather than the imported ones which are not suitable to the local environment.



So these four sub-themes have been put together to create an entrepreneurial ecosystem through which youth can realize these full values and which can help them become successful. That ecosystem consists of policy, funding mechanism, market access, capability building and mentoring of the entrepreneurs, and all this put together for each area of opportunities, whether it is for apple farming or for very exotic floriculture, so in each of these areas a thousand flowers can bloom; but we have to make them happen.

Shri Ramola went on to say that IMI's work does not end with that of the Summit. The post-SMDS work will focus on action research to take some of these ideas forward, create a technical hub and support system; create development and demonstration platforms where there is good work already being done in different states, and through partnerships work to realize outcomes of the summit. So there is the full year's agenda lined up. This work will be done with the support of all the partners, the states with which we are working together, and through IMI hopes to be able to realize the aspirations of our youth, and create a future for them and channel their energy for meaningful livelihoods. In conclusion Shri Ramola paid tribute to late Dr R S Tolia, the founding President of IMI, who conceptualized the idea of IMI and guided the organization.

## **KEYNOTE ADDRESS: 'CALL FOR ACTION ON MOUNTAIN PRIORITIES – FOCUS ON YOUTH & ENTREPRENEURSHIP'**



**DR EKLABYA SHARMA,**  
DEPUTY DIRECTOR GENERAL,  
ICIMOD, KATHMANDU.

Dr. Eklabya Sharma began his keynote address by acknowledging ICIMOD'S partnership with IMI from its very inception. He drew attention to the recently published Hindu-Kush Himalaya (HKH) Assessment Report that called for action on mountain priorities, which has attracted global attention.

HKH region is shared by eight countries - very difficult countries, but very important countries for the world; it's a unique global asset, an asset that provides food, energy, water, carbon, cultural and biological diversity, and therefore, globally it's very important; world's 10 major rivers originate from this region... about 240 million people live in this mountain region, but more importantly, whatever is happening in the mountains is impacting people in the downstream and, the food that's produced in the river basins caters to more than two-three billion people. So, what is happening in the mountains is impacting about half of humanity, and therefore, it demands global attention.

In terms of biodiversity, four out of the 36 global hotspots are here in the HKH region, including the Indian Himalayan region. Unfortunately, biodiversity as a subject has not been much explored. The report says, in just ten years (between 1998-2008), at least 35



new species per year has been discovered in the eastern Himalayan region; so there is a need for more research, as there are many drivers of change at work, and it is estimated that, one-fourth of endemic species which is mostly from the eastern Himalayan region is likely to be vanished by 2100. This is the finding of the assessment which was prepared by more than 350 scientists over the last five years, and this assessment has drawn global attention! What is to be noted is that 60% to 85% of rural people in the HKH region is dependent on biodiversity, which means, care must be taken as to how these resources are used. He told the youth and aspiring entrepreneurs that “biodiversity and water are very fundamental resources for entrepreneurship in this region.”

Focusing on the general poverty situation in the Hindukush Himalayan region of the eight countries, Dr Eklabya Sharma points out, one-fourth of the population on average are in poverty, but in the mountains, it's one-third, about 30% of the population. So far as food insecurity is concerned, 30% of the HKH region is food insecure; there is a glaring issue of malnutrition and the problem of stunting and, at least 50% the mountain people are suffering. Drawing attention of the HCM, Shri Conrad K. Sangma to the alarming problem of malnutrition in Meghalaya, he urged the state government to urgently address the issue.

He also spoke about the existing energy poverty, which was quite critical. Though the Himalayan region is bestowed with huge energy potential, nearly 80% of rural population still doesn't have access to affordable clean energy. Though India has taken certain bold initiative in the promotion of renewal energy, and made some progress, it needs to do more to connect the unreached in the uplands.

Coming to the issue of Climate Change, even if it was agreed in Paris to keep a 1.5 degree world, but the countries are not achieving the target at all, and he warned that if the current rate of emission continued it would be a 5 degree centigrade world by the turn of the new century; so that's a huge challenge, and the next 10 years will be very critical for the world to act. Dr Eklabya Sharma pointed out, it is estimated that even at 1.5 degree rise in temperature, one third of all glaciers are going to be vanished in the HKH region by 2100; and with the current emissions two-thirds of the glaciers are going to disappear: that means water resource will be a very critical resource, and conflicts might come up at community, district, national, regional and global levels; So water is going to be fundamental and critical.

In the agricultural sector, where most of entrepreneurship will be focused on, the Indus region- which is the western part of India, Ladakh, Kargil and J&K, Pakistan, Afghanistan and China – for all these regions, glaciers are going to be key source for agriculture and other allied activities. However, when it comes to the Brahmaputra basin, glaciers are important but more important is the rain-fed mountain waters, and therefore, integrated watershed management would be critical to the socio-economic life of people of the region. He said the Assessment report clearly called for action, here and now, and ICIMOD was already interacting with all the HKH countries and initiating actions at different scales.

Towards that end, ICIMOD has developed six urgent regional actions and are working with all these countries on climate change or drivers of climate change, on low carbon technologies, as well as focusing on opportunities to both adaptation resilience and



mitigation. The second urgent action is to recognize and prioritize the uniqueness of the HKH region, the voices of the people, their culture and traditional knowledge systems and how all this could be integrated into the formal system and made use of them in the planning process. Then limiting global warming under 1.5 degree, and see how adaptation and negative carbon growth could be achieved. Bhutan is a perfect example and people can learn many things from regional member countries.

As regards the Sustainable Development Goals, this is another big aspiration of the world, and all the eight countries are signatories. He stressed the need for a mountain-specific approach to address the vital concerns and challenges in the Himalayan region, including enhancing ecosystem resilience. Exhorting the youth entrepreneurs in mountain region and hilly regions, Dr Eklabya Sharma averred: "If we were thinking of green economy then certainly we needed to focus on ecosystem services, whether it is biodiversity, horticulture and, finally information sharing and knowledge which we are doing is critical. What IMI is doing here is looking for solutions with youth and entrepreneurship, and in this, the capacity building, and strengthening capacities are quite critical, and investment which is inclusive, in terms of finance, in terms of marketing on green economy, green production systems are critical. Major opportunities that we see are decentralization and democratization; digital economy, which is quite important if we need to upscale. The other very important action for the HKH region is low carbon and climate resilient development that is what we think in terms of green economy."

He said ICIMOD was very critically focusing on medium and small mountain enterprises. ICIMOD's work and experience in the Hindukush region clearly show that there are number of opportunities related to horticulture, agricultural products, wild edibles, non-timber forest products, yak husbandry, tourism and bamboo etc. In fact, in the Hindukush Himalayan region, medium and small enterprises occupy 95 % of all private sectors. It's huge. But, the region lacks in savings and institutional capital. So this important area needs to be addressed. Investment has to really go to climate sensitive, resilient development in this sector and that's why ICIMOD is very keen to work with IMI in this topic, Dr Sharma added.

However, he opined that one of the greatest challenges was the question of sustainability of enterprise- be it renewable energy, horticulture, organic farming, NTFPs, rural tourism – and to address that a host of initiatives would be necessary such as, skill development, technological knowledge, access to financial services, market access information - all this is critical. The other major challenge is renewable energy and energy efficiency, and for all that, investment has to come to the mountains.

He informed the gathering that ICIMOD was developing a new program, Himalaya Calling, for the Hindukush region in general, but particularly aimed at the Indian Himalayan region. Much has been reported about the distress of the Himalaya – that focuses on the impact of 1.5 degree Celsius temperature rise on the vast Kailash landscape, which encompasses Tibet, Nepal and Uttarakhand of India; that is where 22% ice mass loss has been observed recently. Reports further reveal that about 23,000 tonnes of solid wastes is actually generated in the Hindu Kush Himalaya (HKH) region every year. Five million springs, about 30% of these are drying, 50% is showing reduced discharge; in Uttarakhand, more than 16,000 villages are reported to be ghost villages, people are out-migrating and leaving the mountains; forest cover is really going down; disasters have increased manifold - 532 disasters between 1992-2012- which had huge impact.



So how should we address all this? What should be our action? He asked. The program, Himalaya Calling, has been conceived to find solutions to these emerging issues. ICIMOD has geared up to work with a range of stakeholders - with the communities, communicating evidences; with the policy makers and practioners. "There is a lot of information and knowledge available but they are not going into the policy, upward pathways and downward pathways to the final beneficiaries. We will have to engage with many stakeholders on various topics - springs, waste management, tourism, mountain agriculture, green economy, biodiversity. We need to foster networks; that is what IMI is doing as one of the partners".

As part of the Himalaya Calling program ICIMOD will study four aspirational districts in India - of which Meghalaya will have one district - in partnership with IMI and G.B Pant Institute. The Government of India, Ministry of Forest, Environment & Climate Change, have provided resources for the next three years to carry out this work in India. And in this context, it is also important to collate and synthesize all the existing efforts taken in the Indian Himalaya region; National Mission of Himalayan Studies, and National Mission on Sustainable Mountain Ecosystem, ICIMOD's efforts on Hindukush monitoring and assessment programme and many others so that all those materials could be effectively used for communication. "We need to have knowledge products; we need to develop creative communications, establish networks. So lots of synergy will be required. The Summit here is quite critical and we would like to carry the outcome forward," Dr Sharma said.

He ended his powerful talk by citing a successful collective action in Nepal, by which a long swath of degraded forest was completely regenerated and transformed into a lush green thick forest. It was possible through a comprehensive conservation plan designed by ICIMOD and implemented through the community. That is how change can happen.

The Hindu Kush region is the pulse of the planet, in an era where climate change is happening. What happens here can be felt all over the world. Like it is said if the Amazon is the lungs of the earth, it (HKH) is the pulse of the planet. Let's protect it, let's bring more investment and efforts in the mountains.



### **ADDRESS BY THE GUEST OF HONOUR, PROF. B.K DUTTA**

Prof. B.K.Dutta expressed great pleasure to be present in the inaugural function of the SMDS-VIII, organized by Meghalaya Integrated Mountain Development Initiative (MIMDI), Shillong. This summit hopes to deliberate on Sustainable Mountain Initiative for Livelihoods, entrepreneurship for Youth (SMILEY), involving all the northeastern states and other Himalayan states like Uttarakhand, Himachal Pradesh. Two UTs, J& K and Ladakh, and the Himalayan districts of Darjeeling and Kalimpong have also been included in this program. He wished the Summit a success and looked forward to useful outcomes.



## SETTING THE CONTEXT OF THE SUMMIT

To set the context for the Summit, a report was prepared by IIM, Shillong. Prof Sanjeeb Kakoty, lead author of the report, provided a preview along with his short remarks.



Prof. Sanjeeb Kakoty, IIM, Shillong, informed that this report was prepared in collaboration with seven research scholars of the IIM. While preparing this report, a couple of things became very obvious. First, they all thought that we are running out of time regarding climate change. The reality is we have already run out of time. Delhi, our national capital has become a gas chamber, and it is not very long before the rest of the cities will follow suit.

Second, policy planners and the government probably have no idea of what to do; we were looking at various schemes that exist to promote entrepreneurship in the state.

As a teacher in a management institute he said that he was confused by the dozens of schemes that exist. Had he been an entrepreneur, he would not be able to figure out which scheme to apply for; which means that there is a need to ensure that the schemes are made simple and accessible, that's a major challenge; Third, what we have also realized is the development model that our country followed was essentially a replay of the development model that has probably worked or not worked for the rest of the world, for the West. And what we are trying to do is trying to tweak the development model in a way that would suit us, but this tweaking is not going to help us anymore since we have run out of time. Having said that Prof Kakoty called for 'a new development model' for India and the IHR. What would that new development model look at? He continued, "This development model would look at communities as the mainstay of the development process; what has so far happened is that we have tweaked the skilling that has been there. We have skilled people with skills that do not give them jobs within the region." So, there is an out migration of the youth from the region to the rest of the country, to the rest of the world, creating huge problem for the local communities here. In some of the churches the choirs have gone silent because the youth have gone away. Sharing his experience while doing research in the Majuli islands of Assam, he claimed that the Bihu festival got affected because there were not enough drummers to play the drums, as youths have gone out to work as security guards to faraway places like Chennai, Bengaluru or some other places outside. This is a serious problem, which needs to be addressed.

He said the report was an attempt of the IIM Shillong to help in the process and, IIM would offer its services to anyone and everyone who wants to make a difference. He hoped that this Summit would mark the beginning of a change in the region, where collaborations can be attempted, for nothing will happen if people and organizations worked in silos.

He stated that he was quite impressed with the presentation made by DDG, ICIMOD, but opined that: "The place where I think we have a problem is that we have everything



in theories but in the practical ground we don't have many success stories to show to the rest of the world. So it is very important for us to create success stories on the field. It is happening in some places, but it needs to be highlighted, some kind of traction needs to be created and I am sure we can do it. But probably we can't wait for tomorrow to start it, we got to start it now. How do we start it, where can we start is something very important."

He emphasized that the existing development model needs to be changed. The sustainable systems that are there among the many communities in the mountains, which are disparagingly called as subsistence, hand-to-mouth economy, needs to be respected, the traditions of the region have to be respected. He emphasized on the need to build upon their strengths and not to impose a development model that is alien to them, which has not worked in other parts of the world so there is no reason why it should work in this region.

Release of the IMI-IIM Report, 2019: "Assessing the Changing Entrepreneurship Landscape in the Indian Himalayan Region" – a background note for SMDS-VIII.

The Chief Guest, Shri Conrad K. Sangma, HCM Meghalaya released the report.

### **ADDRESS BY THE CHIEF GUEST -**

SHRI CONRAD K. SANGMA, HCM MEGHALAYA



He thanked IMI for organizing this Summit and taking this important initiative, while nurturing it for the past eight nine years. He had heard about this Summits and a few years ago he also participated in the Summit at Leh as an MP. There he came to know of different initiatives taken up by IMI on issues that are so important for the Himalayan states. Shri Sangma congratulated Dr Eklabya Sharma of ICIMOD for his 'wonderful, enlightening presentation' that had really put everything into perspective, especially the challenges and opportunities that are emerging in the context of climate change.

He said people were generally aware of the issues. However, he felt, as he was engaging with the IMI and discussing about the SMDS-VIII, he realized that what was really needed now was to find some way to convert all discussions into actions. There are a lot of policies, a lot of ideas that are coming in, for example, the Look East Policy, which is now called, the Act East Policy; everyone keeps on talking about 'Act East, but no action is taking place. At the grassroots so many programs are there, but then some links are missing. That is why it is so important to convert all this thought processes and the policies into actions that would yield some real results and create opportunities, and which, ultimately, lead to creation of a complete ecosystem where economics plays a huge role and entrepreneurs become an integral part of it. And that's why he was particularly focusing on entrepreneurship, and the youth as its driving engine.

He then points to the changing world today, which is witnessing two major disruptions, one caused by the new technologies and the other has been triggered by the human-



induced climate change. Talking about the new technologies, especially the powerful artificial intelligence, he described the looming scenarios where technology would determine the way people do anything and everything, where one would see artificial intelligence taking over all the data analytic that is taking place today. He further said that we will have all predictive systems in place and, it will remove a number of jobs that will not be required, and that will become redundant; the kind of jobs that were available in the market, the kind of human resources that required, the kind of skills needed by people are going to change in the next 10 or 15 years time. There is no secret about it, it is going to happen. And, therefore, he urged the younger generation which will soon take leadership, to prepare itself to face the new situation. He warned that if we don't prepare ourselves for it today, we will be caught unaware, and then obviously, we will be badly affected economically, in terms of jobs and other economic activities. However, despite this great disruption, the new technologies are opening up great opportunities too, which can be harnessed for prosperity.

The second area of disruption is the climate change. When climate change takes place, it disrupts everything - it disrupts water, resources, livelihoods, agriculture, tourism - all kinds of economic activities get affected. Here, too, everybody has to be prepared for the climate impacted disruptions, which are already happening everywhere. Therefore, he offered: "We need to take action, and it is we who need to take action when disruptions are taking place in technology and climate change ...yes there will be many things going wrong, but you are going to see massive opportunities that exist; the question is, how do we take advantage of these?" All normal interventions have to be continued such as, ensuring water conservation, tree plantation, waste management etc. along with translating policies into practice in a way that create economic opportunities for entrepreneurs. Focusing on green economy is one such area, where northeastern states must look into, and also create necessary ecosystem in this. If what IMI is doing today, is linked to this aspect, much can be achieved.

Explaining that the Government of Meghalaya has taken up entrepreneurship as a major focus, Shri Sangma stated - "We have been always very clear that it is only through entrepreneurship that we will be able to make economic changes that we want, make the environmental changes that we want, make the normal implementation of different projects that we want- all that can happen if entrepreneurs are there; without entrepreneurs, nothing is going to move. That's the reason why the government of Meghalaya has always stressed a lot on entrepreneurship".

The Government of Meghalaya has initiated something called e-challenge, through which it is looking at, to start with, 50 top ideas that can be transformed into sustainable enterprises. It was opened up to the whole state. The government also held a series of community engagement programs in districts and blocks in which people were asked to come up with doable ideas as potential entrepreneurial activities. The government also committed to all kinds of support, from providing small funds to linking them to different financial institutions, policy, ideas and facilitating NOC that may be required, and eventually to linking to markets once they start developing products. To encourage young aspiring entrepreneurs, the state government has also instituted an entrepreneurship Award, known as, MEGHERA, Meghalaya Entrepreneurship Recognition Award, which is given every month to an entrepreneur, who has done something innovative, something that affects society or something that is really first of its kind. And, so far at least 15 people have been given this award. Both these steps have been taken to push entrepreneurship in the state. The government is encouraging, recognizing their efforts, giving a pat on their back and telling them that they are doing a good job. Citing his personal experience as an entrepreneur, he said it is most difficult thing for an entrepreneur when he or she



is alone. One may not realize that but when somebody comes up and tells him or her that he/she is doing great, it can make a huge difference in the entrepreneur's life!

Beside these, the state government is also setting up the necessary infrastructure for promoting entrepreneurship in Meghalaya. It is also setting up incubation centers everywhere, which can serve multiple purposes, including providing all kinds of official information regarding schemes, funding for income-generating activities that will help improve local economy. All these incubation centers would be subsequently moved up to the Blocks, may be with a smaller model of incubation center, as growth centers, which will help aspiring entrepreneurs to develop their plans and ideas; they would know how to apply to bank or what are the technologies available for developing such ideas.

One sad thing about Meghalaya, like any other state in the northeast, is that when it comes to the ranking of ease of doing business, it figures really at the rock bottom.



The inaugural session ended with the vote of thanks offered by Smt Fantry Mein Jaswal, Secretary IMI, followed by a group photograph with the Hon. Chief Minister Shri Conrad K. Sangma. .

That has to change and all the northeastern states must address this critical issue. Shri Sangma said his government was trying to improve its ranking of ease of doing business in the state. One of the ideas that the government is working on is creating an online single window mechanism through which any official information can be accessed – be it for Government to Business or Government to citizens.

The government is working with various important central government agencies, Army and Airforce establishments located in the state to help local entrepreneurs, SHGs and local cooperatives, which are making all kinds of goods ...from biscuits to chips from banana, jackfruits etc, to promote and sustain these small local businesses. To this end, the government has launched a portal called, Meghamart, where producers can showcase their products and sell them online. Any entrepreneur can register his or her enterprise. There are many other initiatives in the offing.

While concluding his speech, the HCM touched upon his government's ambitious '100 smart villages' project, which aims at addressing the issues of rural migration and initiating a reverse migration economic model. He said people today shift to cities for three reasons – (i) to better their lives where there are facilities available, (ii) for jobs and better income, or (iii) for securing quality education and professional skills. The state government is looking for partnership to work in this area, and urged the IMI to think in those lines and offer solutions to these problems – sustainability and rural jobs.



## PARTNERS' REMARKS ON SMDS VIII

The second session opened with brief remarks on SMDS VIII from two key partners – the Swiss Agency for Development and Cooperation (SDC) and G.B Pant National Institute of Himalayan Environment and Sustainable Development, Sikkim.

### **DR MUSTAFA KHAN, SDC:**

Dr. Mustafa Khan spoke about the risks arising out of climate change and extreme weather events and how climate risks affect entrepreneurship and livelihoods. Before his presentation, he gave a brief of the project IHCAP, which is being supported by the Swiss Development Council and its broad objectives. Being a bilateral project between the GOI and Govt of Switzerland, the project works within the existing country systems.



GOI has launched the National Mission for Sustainable Himalayan Ecosystems, and SDC is providing the knowledge and technical support for implementing the NMSHE; He highlighted that as per several reports, the Himalayan region is much more vulnerable and prone to climate change impact as compared to the rest of the world. For example, reports suggest, even if the global warming stopped at 1.5 degree centigrade, it is estimated that in the Hindukush Himalayas the temperature rise will be 1.8 degree. So whatever the scenario is taken, in the Himalayan region is likely to be more impacted by the climate change than any other parts of the world.

Simply put, Dr Khan explained: "The climate risk is composite of three factors – one is the hazards, which is simply an event, an extreme event; for example, Glacial Lake Outburst Floods (GLOF) or flash floods in the river - these are kind of events which are hazards; the second is the exposure – are you on the way where the hazard is taking place; is your business located near a river, where the flood is going to come? If yes, then you are in the exposed area, that means your enterprise, your livelihood, your business is in the exposed area; that's the second component. The third is the vulnerability component; vulnerability is of the system. So, if your business, your factory, your establishment, your home or your agricultural fields are internally weak, that they are not able to take the impact of those hazards in the exposed region, then you are set to be more vulnerable. All these factors contribute how risk prone your business is."

There are three types of risks which any business model must consider: One is the contextual risk, which may be the market related things, for example, what is the reason for proposing a business or enterprise to be set up? There may be a demand for a service or good, which is not available and the proposed business model offers to fulfill that demand. The second is the programmatic risk.



It relates to operations of a company or enterprise, for example, suppose there is a flood and the road that connects the company gets inundated with water, so it can't supply the goods out or the inputs that are required for the business or enterprise can't come in. This is operations related. The third is the institutional risk-this is within the system's own boundaries, this is about how good or bad management practices exist to run an enterprise. Management practices could be related to labour. This could be also related to financial aspects. How well audited or not well audited is the enterprise – all this involves internal risk, this is the institutional risk.

Now what climate change does is it directly affects the contextual and programmatic risks. For example, a hydro power project, even the micro projects, they are all located at the mountains, a lot of them are in Himachal Pradesh and Sikkim, and they are sometimes located very near to glaciers. Everybody knows glaciers are melting, which are creating glacial lakes, and these glacial lakes are not very stable systems; they are new entities, they are dynamic systems, they fluctuate and sometimes they can burst also. If these burst, they run down the valley with easiest flow path of the water and they have the ability to disrupt even the large dams, leave alone the small ones.

So when an entrepreneur enters a place and wants to set up a hydro power plant, it's expected that GLOF is taken as a risk factor when they assess the risks for business. It's not the investor alone, even the insurance companies don't take climate change as a factor. This is something any smart entrepreneur entering into livelihood model should consider about. This is especially true for the youth who are entering the market, they are more aware of the climate change and the kind of risks it poses. The other thing is the contextual and programmatic risks, for example the Kullu valley is known for its apple enterprise; it has been a very good apple growing belt. Then the climate changed, and suddenly the Kullu farmers found that they could not produce apples anymore, and so they had to shift to pomegranate. Now the apple valley in Kullu has changed into pomegranate valley, while the resorts set up in the 80s, are still called apple valley resorts, though there is not a single apple to be seen around there. So these are the kind of risks which have to be factored in. So any prudent business has to factor in the climate change related risks and extreme events when they develop or set up an enterprise.



## **DR RAJESH JOSHI, GBPNIHESD, SIKKIM**



He started his remarks with a brief introduction to the GB Pant institute which is working with IMI since its inception. The institute has played a key role not only in the sphere of sustainable development of the Himalayan region but also at different platforms and fora, particularly at the sustainable mountain development summit like this. It has multi-disciplinary expertise and resources and works on the inter-disciplinary issues. He said the Institute and the IMI work in the same geographical region. However, while the institute works for providing scientific, R&D based solutions for environmental and sustainable development of the region, the IMI is focusing more on network building and policy level and advocacy level solutions. Both the organizations have common geographical area of action, and so through this kind of platforms and summits, the

networking and partnership between the two organizations are further strengthened. And through these state chapters and regional partners, the Summit provides a platform to showcase the partnership and also explain their activities and interventions.

Both the organizations emphasize working in coordination, rather than in silos. Currently, the GBPNIHESD Institute is coordinating two major missions of the Government of India; one is the National Mission for Sustaining Himalayan Ecosystem, and the other is the National Mission for Himalayan Studies. Under this NMHS programme, which is guided by the ministry, more than 130 projects are being funded and implemented all across the country by the Institute, which focuses on various environmental and sustainable mountain development issues of the Indian Himalayan region. Under the NMSHE, the institute is also working very closely with the regional partners. For issues like, SMILEY at the SMDS-VIII, out of the six landscape programmes, which are being supported and coordinated by ICIMOD, three are in India implemented by the Institute, wherein key aspects of sustainable development and entrepreneurship are being addressed. There are a number of activities that have been initiated like, spring shed management, community-based eco-tourism, rural livelihood- all these are being covered by the Institute under three landscape development programme; one is Kailash Sacred landscape Conservation Development Initiative in the Western part of the Himalaya, the other is in Sikkim, the Kanchenjunga Nature Conservation Programme and in the northeast, it is the HILIFE program. These are being implemented through regional partnership with different organizations, NGOs, and other development agencies. Since many ideas are available and some pilot level successful models have already been identified or showcased, there is need to upscale these successful models to regional level. It is hoped that the outcome of the summit will provide a platform to device strategies for upscaling these activities.



## **SHRI THANGJAM ADITYA, PH.D. SCHOLAR**

Shri Thangjam Aditya, Ph.D. Scholar, IIM presented the IMI-IIM Shillong Report, 2019.

The main focus of Shri Thangjam Aditya's presentation was on how to get the youth interested in the entrepreneurship movement in the Indian Himalayan region. It is needless to say that the climate change is real and the youth of the IHR need to act now. Empirical evidences from a research study done by the IIT-G suggest that the climate change vulnerability is alarmingly high in the Indian Himalayan Region due to two factors: one is the rising temperature in the mountain region, which is higher than the global average, and the second, there has been erratic pattern in the rain fall. Another worrying issue is the exodus of youth from the mountain states. Every year, a large number of youth come down to Delhi, Mumbai, Chennai, Bangalore and other places for higher studies or in search of economic opportunity, but often return facing a bleak prospect there.

Entrepreneurship can really drive the social and economic welfare of the society as well as bring down the current youth exodus. The challenge is to create opportunities in the mountain region, and this needs to be explored.

There are a plethora of policies which are intended to foster entrepreneurship, but most of these policies are rather blind to the ground realities. There is a gap between what the government is focusing on and what is really happening in the field. The government has been focusing on financing, but as a NASSCOM report suggests, the entrepreneurs see funding as a major problem. It's important to see where the missing link is. May be a single window approach, coupled with an effective monitoring (Monitoring Information System) policy will help.

Communities in the Himalayan region bank on agriculture, because there is a lack of extractive prospects. However, he pointed out, the marginal farmers constitute the majority in the IHR and appropriate support system should be made available to them, including ensuring access for the mountain farmers to the kind of technologies that can address the socio-cultural inertia of the farming families, and make sure the participation of the local communities in identifying where does the shoe is pinching and create appropriate technology for them.

Finally, he highlighted three critical issues – localization, affordability and scalability, saying that there must be systemic linkages between these issues, while capitalizing on the inherent benefits of the socio-cultural environment of the Indian Himalayan region and strong social cohesion among the farming communities. Secondly, the traditional knowledge base of the mountain communities must be taken into consideration, because an attempt at external intervention only will be futile.



## **SHRI MIHIN DOLLO, NERCORMP:**



He briefly highlighted what the Northeastern Council has been working in the region to improve livelihoods through the NERCORMP (North Eastern Region Community Resource Management Project). NERCORMP was set up in 1999, which was implemented in the six hill districts of three states – Meghalaya, Manipur and Assam, and in 2014 it was extended to Arunachal Pradesh also. Till date, NERCORMP has covered around 2532 villages, 1, 20,000 households across the region. The project initiated works with the idea that the development objectives could be effectively realized by empowering the local communities. Therefore, it focused on developing grassroots institutions, known as, NaRM-Gs (Natural Resource Management Groups) to

support village level implementation activities by the local communities in all the project villages. Women were also mobilized to set up Self Help Groups (SHGs) to encourage savings and address the need for local credit. All together 3000 NaRM-Gs and 8,500 SHGs have been formed in the region so far. Subsequently, these SHGs were clustered to form district level apex federation, in order to drive economic activities in the rural areas and then help them market their local produce and develop agri-based enterprises. Another important focus of the project was the empowerment of women and reduction of women's drudgery by improving basic amenities, such as safe drinking water and village road linkages and transport vehicles so that the communities could take their local produces to the nearby markets.

NERCORMP also promoted different kind of livelihood activities like, piggery, poultry, dairy and all kinds of agricultural and horticultural produces. Several product-specific clusters – piggery, ginger, turmeric, tea, etc.- were identified and supported with funding and credit linkages so that each could develop local enterprises through sustainable value chains around the product clusters. Another significant contribution that the project has made is in creating Community Conserved Areas (CCA) in almost all project villages, thereby bringing around 2.2 lakh hectares of forest under conservation.



# AN ENTREPRENEUR'S LIFE STORY

Session Chair - Shri P.D Rai, Councillor IMI

Co-chair - Shri Ramesh Negi, Vice President, IMI

## **SHRI VILAS SHINDE,** CHAIRMAN, SAHYADRI FARMS



Shri Vilas Shinde began by saying that the Indian farmers' situation is well known, whether they are based in Maharashtra or in the mountain states, everywhere most of the problems are similar. He comes from the Nasik district of Maharashtra. It is the part of the Sahyadri mountain area. It's also one of the important mountain ranges of the country, also known as the Western Ghat or the Deccan Plateau. In that area, the main farming is basically sugar or other horticulture and fodder crops. The problems of agricultural economy are almost similar, including the major challenges.

It is also a common knowledge why agriculture is considered a loss-making activity for the farmers, especially for the small and marginal farmers. Skill is one challenge, along with other resource-related issues, like in Maharashtra, where drought condition is a regular feature. Nearly 80% of land is still un-irrigated; there are quality and production-related issues, and policies are not aligned with the systemic changes in agriculture. Then there are several issues like market-linkages post-harvest issues, but the ultimate issue is that agriculture has become non-remunerative. And above all, in urban and rural India there are inequalities.

Sahyadri Farmers Producers Society is an initiative taken by the Nasik grape farmers in 2011 to make farming profitable and sustainable. And for that to happen, there was a need to create a perfect ecosystem, to connect all the dots, which was so eloquently explained in the inaugural session by the Chief Minister. Sahyadri is working on the same lines. Currently, Sahyadri is owned by 623 grape farmers, who are the main shareholders of the company. Along with that, different crop-wise farmers' producer companies have been set up. In Nasik area, farmers are growing grapes along with tomatoes, pomegranates, onions and few other vegetables and fruits.

All these farmers have been collected under different producers companies; currently, over 6,000 farmers are part of the organization. The number is increasing day by day, and by 2022, the Sahyadri Farms is hoping to connect around 25,000 farmers in 50,000 acres of horticultural area. The farm was created with a mission to make each farm profitable and, along with that, meeting the challenge of consumers demands for safe, healthy and affordable farm produces.



One of the main challenges of farmers is marketing of produce in all possible circumstances, efficient utilization of resources and through efficient management, reduction of cost of production at the farm level as well as throughout the value chain. Then, the financial management along with mentoring the farmers to improve quality and productivity at par with global standard are also important aspects. "The focus is to create our own supply chain, from farmer to the consumers- on that line the organization is working. In short, we are providing a complete end-to-end solution to our members; at the farm level all the interventions to improve quality and productivity, input supply system has been created; nursery, finance and insurance-related products, skill development for the farmers; then the value addition level, giving the total solution for handling produces and their processing, and finally, continuous research and development," Mr Shinde explained.

He said the Sahyadri operations, including the ecosystem, are modeled on the AMUL project- from the farmers to the consumers. The whole operation of the company is done through four layers – farmers at the base, then the crop-wise producers company, then the Sahyadri farmer producers company, which is the main, parent company, and the retail company. All these four layers are controlled by one entity, Sahyadri Farms, which is the parent company.

Marketing for the perishable commodities in horticulture is always a big challenge, because of the perishable nature of the product. And that is why the prices are continuously fluctuating; for that Sahyadri has created a unique strategy: "On one side, we have to assure our farmers by giving the minimum price support, which will insure the cost of production and, on the other side, we have to get the best possible realization, and for that, we have created different route. We focus on export market for handling fresh and processing farms; along with that in domestic markets, we are creating our own networks to reach the consumers and then the processing back up plan. So with that we are handling our produce in different situations, and meeting both the objectives, that are, making sure minimum support price to the farmers, and the best possible realization for the Farms," Shri Shinde said.

Last year, Sahyadri made Rs 350 crore business, and this year, it is hoping to cross Rs 500 crore business with a decent profit around four to five per cent every year. The company has created a net worth of Rs 118 crore in the last six years through the farmers' contribution of around Rs 55 crore, and the remaining as reserve, created through business. So, the company has created around Rs 180 crore asset in the last five years through its own network and banks.

But, he confessed, all this success came through a hard way.

Shri Vilas Shinde's personal story is from grape farming to multi-crore enterprise. In 2004, he started grape farming, after completion of my post-graduation in agricultural engineering. In the initial period itself he realized if he did farming only, and if he is not connected with market and other support system, he would not succeed. That happened in the first 10 years. Whatever agricultural activities, such as grape farming, dairy and other allied activities he took up, most of these failed because of various reasons; sometimes, it was the capital issue, other times it was the market issue or natural calamities etc. Through all this, he realized he has to create a complete ecosystem. As the Chief Minister of Meghalaya mentioned, connecting the dots - from handling challenges in the farm to the market side was important to find sustainable solutions. So he started with grape farming and started export of grape from 2004 with four small containers from his own small pack house. Slowly they built the business, though they faced a lot of challenges in



European market initially, but soon with the proper understanding of the grape business and also the production side they succeeded. Now, Sahyadri is the country's largest grape exporter company. Last year, they exported 1458 containers i.e. more than 21,000 tons worth Rs 270 crore of grapes.

So, success in grape happened because of the various reasons- creating the complete ecosystem, adopting technology at different levels like, all their farms are 100% geo-tagged, complete traceability is maintained throughout production to market; the farm level operations – from pruning to harvest – all are monitored. Every farmer's identity is maintained; then pack house and retail parts, everything is connected through proper IT solutions. They are currently following cropping apps system, Kissan Apps system, a lot of different solutions for different purposes. For example, Kissan apps solution, is used for getting farmers the right support, based on crop advisory services for addressing irrigation-related management challenges.

They connect all their farmers with the global experts- for grapes, from major agronomists from California, Chile, South Africa; they are regularly interacting with Sahyadri farmers and getting their advice. These farmers are now at par with the California grape growers, Chilean or South African grape growers. They are also conducting exposure visits for their farmers regularly to different parts of the world so that they get a bigger and better vision to understand different challenges of the farming communities throughout the world.

The infrastructure that they have created in a 65 acre campus, has a capacity of handling 300 MT of grape per day, employing around 3,000 people during the peak grape production season. In pack house operations, around 1,200 people are working and handling about 250 MT of grapes per day. On the R&D side, a lot of initiative has been taken by the company. They obtained the patent rights on a California grape variety, which is the breeding program of a California company. They gave them exclusive rights for growing this variety in India, along with the Chilean research Institute. They also gave rights of another grape variety, which is in black colour, to Sahyadri for developing a Rs 50,000 crore business from Maharashtra. Whatever R&D initiatives have been taken, it is a breakthrough in grape industry in India.

So whatever success has come through grapes business, the focus is now to replicate this story in other horticulture crops, like banana, mango, pomegranate, strawberry, papaya, guava which are grown in Maharashtra. More farmers are joining them and they expect to connect 22,000 farmers across 50,000 acres in the next three years. For creating a complete ecosystem a lot of infrastructure has been developed; they have complete back hand input facility center for their farmers, where they are getting all required input-related services – seed, fertilizer, machineries, irrigation equipment etc. And because of the scale, the farmers also have an advantage over quality control and price. About 20 to 30 per cent saving is happening because of the company's initiatives. Sahyadri has installed all weather systems in their farms, nine are operational and 100 more weather stations are being installed in next one or two years.

Sahyadri also has complete post-harvest facilities for handling fresh fruits and vegetables from the farms – pre-cooling and cooling rooms, ripening infrastructure, cold storage (4,000 MT) have been created. Also semi processing units have been set up to deal with glut situation, and to control all the products efficiently, they have put IQ processing line. In short they have tried to replicate the whole AMUL ecosystem model in their fruit and vegetable business.



While developing the grape export business for the European markets, they were fully aware of the food safety issues and consumers rights. All consumers throughout the world expect products to be safe. Everyone is looking for fresh organic products, which are safe, healthy and affordable. So, they make sure all their products maintain the food safety standard of the country. Their organizational structure is certified with all the major certification programs like, the Global Gap standard for the farm operation, BRC standard, super market standard for the TESCO, European super market, US FDA, ISO 2000; they are also certified with all food certification program, and because of that they are able to export all their products to different parts of the world. The Sahyadri products reach at least 25 countries, especially Europe and Gulf markets.

Recently, the Hindustan Unilever has tied up with Sahyadri for manufacturing all Kissan brand products like jam, ketchup using the Sahyadri facilities. And because of this tie-up with Sahyadri, they save seven to eight per cent; the kissan brand is also getting value because of the direct linkages with farmers. They are also getting value because of the Kissan brand relationship with Unilever. They are expecting that 60,000 tons of their farm tomatoes will be processed this year for Unilever alone. This is their plan for implementing in the domestic market. Currently, Sahyadri has revenue of about 80% from the export market, but are now focusing on domestic market too. And for that they are creating their own supply chain for the domestic market. Recently, Sahyadri got Euro 15m limit facility from the Netherlands bank for creating supply chain in domestic market. So under that, they are creating their own retail outlets, of which Nasik and Mumbai have already become operational; in the next two-three years, it will be operational throughout the country.

Sahyadri has taken initiative to create similar companies across Maharashtra and other parts of the country. It is introducing soon the block chain in Agriculture to ensure complete transparency from farmers to consumers. Basically, Sahyadri rural model is being developed on the lines of late former president Abdul Kalam's PURA strategy: A community can create its own solution to create sustainable community, and for that the main focus is on transforming the economy through agricultural intervention.

## **SHRI P.D RAI, CHAIR'S REMARKS:**

Sahyadri is an extraordinary model for entrepreneurship, and the personal journey of Shri Vilas Shinde would certainly inspire the budding young entrepreneurs.

## **SHRI RAMESH NEGI, CO-CHAIR'S REMARKS:**

He thanked Shri Vilas Shinde for his excellent presentation, which may seem to be unbelievable. The strength and success of the whole initiative is certainly due to his personal conviction and robust entrepreneurship. It's a great learning for the whole of Himalayan region, and the country. Everyone loves a winner, one who succeeds, and that has got the Unilever interested in the Sahyadri model. There is another important issue that has to be kept in mind as to how to deal with the middle men and dalals- who are found in the hill states- undercutting farmers' profit; whether it is in apple, orange or citrus business, the middle men make money. If the middle men could be eliminated and farmers could be directly connected through such organizations as the Sahyadri, both would benefit from the partnership. Another issue Mr Shinde has mentioned is the



problem of marketing perishable, risk prone produces. Here in Meghalaya, farmers grow a lot of spices, black pepper, chilli, ginger, turmeric, which are not so risk prone, and with complete ecosystem in place, this sector certainly holds immense promise. All said and done, ultimately what is needed is entrepreneurs and collaboration with successful entrepreneurs like Sahyadri.

Shri Ramesh Negi also thanked all the presenters – Dr Mustafa Khan, Dr Rajesh Joshi, Shri Mihin Dollo and Shri Vilas Shinde for their contribution.

## MOBILIZING YOUTH AND ENTREPRENEURSHIP ZERO WASTE INITIATIVE

**MS PRIYADARSHINEE SHRESTHA,**  
JOINT SECRETARY, IMI

Ms. Shrestha began by congratulating MIMDI for making SMDS-VIII a zero waste event.



She spoke enthusiastically about youth mobilization and entrepreneurship from the angle of zero waste. Citing a 2017 report, she presented some stark facts. The existing linear economy generates about 8.3 billion tons of plastic, of which 6.3 billion metric tons have been trashed. Even in the so-called circular economy, which recycles its waste, reports say, just 9% of plastics is recycled globally. Therefore, the whole idea of recycling is actually false.

The circular economy is built around three R's- recycle, reuse and repair. Sounds good! But it is also about responsible production and consumption, which is the 12th SDG. Zero waste actually moves away from the 3Rs- it was known all along but never practiced; zero waste looks at the entire gamut of responsible production and consumption, which she and the team she is part of is advocating.

Now, what are the opportunities for the youth in that zero waste entrepreneurship? If one focused on the circular model, the whole range of opportunities in the process could be found; take, make, recycle and return – everywhere in this process there is an opportunity and entrepreneurship can be built around that. The whole thing can be divided broadly into three areas: one, the product design, making a decision what could be the material choices (that is biodegradable), say a bamboo tooth brush... there are composting solutions; recycling services, utensil hiring, instead of disposable plastic bags- simple things can be easily done. Then looking at the knowledge about waste management, for example, there may be a special team within an event management operation, which can only deal with the waste generated in such events; Another major initiative should be about eradicating single use plastics. Recently there was a video on plastic tsunami over the Umiyam lake, which went viral. Since the lake water does not flow as the river was dammed, it was very much visible unlike in many other hilly areas where everything washes down with the gurgling streams.



However, people are faced with similar situation in Gangtok and everywhere else, even in remote locations at Leh. Water ATMs, instead of disposable plastic water bottles, leaf plates etc are solutions one should think of. And finally, much attention is needed on food and hygiene products. Eco-fem is doing fantastic work on menstrual health, and helping SHGs in Sikkim manufacture sanitary pads under a brand called, 'Ramro pads', and also connecting to local markets. The Trivandram municipality has developed a great system of home composting or community composting. There are many small initiatives like this that are happening. Then there are complete zero waste stores, package free shopping coming up, recycling initiatives like Khali bottle in Bengaluru.

Now, the question is how to engage the youth for zero waste, and one of the requirements is the support at the policy level. The solid waste management rules 2016, are there, but implementation remains sluggish – from the community level up to the municipality level. How to deal with single use plastic, how to enforce the ban on single plastic use etc are the areas where youth can really engage themselves and push for action and policy support. She gave the example of IMI's initiative, 'The Himalayan Cleanup' as a form of protest and awareness tool. Not for the sake of cleaning up, but also to send a message to the policy makers that this is what is happening to our backyards. At the same time, producers also must take the responsibility to ensure that they move away from single use plastic products. Reports suggest that more than 40% of plastic is made for single use plastic, which then becomes a mountain of trash within a short time. Recently, there was a global brand Social Audit report which finds Coca Cola the top polluting company in the world. Producers however often blame the consumers for littering. Last year, IMI initiated its own brand social audit for the Himalayan clean up across the mountain states, which also revealed Coca Cola, Pepsico, Hindustan UniLever, Britannia, amongst many other companies, who are making single use plastic that end up in the mountains. Real solutions to tackle the problem are eluding all.

In conclusion, Ms. Priyadarshinee exhorted consumers also to be responsible, while making choices about what they buy or use; they may decide to ban and reject polluting companies and their products at individual level, community level, societal level; a good example is Lachen in North Sikkim, where the community has completely banned use of plastic bottles. She said at individual level people could easily reduce their waste footprints by following just a few simple steps. In fact, she and Roshan Rai, who are spearheading the zero waste campaign in Darjeeling, Kalimpong and Sikkim, have designed a very creative poster by listing out just 12 steps to implement the zero waste project.

Shri PD Rai, Chair congratulated Priya for conceptualizing and driving 'The Himalayan Cleanup' campaign which was launched on May 26, 2018 across the 12 mountain states. Since then IMI has decided to observe 26th May as The Himalayan Cleanup day.





# S U S T A I N A B L E   A G R I C U L T U R E

Chair: Shri Alemtemshi Jamir, Councillor IMI

Co-Chair: Shri Ramesh Negi, Vice President IMI

Shri Alemtemshi Jamir briefly talked about the sub-theme and stated that humanity faces one of the biggest challenges of how to feed the 7.7 billion people from 1.7 billion hectares of cultivatable land in the planet earth! There are many issues linked with this – population growth, water, climate change and all these are encroaching upon the sustainability in food production. It's a huge task, and hence entrepreneurship in sustainable agriculture, and the application of new technologies, artificial intelligence etc., are being stressed upon. He then invited the experts to make their presentations.

**DR S P WANI,**

FORMER DIRECTOR, ICRISAT:



Dr. Wani stated that India is facing major challenges, such as, water scarcity, land degradation, and the combination of these will increase poverty particularly in the rural areas of India and in other developing countries. Above all that there is the impact of climate change. The rain-fed agriculture is vulnerable to the impact of climate change. In the context of the climate change scenario in the country, the aridity has increased dramatically; almost 3.5 million hectares have been added to the semi-arid tropics, as compared to what was 30 years back.

As aridity is increasing so is the intensity of rainfall in these areas, and the length of dry spell is also increasing. Both information and knowledge at the micro level, say in a particular district or a cluster of tehsils, would be necessary to understand the ground situation, particularly the problems arising out of climate change impact. And this is where science has to step in. It is necessary to move from macro level to micro level to assess the impact of climate change that can help address the issues therein.

He said managing water would be critical for mountain agriculture. There are broadly two types of scarcity of water; there is physical scarcity of water which is happening in many parts of rural India, especially in the Marathawada region of Maharashtra where a water-filled train reportedly goes there every day; then there is economic scarcity of water which means, lack of water infrastructure or capacity to harness available water in a particular region. For example, in Africa, the total irrigated land is only 3%, whereas in Asia it is 40%, and in India it is about 45%. Lack of financial resource to develop water infrastructure may be termed as economic scarcity.

Unfortunately, in India there is no bridge between the group of concepts and the scaling of technology, and that is where developing research is lacking and all the technologies that are developed, they remain in the shelves of the research stations or research papers, and the farmers continue to do what they have been doing. Farmers also do not have much trust in research. No one wants to spend time with the farmers to understand their



problems and needs. There are a number of actors involved in technology development and its dissemination, and no one wants to do the job of bringing different partners and institutions together to enable the delivery system to be put in place and provide solutions to the farmers.

He said the potential of mountain agriculture could be unlocked through integrated watershed management. He elaborated this by citing the outcome and learning from the projects he was associated with in the mountain areas of China and Vietnam. The ADB-funded integrated watershed development project in China was launched in 2007, and assessment was done in 2013-14 after withdrawal from the watershed project. It was observed that cropping intensity has increased up to 300%, the crop diversification has taken place from maize and other dry land crops to high value vegetable crops, and now farmers have all the basic amenities in their home like the city dwellers have - all developed through the project. The reverse migration to project area has also been observed. The farmers branded their vegetable products and were selling them on the internet. That is where the power of the new technologies have to be used. What to plan and how much to plan, what kind of grading has to be done, where the products can be sold – all these information is available on the internet. The community has training centers for the farmers. To sum up all this, what it means is: there is transformation of strategies from sectoral to holistic, from subsistence to marketable surplus, and productivity to profitability.

## **SHRI KARMA BHUTIA,** FOUNDER & CEO, ISHIPPO:



He provided a tech's perspective on what and how technology can help achieve sustainable agriculture. He touched upon SDG no 2 (No hunger) and No 12 (Responsible production & consumption), which are directly linked with agriculture. In the journey of food production, farmers travelled a long distance - from the age of hunting gathering to domestication of plants and animals for production of food from a particular land, to industrial farm tools such as, tractors and other mechanized tools. And now, Robotics for manufacturing all kinds of machine, and application of drones, GIS and other spatial tools to improve productivity of the farm land are available. Because, while population is increasing, farmlands are not, but rather becoming smaller.

New technologies and tools have emerged-that is, Cyber-physical-system stage, where man-machine and cyber space integration is taking place. There are other new technologies that are going to dramatically impact life on the planet, technology like Crispr that does man-machine integration, and is even capable of editing human DNAs etc. It is kind of a new world, which is basically controlled by five companies – Apple, Alphabet, Microsoft, Amazon and Facebook – producing wealth, a whopping total of \$4.1 trillion. And what do they have in common? They are all data harvester, they mine all kinds of data from various social platforms they own and control, and by using that data they create wealth.

Indian agriculture is still basically an agrarian economy in which majority of our population



is engaged in. In the next 10 years, even if India was projecting a \$5 trillion GDP, it had to start with agriculture and ensure that the sector grows by 8 to 10 per cent, which seems to be impossible, as it is ridden with a host of challenges-land degradation, contamination of ground water due to indiscriminate chemical use, including pesticide. There is a steady migration of youth from rural to cities, all this are going to impact agricultural growth. There are certain success stories though here and there like Sahyadri farms, which is an excellent model for demand side and supply side integration. Farmers must have access to complete agri-entrepreneurial ecosystem, in order to develop sustainable farm-based revenue model.

Future of agriculture is not soil or land. Farmers have to eventually adopt other modes of farming, such as hydroponics, he felt.

## **SHRI RAGHURAM LANKA,** AI CENTRE OF EXCELLENCE, RELIANCE JIO



He started by saying that it is the perfect time for India to get into AI. From the agricultural perspective, look at America; they have four crops, one language, whereas India has 100 crops and 150 languages, and very diverse lands as well. He was of the opinion that there is no need for importing models; India can build its own. However, a lot of local entrepreneurship will be required to make it happen, as it cannot be expected that USA build for India a wheat model to do better forecasting; someone who understands local characteristics will be able to build this forecasting model. Second thing is that India has a big population, but then, it also has a lot of data, which can be used for creating new enterprise and wealth for the country.

Technology is evolving very fast across multiple things. “Our tools are evolving, too – manual tools, mechanical tools, now robotic tools. Our sensors are evolving –from human looking to the sky to remote sensing to IoT sensing; our connectedness is changing from postcard to voice call to video call; our interface is changing –from having a touch in the face to conversation to speech identification; our products are changing- moving away from stand-alone smart products to scalable products, and now we are talking about integrated products,” Shri Raghuram Lanka wondered.

He identified broadly three kinds of challenges to making agriculture sustainable and profitable for people: “One, we have limited number of experts; there is a ratio talked about like, 100 thousand agricultural experts for about 100 million farmers; that means, if we do the math, 10,000 farmers being serviced by just one expert, which is humanly impossible; secondly, maybe we have experts in Hindi, but they can’t communicate with the Assamese speaking farmers, so we have knowledge but it’s not available at the right place; even if we codified all the knowledge, because we are multi-lingual, we need multi-lingual solutions; thirdly, it’s about data; we don’t have data from the ground, but there are technologies evolving, like the AI which can deal with the data gap, processing of data and analytics that can help support entrepreneurship ecosystem in agriculture.”



## PANEL DISCUSSION: SUSTAINABLE AGRICULTURE

**SHRI ANIRBAN GHOSE,**  
TRIF:



The three presentations have laid out the context of various challenges –the first presentation largely talked about the challenges and movement around the more holistic approach; the next two presentations showed the window into a world which is going to come. In the context of the Indian agriculture, there are a very large number of small-holding farmers which is where the problem is. The large-holding farmers having significant numbers of production size are able to connect to supply chain, access larger market, as the Sahyadri Farms has shown the success. But unfortunately, for small-holding farmers this is not going to happen on their own; it has to be triggered from outside, and the technologies, which have been shown here, promise to do things of that kind.

The biggest challenge for the small-holding farmers is the aggregation-disaggregation challenge. Especially for the farmers of the Himalayan region who have small plots of land, small volume of produce, scattered around, where even logistics is a challenge. But there are potential for such emerging technologies that can help farmers aggregate this kind of tasks much better. He stated : “There are already few start-ups, like Cropin, and as the machine learning keeps on evolving and the AI system starts kicking in, we can have efficient system that a large farmer has, with 100 or 1000 small farmers scattered over a geography using the back-end technology. Therefore, in this aggregation-disaggregation challenge, there is a huge space for technologies to come in, and it is combined with an effort of connecting SHGs, farmers’ federations and producers companies, which are human-to-human processes, and layered with technologies, which have been shown in the presentations.”

If investments came through government policies, small-holding farmers could be connected to these emerging technologies, and even with a half or one acre land, they would be able to compete in the market. These investments need to move away from the standard cash grants to Capex investment in emerging technologies. His organization (TRIF) is involved in a large program supported by the World Bank, NRETP (National Rural Economic Transformation Project), which is focusing on agriculture value chain – North East is also one of the focus areas – and in those places, such kind of investment would be necessary that could come into IOT technologies.





## **SHRI KENNETH PALA, GIZ:**

Listening to the presentations, Mr Pala noticed two threads of argument in the conversation – one that looks at agriculture as a production system, while the other focuses on ecological system. Both have some merits. Question to be asked is what should be done. Secondly, in the Himalayan region, including the North Eastern region, there is a lot of talk about value chain, use of IT and new technologies.

However, the enabling conditions are not available uniformly across the region. There are villages which have easy access to the new technologies and market, connected to supply chain, and those villages, which do not have such possibilities, and may fall under the ‘aspirational category’. He said his organization had been working in the last six-seven years with a few agricultural communities, which promise a lot of hope. The case studies show how the youth entrepreneurs in their own ways and means have been using new technologies, as simple as WhatsApp in their smart phones, to share experiences of various economic activities with the fellow farmers. Besides, he also emphasized on the rich biodiversity and the traditional knowledge, which could be vital resource around which entrepreneurship could be built.

He concluded by posing a question - Forest is a great resource of the Himalayan region, but can forest-based livelihood meet the economic aspiration of the youth today and what kind of entrepreneurship can be built around that?



## **DR BRIJ MOHAN SINGH RATHORE, CHIEF POLICY ANALYST, ICIMOD:**

Forest ecosystem and agro-ecosystem are seamlessly inter-twined; it is more evident in the mountain region. For example, those days in Uttarakhand, people used to say that one hectare of agriculture would require four hectares of forest, because of the integral relationship between soil and water. Good example is the Khonoma village in Nagaland; farmers there have been able to do the terrace rice cultivation due to good management of the catchment forest around the village. They maintain the catchment forest overlooking the village that

ensures perennial water supply to the terrace fields for enrichment of the farm lands to continue agriculture in a sustainable manner. This is also a fine example of integrated watershed management, which is critical to upland agriculture. Yes, there are many of these opportunities – in agro-forestry, catchment forest etc. Forest is the foundation of all, multiple products come from the forest, each product can be brought under a value chain and entrepreneurship can be built around it, but more important, perhaps, is the creation of forward and backward linkages, as well as institutional arrangement. Citing Alvin Toffler’s book, chapter 13, ‘Gandhi with Satellite’, Dr. Rathore makes his last point:



“We may have the decentralized production system with Artificial Intelligence; both can be combined in a seamless manner, but for mountains, we have to look at the ecological foundations, and see how it can be nurtured and cared for before we build the value chain.”

Question: related to market linkages, and rural value chain in agriculture in the mountain states. We all know there is so much challenge as well as strength, so what should be done?

### **SHRI ASHISH GUPTA, NASSCOM:**

He opined that the nomenclature, ‘Agriculture’ should be changed. It should be called ‘Agri-tech’, because without technologies, agriculture cannot survive in the near future. In the past five years, there was no start up in this field of agri-tech. Suddenly, the spurt has come up, why? Because of the communication network, data is cheaper and many have smart phones; and now there are more than 450 start ups in agri-tech in India. The main USP of all these start-ups is that 50% of them are tackling the supply chain model, most of them got their funding from the investors. That is the current trend: the supply chain approach. So even for the mountain region, ideally, this approach should be followed. Farmers’ biggest problem is the supply chain and its management, including the post-harvest loss. He advocated breaking the middlemen chain and take the farmers’ products directly to the consumers. That is what is happening in the major metro cities. Let corporate, start-ups and government work together to help farmers develop the supply chain and find solutions. Farmers have smart phones, so provide them Apps which they can download and offer them solutions. Market linkage is one of the solutions. Farmers Producer Organizations (FPOs) are the mainstay of the whole ecosystem.



## **QUESTIONS FROM THE FLOOR**

What are the alternatives for Small farmers in the mountains?  
Haven't heard of High value low volume products for mountains, any example?  
Can we really get rid of middlemen? Or should we, as they play a very important role between farmers and market? We haven't talked much about indigenous knowledge, seed-saving tradition of women

Answers: There are many niche mountain products, which are there, but more needs to be documented. As far as the issue of middlemen is concerned, it cannot be ignored that middlemen play a very important role in the value chain, as they are quite knowledgeable of the supply chain or the markets for agricultural produce. Regarding indigenous knowledge, yes, there is not much documentation of that is available. It is necessary to digitize all kinds of traditional systems related to agriculture, medicinal plants and herbs. In fact, it's more important for the mountain region and mountain enterprise.



Chair: Dr. Lalbiakmawia Ngente, Vice President, IMI

Dr. Lalbiakmawia Ngente defined sustainable energy as a balance between energy security and four components of sustainability, that is, political acceptance, economic development, social equity and environmental protection. He then invited the experts to make their presentations.

## **SHRI ROSHAN MASCARENHAS,** SELCO FOUNDATION



He opened his talk by describing how SELCO Foundation looks at poverty, and how it uses renewable energy as a catalyst to eradicate poverty. Everybody knows what happens when there is extreme poverty and the pressure it has on natural resources, and that is what contributes to poverty. One is natural disaster and extreme weather events and its impact. Secondly, the skewed development, which is often done in a selfish way that affects the poor the most. Thirdly, lack of inclusive policy that may fail to address the need of the poor and eradicate poverty. On top of all this, social conflicts or ethnic strife may also worsen poverty.

Poor have little or no access to energy, which touches all aspects of their life –health, education, livelihood etc. Energy per se may not solve poverty, but can play a vital role in the larger context of poverty alleviation. For example, rural health services cannot be solved by merely installing solar power in a public health centre, just as putting a solar light in a house cannot address children's education of that household. Energy may be a vital enabling component in running a PHC or providing light for children to study and for all other household works. SELCO believes that energy solutions have to be need based and energy planning and utilization must be contextualized. For example, a lantern would be more useful for a nomadic or migrant community than for a settled household, which could think of other options for home lighting. Generally, SELCO advocates solar-based energy options for permanent home-lighting.

SELCO also focuses on innovation at end-user level; innovation has three aspects – social, financial & technical. It's not enough just to provide technology; it has to combine multiple things to provide complete solution to sustainable energy problem- which Chief Minister was also talking about- and, around which entrepreneurship can be developed. For that focus has to be on human resource development and multi-type training in all the three categories (Social entrepreneurs, Bankers, & technicians), through which sustainable energy entrepreneurial ecosystem can be built.



Another key aspect is incubation for last mile clean energy enterprises. In the past four-five years, SELCO has been trying in Assam and Manipur. Incubation could be for multiple things and local solutions. For example, in Manipur there is something called incubation of NGOs or civil society, which can help mobilize the local community for collective action. There are other requirements such as, grants making, investment, equity and policy in financing to implement renewable energy projects holistically. Every solution has to be need based, and assessment at the end user's level is very important. SELCO is trying a few livelihood projects in the northeast region. In Meghalaya, it is working with a church-based organization, Bakdil in Garo Hills and RRTC in Ri-Bhoi area, and looking for more partners to carry forward its solar-energy based livelihood solutions.

**SHRI FAZLE MUZTABA,**  
ENVO RENEWABLE ENERGY SERVICES:

He started his organization in 2012 with just three members in Meghalaya and Assam. One of the things it focused on was basic home lighting, providing solution for people who are at the base of the pyramid. The main objective was financial inclusion and bridging the gap between financial inclusion and government policy.

So, Envo Renewable (ER) along with SELCO foundation tried to bring in financial inclusion. His organization worked in the Ri-bhoi district of Meghalaya, bordering Assam where they didn't have access to banks. They identified 10 to 15 villages of Meghalaya, which were more accessible from Assam than the Ri-Bhoi district headquarters. Initially, ER targeted 50 poor households, created a revolving fund with the support of SELCO Foundation to provide solar-based home lighting facility. Each household has to invest only Rs 10,000 to avail this facility. The households could pay in easy installments through the revolving fund mechanism. Later, as the project gained traction with more household joining the scheme, his organization got the Meghalaya Rural Banks involved in the inclusion model, which are now supporting the home lighting projects.

Besides, ER has also helped set up a community development support project at Mawlynnong in the East Khasi hills district, said to be Asia's cleanest village and one of the most popular tourist destinations in Meghalaya. It studied the tourist footfalls, including the transport and vehicular traffic. It sat down with the local community and worked on a small infrastructure development project that included solar lighting that hugely improved the night life in the villages. In early 2014, tourists would go there and return by evening; there were few accommodations in the village. So, with the CSR funding, Envo has been able to install solar street lights around the village, which not only improved tourist flow, it also helped build more home stay facilities in Mawlynnong. Solar street light facilities were subsequently created in a cluster of 25 to 30 villages around Sohra. Solar installations were put at PHCs of Umkiang, Saipung and Ichamati, while in Arunachal Pradesh 10 PHCs were connected with solar energy.

Envo was also involved in another interesting project on Boat clinics on the river Brahmaputra. Boats were fitted with solar panels that helped address the energy requirements – from lighting the boat to running the basic laboratory services, including vaccine protection, as the boats had to travel to far flung riverine villages even at night. As of now, EV has powered four boats located at Tinsukia, Dibrugarh, Dhemaji, Jorhat, catering to 50,000 population of the riverine island, Majuli.



He said he was happy that the organization could expand its works within the last few years, and bring in more talented people to carry forward the business. The current staff strength of the company is 18 deployed in the states of Assam, Meghalaya and Arunachal Pradesh.

## **SHRI DEVAKISHOR SORAINAM,** MANGAAL SUSTAINABLE SOLUTIONS:



Solar as a technology is fantastic, but unless the service part is not properly taken care of, no solar-based solution will be sustainable. Especially, in the rural areas of Manipur where his organization, Mangaal, works with the marginal communities, people often question the viability of the solar projects and the common refrain is that the technology doesn't work or if something goes wrong, it's very difficult to get it repaired. This gives them the impression that this technology is not good or reliable. It is challenging more in the northeastern region because of the logistics issue. However, the good news is that ecosystem for renewal energy is coming up gradually in this part also. Support system for young entrepreneurs is also developing, and it is a good time for start-ups in this sector. Of course, young entrepreneurs have to be encouraged, trained and supported.

## **SHRI REUBEN GERGAN,**



### LREDA, LADAKH:

Before getting into the risk aspect, Shri Reuben Gergan suggested that the perspective of renewable energy needs to be broadened. Besides solar, there is plethora of other technologies that exist. Let's say eco-hydro project or micro-hydro project-one has to look at different scales of renewable energy. There is what is called utility scale, then there are village level micro-grade or mini-grade scale and at the household level scale, when one talks about access to energy. At all of these levels a host of opportunities are available out there, especially in the mountain states. Now talking about risks, first of all, there may be risk in

terms of whether certain technology is going to work or not in certain areas. That is why resource mapping is fundamental to the type of renewable energy that is proposed to be deployed in a particular area. For example, solar technology will work really great in upper Ladakh because of number of days of sunshine and high insulation, but in other places where there may be less sunshine days and much lower insulation, the same model cannot be implemented. So the choice of renewable energy project must be based on resource mapping on available local resources, hydro power, wind power, biomass etc. So, these are other resources which should also be tapped into. Avenues in these areas are large.



In other words, risks can be minimized by resource mapping, and resource mapping means that experts need to go and carry out micro level planning with villages and in different areas to figure out what sort of resources available, whether it is solar, wind speed, which will go into planning. One of the other things that causes renewable energy to fail is the fact that on the one hand, it is about power production, and on the other, it is about distribution of power. Both have to go hand in hand. Merely production of power without its distribution potential is meaningless and unsustainable. In terms of energy access, the year 2017-18 statistics says, in Arunachal Pradesh, about 34% households are un-electrified, and in Himachal Pradesh it is about 8.8%. So there is much scope for renewable energy to expand in northeastern region.

Another aspect that can minimize risk is to ensure serviceability—operation & maintenance of technologies is the key in this area. For that local youth should be trained, who can address the problem of operation and repair within the village. The challenge is, of course, how to retain that skilled labour in the village, as many of them having gained knowledge and experience in operation and maintenance of certain renewable technology, are likely to move out for better economic prospects in towns and cities. One way is to train people of all ages in villages; elders are likely to stay back.

The first day ended with colourful cultural performances that included songs, music and dances from various mountain communities.

## DAY 2

Chair: Shri P.D. Rai, Councillor, IMI

Co-Chair: Shri Ramesh Negi, Vice President, IMI

Recap of Day 1: Shri P.D. Rai summed up all the sessions of Day 1, including the high-profile inauguration of the Summit, in the following words:

Deliberations started off with the keynote address by Dr Ekalabya Sharma, who presented the major challenges in the Hindu Kush Himalayan Region, including the Indian Himalayan Region, and the major disruptions that are coming there too. He also felt that there are huge potential to use those disruptions innovatively, and for young people to move forward, especially in the field of entrepreneurship.

The Honorable Chief Minister, Shri Conrad K. Sangma actually set the stage. He flagged all the disruptions that are happening through market forces, through changes in the educational landscape, educational processes, and also in climate change. He said for the entrepreneurs this is the great platform from where to take off, because innovation is at the heart of great entrepreneurship. He also asked for solutions, and not to just look for problems or band-aid solutions. He asked for deep thought through entrepreneurial activities for which the government of Meghalaya had taken a lot of initiatives, backing the aspiring entrepreneurs through incentives and plans. That set the state for building the ecosystem which would then serve every Himalayan state. I think this is what the whole topic of discourse is all about, and it was a great start to the state. Dr Mustafa of IHCAP flagged the whole issue of climate risks and how these have to be factored in by all entrepreneurs if they had to succeed, because climate risk is the most important risk element that is upon us.



From GB Pant Dr Joshi talked about the IHR mandate of the Institute and of Government of India, and how they are collaborating with institution like ICIMOD and IMI.

Shri Mihin Dollo from NERCORMP made an excellent presentation of what the project was doing in all these years. And in fact, the kind of ecosystem that NERCORMP has put in place. A case could be made in which NERCORMP's works have to be further examined in order to find the local solutions that they have found. Dr Sanjeeb Kakoty and PhD scholar Aditya of IIM Shillong have presented the collaborative effort between the IMI and IIM Shillong. The assessment of the changing entrepreneurship landscape in the Indian Himalayan Region is a report which is a great reading to understand how things are changing in the IHR due to education, migration, collaboration and market access, and all other issues that we know of and are being talked about in this summit. This report is the harbinger of greater collaborative efforts between IMI and IIM Shillong.

Shri Vilas Shinde's entrepreneurial journey was most exciting because he raised the level of thinking in terms of innovation and the thinking as to how if it is led from the market end right up to the farmers, how the latter can also benefit. If we look at end to end system, there lies the whole success of how actually we can build the ecosystem. Starting off with export of grapes and other horticultural produces he has used this to leverage the domestic market.

The other inspirational story which came from Ms. Priya Shrestha, Shri Roshan Rai and Shri Gurung is the zero waste. Ms. Priya outlined the way youth can participate and get engaged in many of the waste mitigation and recovery opportunity that abound in this particular space. But it needs far more clarity.

Then we moved into the two concurrent sessions: Sustainable Agriculture which was chaired by Shri Alemtemshi Jamir and co-chaired by Shri Ramesh Negi. In this session what came out was the issue of how technology is disrupting positively at one level, and therefore, a case in point is that some of the elite are getting benefitted, while there are others who are not, and how the small and marginal farmers would be able to work on this. So there is a case for large support that is needed in this direction from the government and also from the educational institutions. It was very clear from their presentations that in IHR there is little penetration of technology, especially in the field of AI. A lot of work has to be done on data and crunching that data for finding solutions.

In the other sub-theme, Sustainable energy that was chaired by Dr Lalbiakmawia Ngente, I think it was very clear that this sector which is already getting disrupted in which ecosystems are being built, re-built and re-innovated. So there is plenty of opportunity in this space for entrepreneurs.

Shri Ramesh Negi, Co-Chair introduced the Key Note Speaker Shri Neichute Doulo, Founder and CEO of Entrepreneurs Associates, Nagaland. Shri Doulo has unleashed the power of entrepreneurship in North East India, particularly in his home state, Nagaland. Under his leadership, he has launched 12,000 micro enterprises, supported over 3,000 farmers, trained over 1,200 street vendors and financed thousands of agri-entrepreneurs since inception in the year 2000.





## **SHRI NEICHUTE DOULO:** JOURNEY OF AN ENTREPRENEUR

He lauded IMI for taking up entrepreneurship for youth as the key theme of the Summit, because entrepreneurship is one issue which he had been working for over the last two decades.

In the northeastern part of the country, especially in the hilly tribal areas, people hardly talk about markets, industries or capital. Everyone is thinking only about getting IAS, IPS, IFS, IRS, though there is nothing wrong about it.

According to him, entrepreneurship is actually looked down upon in this part of the region. And that explains why the northeast region remains still under developed. In spite of the successive governments having pumped in so much of money, in spite of region's excellent literacy rate, and in spite of youth of this region knowing an international language, that is English, for some reasons North Eastern India has been defined as a landlocked region, and for some reason, people here think that nothing can grow in this region or nothing much can happen here. And this definition for the last 60-70 years, since independence, has seeped deep down in the psyche of the North Eastern youth. Today the youth think they have to get out of northeast to get their livelihoods and work somewhere in Mumbai, Delhi, Kolkata, Bengaluru, or if possible in Dubai. Therefore, it is difficult to get an audience in this region to be lectured on entrepreneurship. Unless the North Eastern youth begin to understand the importance of entrepreneurship, it will be very difficult to steer the region where it should be.

The North Eastern region was, and still is, the gate way to Asia. Since 2004, India has been talking about 'Look-East policy', and after the new government came in 2014, its name changed to 'Act East' policy. Unfortunately, now when people meet at 'Niti Aayog', they jokingly describe it as 'talk east' policy, because they are going on talking 'East, east, east! But really nothing much is happening.

That is why, he said, when he was asked to talk about entrepreneurship he felt quite inadequate about it, because, he is more known as a social entrepreneur and less an entrepreneur. But because entrepreneurship is looked down upon in the place where he comes from, Nagaland, he has a business at hand. Shri Duolo then veered towards his personal journey to narrate how he struggled to become an entrepreneur and reach where he is now.

He believed that if they were to change the paradigm of Nagaland, the only sure thing would be to do business. "Today, down the years, I realized that Nagaland as well as the North East, which has 98% of its territories as international borders, is not a land-locked region; it is a land-linked region and will be good for business. With this perspective in 1992 when we decided to challenge the status quo I was just 19 years then. So, in Kohima, we announced that we would set up a group called 'Beacon of Hope' to sell newspapers, become porters – just to challenge the status quo that we can survive on our own without government job or getting any contract works from the government.



In those days, if one was a matriculate or class X pass, Nagas would cut a pig to celebrate, because any one who could pass metric that would ensure him to get a contract job. We decided to try different things, despite our parents not approving it. At the age of 19, I was the first who started selling ice cream in Kohima, and subsequently motivated young boys and girls in small businesses, as newspaper vendors, hotel waiter/waitress, selling candles, household items, bulbs, curtains etc, and within 10 years, we could set up what is well known now as Entrepreneurs Associates (EA), to train and motivate young people to do business. We mentor them, offer some start-up funds.”

Thus, over the years, EA could motivate over 15,000 young people in Nagaland and Manipur to get into businesses which would help them gain self-confidence. Of course, that does not mean that if one took up a government job, he or she wouldn't have self-confidence. But entrepreneurship is not easy, though. The irony is that it is very difficult to get funding for a new venture, but if one asked for micro finance for poverty alleviation projects, there were funds available. If somebody wanted to launch an enterprise to make money, to make it successful, the micro finance world didn't understand that language. It was easy to get Rs 5,000 loan for agarbatti making or something like that many banks were ready to fund, but not for a start-up. So, in 2001, he and his team decided to go for crowd funding; they went door to door in people's homes, urging them to invest Rs 1000 for one year with 8% returns. After a lot of efforts, they could mobilize some few lakhs, and with that launched the micro-finance project, the Entrepreneurs Associates.

Today, EA has robust partnership with banks, including its own NBFC, and has a supporting staff of 96 people. It is now fully into promoting entrepreneurship not only in Nagaland, but also across the North Eastern region.

Unless the North Eastern youth get into entrepreneurship in a big way, the region cannot develop. Nothing can be done much with the doles from Delhi. This dependence on Delhi has to change, and the North Eastern states must focus on entrepreneurship and become revenue generating states.

Shri Duolo said innovation and determination were central to a successful entrepreneurship, and EA continues to focus on that. Currently, they have launched a program called, 'Trees for wealth', which encourages people to plant fruit trees on their land. The pilot for this program started way back in 2006. The company planted 10,000 fruit trees and would now like to scale it up. For that EA intends to work with 10,000 farmers and plant at least two/three million fruit trees, including some exotic fruit trees, which are doing well. It has already adopted two villages in Kohima and Phek district. If they succeed in what they had planned, by the year 2027, they hoped to earn a whopping amount of Rs 5,500 crore for 10,000 farmers. And by 2040, they expect to plant 100 million fruit trees by involving farming households and villages, and in that scale, they would be hoping to create a thriving Rs 50,000 crore economy for the whole of Nagaland.

He exhorted young people to think differently because North East has the biggest opportunity that one can find in agro-business. Finally, they also must learn to save to invest. A lot of people make a mistake by saving to spend. But if people save to invest and plough back the profit interest, it will make a big difference in their financial health.

Shri P.D. Rai thanked Shri Neichute Duolo for triggering a 'great start' for the day by sharing his life story and successful entrepreneurial journey. Following the keynote address, deliberations broke into two simultaneous concurrent sessions - Sustainable Agri-Business and Sustainable Tourism.



# SUSTAINABLE AGRI-BUSINESS

Chair: Anirban Ghosh, TRIF

Co Chair: Amba Jamir, IMI

Shri Anirban Ghosh began by saying that he hopes the session on Agri-business will enlighten the way forward for small farmers to thrive and grow with the range of initiatives, networks and technologies now available where farmers can have access to finance and markets which they never dreamt of. He said besides the initiatives being made by civil society, there is keen interest from the Government itself which has brought out a host of new policies and engagement to support farmers. In fact, this year's budget talks of supporting the rapid growth of farmer - producer companies. He pointed to the major projects focusing on agriculture value chains giving the example of the World Bank funded National Rural Eco Transformation Project (NRETP), where large number of SHG women are involved. Another is the NRLM where 6 crore women are part of it. Similarly a lot of activities from other areas in developing technologies such as the one presented from NASCOM earlier. There has been a spurt of activities around start-up space. The task of this is to focus on how to bring this whole discourse to this region, how such entrepreneurial activity around agri-business could help solve the unique challenges of the farmers especially the small farmers in northeast region and the whole Himalayan region.



Shri Amba Jamir, Co-Chair introduced the panelists and requested them to make their presentations.



## SHRI KRISHNA ROUTELA, ASIAN DEVELOPMENT BANK:



Nothing is more important than land and agriculture in the mountains. Agri-business is a whole value chain that starts with farmer and ends with consumers - some call it farm to food. But there's a whole lot of industry around it. On the farmers' side, the agri-inputs, equipment, machinery, finance, lot of utilities, then the value chain which goes across to the consumer: Processors, middle men, cold storage, wholesalers, logistics and then retailers, which makes the last mile connection with the consumers. One third of the world GDP is actually in agri-business including all this. This is not a small sector. There are multinational companies which are very big: Monsanto, Big basket, Grofers, possibilities are there not only in agri-business but in allied sectors.

Sustainability means social, environmental and economic. Water scarcity was a worldwide problem, but in the mountains, water is both a non-issue and also the biggest issue. The impact of climate change is evident everywhere. In India, most of the farmers are small and marginal. Rural out-migration is a big issue. In the context of agriculture whether farming remains a sustainable sector or not, the challenge is how to double the farmers' income, making it attractive and profit making, especially to today's youth as a profession - not just farming but farming business.

Sustainability in terms of SDGs, at least five SDGs can be linked with sustainable agribusiness, starting with no poverty (SDG 1), zero hunger (SDG 2), Life below water (SDG 14), life on land (SDG 15), etc. When there are achievements in any of these, this will contribute to sustainable agriculture. The last of these is partnerships (SDG 17). Partnerships are required and desired to make agri-business sustainable. People do agriculture where there is irrigation and abandon the land in the absence of water.

Key is irrigation in the mountains for sustainable agriculture. Geographical location is an issue. Bringing water to the field, fragmented and reduced land holdings are issues. The cost is too high to bring water to the small holdings and the cost-benefit ratio discourages the government and others, as it is not economically viable. In the remote uplands of the North East, where shifting cultivation, or jhum, is the principal mode of food production, turning this system into agri-business is more challenging, even as there are trends, especially among youth, to move away from the traditional farming practice, and try out more remunerative integrative agro-forestry livelihoods. Moreover, there are other factors that come in the way such as, lack of access to finance, poor access to market, low CD ratio. Finance and access to market is the key to agri-business. Without that nobody can do business. One can do agriculture but not business. Agri-business is a far off dream without these inputs.

Then there are animal-human conflicts. In Himachal Pradesh, many farmers are leaving farming due to monkey menace, while in some other places, there is problem of stray cattle and free grazing. People from the plains often leave their cattle in the foothills and those start grazing up the hills getting into farmlands and destroying crops or plantation.

Who will address these issues? Solutions will not be easy. Farmers have to ensure that their low level land holdings will not impact their agri-business capabilities; maybe they



should try to form FPOs, by coming together and aggregating their holding, and then go for agri-business. Such efforts are being made to develop small holdings into agri-business possibilities. State and Center need to look into the policies related to inputs, agri-infrastructure, finance etc, to make agri-business viable.



**MS. ELIZABETH YAMBEM,**  
DWELLER TEA:

She makes tea out of naturally grown fruits and herbs. Despite having no prior experience in food processing, she came back from London dragged back by childhood memories of a certain medicinal drink she was often given by her parents in Manipur and wanting to create a viable product out of it. In 2016 as she landed back in

Manipur she found an array of herbal plants to work with.

She soon made a deal with local women trading in these plants and started to try to manufacture tea with various combinations of these herbs and plants. One of the main ingredients came from a very common plant used as a traditional medicine, called Nongmaithang. She informed that her idea of creating various kinds of tea or health drinks has a strong plank of sustainability as the product is based on all local products which help to create sustainable livelihood both for herself and her co-workers. As it was a new product she had to create a new market with a new avatar of local produces.

She said that entrepreneurship meant running around to get papers in place, get the materials, and keep a close watch on the quality of her product. She studied the market as the main ingredient for successful entrepreneurship. Some of the problems she faced were that the samples she gave out were not the same as the bulk consignment. Maintaining quality was the main challenge. She launched in 2017 June as Dweller Tea which is made up of 10 different products. She has set up an Experience Centre of Dweller Tea, where her range of tea and snacks are served in warm ambience. She said that the response was encouraging and, is now looking forward to expanding it in two other places. She emphasized how important it is to have a mentor. It is also important to stay mentally strong and focused. Mentoring and support is what she needs at the moment. She said she is being supported under a GIZ programe called, 'Her and Now' program. Her main issue now is to create awareness of her product and get people to buy her products.



**SHRI SIDDHARTH SHARMA,**  
START-UP GRIND:

Shri Siddharth Sharma focused on the need to bring in modern food processing, storing and packaging technologies in India where food wastage is a huge problem. He said that while the hunger index is high, billions of rupees worth of food go to waste in India. All this is not due to scarcity of food but rather lack of storage and processing facilities of the surplus. This is where the technologies of dehydration of food

can be brought into place. Dry food is easily packed and stored and easy to transport. This system should be ideal for the mountain region. This can be a model. The problem



of low productivity in the hills, where land is highly fragmented, can be tackled through the new technologies and farmers services which have come up as new start-ups. These start-ups engage with farmers on a community model. He said that they take a portion of the farmers land and provide all the inputs, investment and technology and take a part of the percentage of the profits. This has increased farmers income by 30% in many places.

Among the new technologies that are promising for mountain farmers is the automated market platform. These are based on Innovation Information Technology (IIT) where cameras do the job of weighing products e.g. apples in a farm far away by a buyer through IIT and payment is done online. The market prices can be viewed anywhere on the net. Automated Communication Technology (ACT) can provide many services. It is futuristic but this type of markets will happen in the next 10 to 15 years, he said.

On distribution, which he called the “profitable part of agri-business”, he lamented that neither the farmer nor the consumer gain anything. He proposed that this situation could be overcome if local graduates could get involved in agri-business and this can only be done if the bottlenecks of lack of markets and finance, lack of linkages and lack of experimentation facilities are cleared.

However, agriculture and agri-business cannot flourish in the hills because even the rudimentary infrastructure such as, soil testing facilities are absent. For example, he pointed out that the Himalayan states of Arunachal Pradesh, Himachal, Assam, Manipur, Mizoram, and Meghalaya, Tripura and Sikkim, all together, had about 200 soil testing facilities, whereas Maharashtra alone has 536 and Andhra Pradesh has 955.

On availability of finance and credit, he said while the current ‘blanket’ funding schemes have to be replaced by “specific funding based on geographies for specific products, because blanket funding schemes do not work, as the departments are unable to utilize their funds efficiently. He suggested that there should be a system of rewards and punishment for departments, such as departments which are not able to use their funds should be penalized, while those using their funds efficiently should be incentivized. He said the lack of internal infrastructure was so acute that the logistics of transporting goods within the region was more difficult than transporting them from Guwahati to places outside of the northeast. Horticulture is more suitable for this region, he recommended.

The Chair then opened the discussions to the panel by asking them to ponder over the question as to how they see the scope of upstream entrepreneurial activities.



**SHRI DHRUPAD CHOUDHURY,**  
ICIMOD:

There are a lot of opportunities. But some challenges which have been overlooked by governments have to be corrected. One of these is the urgent requirement to create a scale of entrepreneurs so that there could be specific support and engagement created on their behalf at each level. There is the entrepreneur at the village level who works on their own understanding of markets and their needs. He cited the example of hill farmers of Ukhrul district in Manipur, who grow flat beans which is in heavy demand in the plains of Imphal valley. Within this,



he pointed out, village entrepreneurs have developed around wholesale buying of the vegetable to transport them to the market which has brought up a whole chain of activities. This activity had been done by single elderly women as well as by Self Help Groups (SHGs) hiring trucks to take their goods to the market. Official recognition of these as entrepreneurship could go a long way in getting them better support.

Even as mountains are a different situation where finance and budget sheet would be very different from the plains, where volume is impossible to have due to limited arable land, land fragmentation, slopes, and fragility, he felt that these age-old problems themselves offer the opportunity for importing technologies to solve or manage these issues. To overcome the lack of volume, IT can be used to create that aggregation. Secondly, production can be improvised by application of technology for improvement of water shed management through artificial intelligence (AI). He gave the example that in the hills what is needed is to have moisture retention in the soil rather than water flow. There are opportunities for new enterprises coming in here.

The third point he raised is that credit to farmers based solely on land collateral needs to change to other forms of guarantees as mountain farmers have very small land holdings which are not bankable as collateral. He wanted policy changes to allow guarantees through SHGs and Federation of farmers in the mountains, a system which is already there in the plains. He suggested that this Summit can push for this. He pointed out that due to distance and remoteness, costs, procurement cost is much higher in the mountains and this has to be brought down or the volume brought up to make business sense.

He ended with the thought that that while there is an immense need for investments from outside to come in and invest in these areas, the instruments that are there to safeguard the local customs, the institutions and the people such as the Inner Line Permit (ILP) system, and the other restrictions discourages investments from outside. Internally there is no capital for that, and it is only people from outside who can bring in those funds from the country or internationally. There has to be ways to look into this he said.



**SHRI MANISH SHANKAR,**  
INTELLECAP:

He started off with the reality that the problems outlined are all related to life in the mountains and that these are the very challenges that need to be overcome through innovative ideas and solutions. That the best way is to get into products which offer high margin, while pointing to the example of the universal market available for tea which could be sectorized as organic tea from the mountains for the higher premium to cover the high costs.

Secondly, he said that there is a need to avoid the tendency to neglect the things that are in abundance. Bamboo, for example, which offers a huge opportunity for entrepreneurs, is used carelessly and wastefully. He said while using bamboo for making agarbatti in a unit he had worked with, the waste from this was used for making multiple products, thus spreading the raw material cost over all the products and improving the margins. The overall bamboo waste was converted into briquettes to be used in boilers while it helped in lowering the carbon footprint, bringing in the circularity which is the need of the hour.



Thirdly, his suggestion was that the volume can be increased through aggregation which can be achieved by creating institutions like farm - producer companies etc which can basically aggregate to create that volume and sell higher in the value chain for better margins.



**SHRI SRINIVAS RAMANUJAM, COO, VILLIGRO:**

He emphasized the need for serious market research. To beat the problems of the mountains he said there should be concentration on high value goods. There is an opportunity for IMI to be the champion here. He suggested that the IMI has to get involved in the process to create markets, highlight the opportunities available here. These could be in any field, he said alluding to the earlier discussions on food technologies such as fermentation which is done all over the hills, or on honey etc. He said that there is a “canopy of wealth” offering vast

opportunities here but one which needs to be documented and mapped.

He said the plethora of “grant based models” to fund infrastructure need to be flipped around to make it “Outcome based funding.” It becomes an incentive to succeed. On mental health of people who set out on the course of entrepreneurship which he called a “brave and lonely journey” he felt there needs to be more focus on counseling them and guiding them which he said can be fronted by the IMI or NEC. He also suggested that branding of sorts needed to be done, either as states or as northeastern mountains and wanted the IMI to explore the possibility for the states to create a brand which stands for something, like the rain forest alliance. A brand which is also a social enterprise could create more legitimacy and one with which people want to connect with. “Someone can spark this off” he said.

Shri Amba Jamir, Co-Chair, while calling for comments, remarked that Mountain agriculture is basically family farming on small land holdings, producing food, not so much for the market. Across the world 70% of food is produced by small farmers and not the big farms. The question is how to ensure the gaps of income disparity between them.

Ethics and values define the environmental context of agri-business, he said. Who defines the markets? Rather than searching for markets outside it is the local markets which is the main generator of income, he said.

**Comments by Shri STS Lepcha:**

There is a need to strengthen shifting cultivation rather than abandoning it as it has evolved for thousands of years and it is best for the mountains. There is a need for micro action research and micro action research incubation centers where knowledge of jhum can be shared.

**Comments by Shri P D Rai:**

All incubation centers for entrepreneurs are in academic centers, which mostly talk of particularly tech areas, but have nothing to offer on fundamentals like value chains, aggregation, market linkages etc. He said now the time has come for government to create new policies on how to support agri-business by revisiting the massive network of existing KVICs and realigning its role towards creating and supporting value chains



rather than focusing on production alone.

**Comments by Ms. Dolly Kikon:**

She called on the Summit for ecological consciousness and remember that the pursuit of development and profit should be tempered with awareness of the other creatures that are co-inhabitants of the world. She said that it was important to look at the political ecology of the region to come up with strong policy initiatives suitable for the mountain and its people. She also suggested that 'fair trade' needs to be the focal character of businesses in the Himalayan mountains to prevent exploitation of people and nature. As ICIMOD is one of the partners and has a big focus on gender, she felt that this aspect should not be forgotten. Food systems in the hills are unique such as fermentation and these could be the basis of new enterprises as proven in the case of Nagaland where people have revisited this traditional method to start family and village based income generating activities to tide them over. There was minimum government in all this, as wine, pickles etc are made in every house using local fruits and plants.

**Comments by Ms Bharati Ramola:**

She agreed that brand and positioning is important and that it is essential to create value with precision products to get the market.

To a question specifically for Shri Srinivas Ramanujam from the audience by a participant, who wanted to know how an entrepreneur from the mountains seeking funds for his organization could make a pitch to receive a favorable reception, he replied that "it's the story that sells" and that every brand which is successful has a story that caught people's imagination, taking the buyer from the product to the experience.

**Comments by Shri Jeevanandhan Duraisamy:**

He shared from experience that there was no support system for start-ups like his which were technology oriented. He said new policies are needed to deal with the issues of start-ups like his which offer latest technology solutions to farmers. Unless the Government and big project funders realize this, bringing technology to farmers will remain a dream. He had created a portfolio of 500 apps. What he found was that big projects with large funds, multi-billion dollar projects did not have even an iota of scope for start-ups which wanted to take technology to the farmers. No one was willing to invest in farmers. Rather all the models being propagated around are again about how much money can be made from the farmer not to propagate technology to the farmers. This is even in the plains. He said that India does not have a single incubator that is equipped to deal with the issues a farmer faces in a holistic manner as all are working in silos. He said that he had 5 patents, but had to go to China to produce as it was not possible in India. Even in the North East based big projects, there is no scope for start-ups. Unless these big projects take these start-ups into their fold and use them the process of introducing technology on the ground will be very difficult. Besides, the government staff themselves need to be up-to-date on the technology available. The incubators have also not provided any support. The Chair surmised that these points were important and that the potential of using existing institutions needed to be retooled. He then called for closing comments and specific policy recommendations from the panelists.

**Comments from Shri Dhrupad Choudhury:**

In his concluding remarks, he stated that mountain agriculture and rain-fed agriculture needs to take centre-stage in all agricultural universities and research institutions, recognition of local products of herbs and vegetables by making specific policy changes to promote these unique items and traditional food technologies such as fermentation, for natural dyes and weaving traditional knowledge, top link them all and take it a step



further for much higher production. In each step of the value chain there are opportunities for bringing in new technologies, he said. He also talked of linking IT with risk reduction in the mountain context with insurance for climate change adaptation in small holding. And this is where youngsters need to come in to see whether there are solutions which can come using IT and other approaches, he said pointing out that these need to come into the integration. He concurred that existing KVICs needed to be retooled. He also suggested that successful entrepreneurs/farmers should be recognized by incubation centers and see who could be linked up with existing organizations like NERCORMP, etc to facilitate that change which is required. The Government's role should be one of facilitators.

## COMMENTS BY THE OTHER PANELISTS:

(i) The mountain regions do have their success stories such as Darjeeling Tea or the apple industry of Himachal Pradesh which offer the lessons for learning. The sector needs new young farmers to come in and they can only be given a lift by creating new incubation centers to cater to their needs. He called for entrepreneur led incubation centers rather than a government led incubation centre.

(ii) Being an entrepreneur is not a smooth ride and it is only mentoring that has helped her through her journey.

(iii) Branding of products with stories that sell would be an ideal process for culturally rich North East which is a gold mine of stories.

The Chairman finally brought the session to a close with the proposal that there be a listing of all the unique products and unique stories, state wise, which could be a starting point for the incubation cells.



# S U S T A I N A B L E T O U R I S M

Session Chair: Shri Ramesh Negi, Vice President, IMI

Co-Chair: Shri Rigzin Spalbar, Founding Member, IMI

The key speakers were: Shri Hari Nair, Holiday IQ; Shri Benjamin Chisi, EA Homestay and, Shri Neikedolie Heikha. Eco Tourism Panelists were: Shri Himangshu Barua, Finder bridge; Shri R P Gurung, ECOSS; Shri Rigzin Wangmo Lachic, Dolkhar and, Shri Rothel Khongsit, Village Development & Promotion Tourism Cooperative Society.

Shri Ramesh Negi, Chair, introduced the theme by saying that as far as Tourism is concerned, though nature has given the mountains disabilities of remoteness, it has compensated by premiere bounty in the form of good environment and tremendous tourism potential. It all depends on how people use it while maintaining the environment, but there are challenges galore. The challenge for those already in the business is how to enhance their stake through the use of technology and networking, while generally the other challenge is how to promote entrepreneurship in the tourism sector.

Alluding to the discussions in the previous sessions, he underlined the need to make entrepreneurship such an attractive proposition that the youth who put a premium on white collar jobs change their mindset. Tourism is catching up as a livelihood and the youth are getting inclined towards it. But how does a beginner begin, and requested the panelists as to how to go about facilitating the youth who are inclined towards it, where to get investment, where are the policy gaps, what does Sustainable Tourism mean, vis a vis the issues of resource base, the environmental impact, water, transportation, carrying capacity of towns and tourist destinations, and sometimes conflict, which is emerging out of these activities with local communities, how to maintain a balance on resource utilization by the industry vis a vis resource available for the community, like use of water.

## **SHRI HARI NAIR, HOLIDAY IQ:**



Tourism is a growing industry and the only thing required to make it sustainable is good management, he said. There is a need to define and differentiate between tourism and people travelling for other reasons such as solely for religious purposes. He said that there is no such thing as too much tourism. The main points to address are: what is the objective when a place decides to have a lot of tourism. Tourism often starts as an individual business when one notices many travelers visiting a place for a number of reasons, which create demands for various services such as, home stay, eateries, taxis etc, and new business possibilities. But why does a place want tourism? What is the measure of a tourist spot? He stated that it is a



fallacy to rate a spot by the number of visitors a place gets. Rather it is the employment generation capacity of tourism which should be the measuring tape of successful and sustainable tourism. According to him, tourism entrepreneurship is the perfect choice for the mountain states because tourism as an industry has the potential to be the single biggest employment creator- dollar for dollar. Other sectors cannot provide large scale employment.

Globally, Employment generation per dollar in the manufacturing sector is going down. Also, technology is taking over most of the jobs in manufacturing. It cannot run on automation. It needs the human touch. Mountain states are not conducive anyway to manufacturing on a large scale, as there are land issues. So employment generation is the key for income or supplemental income. If these were the objectives to measure then the big problem now is to identify as to who is responsible to make tourism related employment and income. He said it is not the government. The lead has to be taken by an organization, an institutional agency that largely takes the tourism industry together and becomes the owner and plans how to create more employment and income from this, he said. Governments cannot do everything, neither it is desirable. Taking the scarcity of water in Shimla as an example, he said that the problem is not because of tourism but because of poor management of the resource, which is a nationwide and global phenomenon. Secondly, it is necessary to define the tourism product of a place and, this can be culled from travelers' feedback and reviews about the places they have visited on the internet, which has become a part of tourism lore. He said from these reviews one gets to know that they look for four of five factors which are more important than what facilities are on offer. And these are cool weather, greenery, clean air and water, place for walking, and a slower pace of life from the city where they come from. How many destinations measure or know where they stand on these issues, he asked.

Focus on tourists and ensuring that your product delivers what they want is how sustainability can be maintained.

Chair's remarks: A tool should be developed to map out what the states have based on the criteria outlined by the speaker. It is important to note that as most investments in tourism focus mostly on transport and infrastructure.

### **SHRI BENJAMIN CHISHI,**

ENTREPRENEURS ASSOCIATES (EA):

He introduced EA as an organization started in the year 2000 that works to build sustainable livelihoods in Nagaland. It has launched successfully 15,000 first generation entrepreneurs, mentors a large number in Nagaland and Manipur. Through its hybrid model having an NGO wing, a finance wing and a finance company and two social enterprises for livestock products and agricultural products EA strives to create a sustainable environment for entrepreneurship. Over 5,000 farmers have been impacted along with 1500+ SHGs, 1,500 women street vendors. They focus on training in entrepreneurial skills, setting up enterprises, while mentoring entrepreneurs, assisting in credit linkages and micro finance, giving entrepreneurs the initial push towards a career in business.



He said in partnership with Wander Nagaland, a tour and travel agency operated by locals they have launched a one stop shop online booking platform called Naga Home stay to connect the home stay owners and the traveler. Home stays in Nagaland have over the years played a key role in accommodating tourists during peak periods. As the budding tourism industry grows so does the home stay sector making the product market fit with Nagaland's position as destination for authentic people-centric, cultural experiences. However, due to the unorganized and fragmented nature of the home stay industry in Nagaland and the market still being unfamiliar with the concept of commercializing homes for tourists, the online market based accommodation are experiencing problems. He said their aim is to tell people that home stay is an enterprise that can bring owners additional income. He felt that this is an age of travelers and millennial who prefer experiential travel options and home stays allow them to experience and immerse themselves in local culture.

Home stays enable locals to become micro entrepreneurs, by capitalizing infrastructure that already exists. This allows local home owners to find income opportunities in rural areas and new destinations with minimal investments. It can nurture local communities, and make women in particular financially independent. Owned and operated by Nagas, Naga Home Stay (NHS) offers a trusted local brand, is supported and mentored by a council of Naga elders to maintain the authenticity of Naga culture. NHS also engages a network of entrepreneurs in different fields - weavers, farmers, designers, artists, tour operators, bakers and chefs etc, in curating various experiences for tourists thereby promoting them and their work. He said that they work under the wings of the Village Councils, to ensure that tourism activity especially in rural areas is transparent and well documented and hoped that through meetings and advocacy sessions they would help aggregate the fragmented industry into one platform.

He said that the EA stresses on the ABCs of entrepreneurship which began its incubation space by giving training and mentorship to students, aspiring entrepreneurs, dropouts, women, street vendors etc. It also is in talks with several organizations to make available the legitimate certifications and audits to ensure quality, he said.

He said they are in the first phase of the project and identifying the problems and solutions with home stay entrepreneurs. They believe with time the quality and revenue will improve significantly as they go ahead with "aggressively mentoring and training hosts to improve their services and management of the home stays. The organization is also encouraging the boards and the village councils to work towards developing their villages as desirable destinations to attract tourists, while regulating activities that may damage the pristine condition of the place. From year 5 onwards, they are confident that these home stays will emerge as successful community enterprises with a wholesome sustainable system generating employment for a range of people.

He said the EA is also the implementing agency for the Start-up Village Entrepreneurship Program under the Ministry of Rural Development, which helped to start several enterprises and local facilities. He said sustainable tourism requires the partnership of all stakeholders of which the Government continues to play an important role in engaging the community, setting up tourism boards at the village level having both male and female representatives for quality control, accountability and security especially in the North Eastern region to assure guests of their safety. He hoped that this project will help in the building up of micro entrepreneurship and generate a range of opportunities for the youth which will help build the village economy. With the start of mini Hornbill across the state throughout the year, the inflow of tourists is slated to increase in the coming years.



## **SHRI NEIKEDOLIE HEIKHA,** KHONOMA EXPERIENCE:

He stated that his association with the IMI since 2013 helped him on his journey as an entrepreneur seeking sustainable livelihoods in the mountains. His “sustainability journey” started on sustainable eco-tourism destinations, entrepreneurship and youth leadership. His experience with a pilot project funded by the Tata Trust group was the first community-based tourism destination in Nagaland with the main objective of weaning away people from jhum cultivation to eco-tourism as an alternative livelihood at Jalukie, in Peren district. It was a successful project.

He identified three important aspects to be taken into consideration before setting up any community-based eco-tourism enterprise: (i) the host’s point of view (ii) identifying Eco-tourism challenges, and (iii) initiatives for sustainable destination. As in his case, he started his work with the community in creating awareness through talks, meetings and exposure trips with the help of IMI network.

He said people are happy to do eco-tourism and that it is flourishing. They have set up an Eco-Tourism Board as a voluntary organization to oversee the tourism activities. It has a secretary and chairman in each village where the members and leaders are elected by the village folk. They have divided responsibilities to oversee activities such as trekking, birding, animal sighting of barking deer and serow, which are found in their forests. He said that it is very rare to see animals in Nagaland but these can be sighted in Jalukie area, attributing this to the eco tourism ethos of the village. He said they have settled upon a way of sharing the revenue among the community by ensuring that the services offered to tourists is distributed among the households in the village whereby they all earn some income. For example there are five home stays in Jalukie, where the visitors lodge but, the food is arranged by others who do not have home stays. Besides, the village authorities have ensured that the visitors are rotated among the home stay facilities. Guides are required to contribute 10 percent of their earnings to the community. Local tourism has also grown with visitors streaming in from Kohima to see the community conserved forests and for camping.

His other achievement was in setting up a hotel in Khonoma, where there was none, under a partnership. He also set up a tea shop where there was none for the tourists. Because of his leadership at Khonoma, he was chosen as the chairman of the Village Eco-tourism Committee in 2018.

Sustainability to him means getting the community, particularly the numerous young drop-outs involved in the project. Some of them are trained as skilled masons and carpenters, while some others are trained in the cultural dance and songs of the tribe, which are dying and disappearing, to become part of the cultural troupes of the village as well as become part of the efforts in village tourism activities. These activities have attracted many people, including VVIPs to the village, which have given the village folk opportunities to interact with visitors. Among the high-profile visitors were many chefs including Master Chef Kapoor who was taught to make local food here, he said. They also established a farmers club and encouraged weaving. Guests are mostly from South India and Bengal, he said.

He said that though all cultural items are dying even in his village, as these items are no longer in regular use as the village is undergoing a process of transition from rural to a city life style. But the people have learnt to make souvenirs out of these cultural items and given them a new lease of life as well as earning an income from that. He



said that the 'Khonoma baskets' are in high demand all over and people are willing to pay fabulous amounts for them. Many basket makers have earned enough to see their children through education outside the state. Promotion of local cuisine has extended the prosperity to farmers who grow the local vegetables and plants, thus in turn helping to preserve the local indigenous varieties which would otherwise have died out.

He also said that they had successfully formed a tour operators' forum and a taxi drivers' forum. They recorded 7,000 tourists since Dec 2018 till date with an average of 15 to 20 tourists visiting daily, he said.

**Remarks from the Chair:** The presentation was inspiring and excellent, and lauded Heikha for creating a great tourism product. He said the Jalukie method of revenue sharing among the community was a model that could be emulated in other places and that by involving the village drop-outs into the project, Heikha has taken a very big and bold step towards solving a universal problem of youth who otherwise are easily pulled into the path of criminal life, or into drugs and alcohol. He said the whole project has the quality of sustainability by helping to preserve culture, food, crafts, folklore, music and tribal artifacts.

There is so much to learn from the north east for the rest of the country from the presentations.

Panel Discussions commenced thereafter. Shri Rigzin Spalbar, Co-Chair threw open the discussion by asking the panel to deliberate on the main constraints in tourism.

### **Shri Hari Nair:**

He said that the main constrain was that successful sustainable tourism models are not celebrated, emphasizing the need for a national narrative of success stories in which these local models could be celebrated. He urged the IMI to take up this issue by organizing a regular program in which they could get people to talk about three or four projects in tourism that is doing transformative work to get the narrative going. This is the way to get things going on what is going on. For example, in Nagaland's case, the story of Heikha itself could promote it as a tourist destination.

### **Shri RP Gurung:**

He stated that the lack of security and an absence of conducive environment remains the major constraint in making Tourism a priority for people. A survey done five years back found that people hold tourism very low in the list of priorities in the north east region. Incidents that happen even in a far corner of one of the states of the region affects the security atmosphere in the whole region as north east is taken as one unit. Tourists start cancelling bookings even in far off places. It is important to create awareness about the region to avoid this.

He said that the fact that tourism is low in the priority of policy makers is what holds back the potential of this sector. This should change. There is total lack of infrastructure and facilities. There are states like Tripura where there is not even a decent place for visitors to have tea he said. There might be good and attractive spots but connectivity and quality of roads is a big issue. He said there needs to be overall improvement in these for tourism to make sense as a livelihood for the masses.



### **Ms. Rigzin Wangmo Lachic:**

She said that the locals should never lose their moorings and leave their heritage for new things. One of the constraints is lack of pride in traditional practice, such as traditional dry compost toilets. In Scotland even the high-end camps have traditional dry compost toilets.

Shri Rigzin Spalbar, Co-Chair asked the panelists to comment on the question of sustainability of mass tourism which has spoilt the mountains enroute to the Himalayan peaks. While countries like Bhutan have set up systems to regulate tourist flow in the country, in a democratic country like ours it is difficult to put restrictions. How do we protect the mountains then, he asked the panel.

### **Shri Rothel Khongsit:**

People want to come to places where there is nature and culture. He has made it a point to promote his village and neighborhood based solely on the available natural spots.

Lack of awareness about his state and the region among the fellow Indians was what galvanized him into tourism, leading him to become tourism promoter and a creator of a web-based platform where people could access all information on the North East destinations in one place. He said that while studying in Pondicherry he and his friends from the region were constantly taken for Chinese by the locals revealing total ignorance of the region. He realized that the people there were travelling all over the world but would not visit places in their own country. After a rudimentary survey he found out that the motivation to visit was there but there was utter lack of information about the region in one place. There is lack of information on the internet and whatever is there, it is scattered and not available in one place. That is when he started to make a website with everything in one place.

### **Ms. Rigzin Wangmo Lachic:**

She said that tourism can help the economy of villages, and can tackle village problems of livelihood, including migration. It promotes culture, artisans and traditions. She spoke about an initiative she had started to preserve and promote the local handloom and handicrafts of Ladakh. It is not only about selling the crafts but preserving their lifestyle surrounding the craft and making the practice sustainable as a livelihood.

Shri Rigzin Spalbar, Co-Chair wanted to know how the issue of safeguarding the mountains and respecting the carrying capacity of the mountains while pursuing tourism as a livelihood can be tackled.

### **Shri R P Gurung:**

He said diversification is the key to having sustainable tourism. The idea is to divert tourists towards other destinations in the rural areas rather than having them converge to a few places. He said in many well-known tourist spots, natural springs are drying out and the urgent need is to conserve them. In mountains the only source of water is springs; earlier, when the population was low the springs were safe. A cap has to be put on the number of tourists allowed in an area, he said, emphasizing on the concept of



high value tourism. He suggested that this is a matter to be taken up by the Government and local committees who together have to agree to do something about this as many places are under threat.

### **Shri Himangshu Baruah:**

He felt that to make tourism sustainable and make it a viable option for livelihood, one needs to get highly qualified people outside of tourism to invest their intelligence, time and money into tourism. People like bankers, big entrepreneurs, technocrats and others who have already proven themselves in other fields should be asked to step into the sector as they have a big role to play in making tourism grow.

### **Shri RothelKhongsit:**

He said that the key is to get everyone in the community involved in making tourism a source of livelihood. Every place has a unique selling point which has to be focused on and safeguarded. In his village of Kongthong one unique fact was that the traditional practice of naming persons by use of musical tunes rather than names. He said that people in Khongthong village call each other by humming a tune, each one having their own distinct tune. Based on these USPs he said he formed a Cooperative Society to promote tourism in 2013.

The Chair wanted to know what is meant by “sustainable tourism.” Does it include social, economic, ecological sustainability? In the context of climate change and climate crisis will this sector remain sustainable? Nepal, for example, is one of the mountain nations that has been impacted most by climate change, so what is this sector going to do about climate change and how is it going to contribute to the world?

### **Shri R P Gurung:**

This is a very difficult question to answer. Main issue is how to reduce carbon impact of vehicles and find better use of clean, alternative energy. He said the definition of sustainability is forever and if a project lasts for just 10 or 20 years it cannot be considered sustainable. Giving the example of Ladakh, he said, a 70,000 km<sup>2</sup> mountain landscape with a population less than 3 lakhs gets more than 5 lakh tourists. They are facing the crisis. There are global tourist spots where lakhs of visitors are handled in a small area annually. But the Himalaya is too fragile to handle this and therefore the focus should be on quality and not quantity. He said the benefits should percolate to all levels of society. Every place in the Himalayan region will have to assess and make its own decisions.

A participant from Arunachal Pradesh said that tourist spots should use locally available material such as bamboo for building and promote “Sustainable architecture,’ within Sustainable tourism. He said the Government of Arunachal Pradesh has notified that all home stays should be made of bamboo in line with the traditional style of architecture. This should become a guideline for all states, if sustainability is to be maintained, he said.

**Ms Rigzin Wangmo** said that climate change has had a big impact while using local materials and therefore it is important to look at the current context while advocating for traditional practices.

Another participant opined that promoters of sustainable tourism should be aware of their own tendency to neglect their role in creating waste, giving the example of the



Nagaland home stay project she visited where she found that plastic water bottles in every room , which went against the tenets of sustainable tourism. Another issue was how to sensitize responsible travelers.

## **Shri Heikha:**

He said Khonoma has been declared an ethnic village and that most tourists are locals from Kohima.

Another participant talked of a of the Government scheme in Meghalaya through which home stay owners can access Rs. 6.5 lakhs. In this the owner has a margin of Rs 50,000, Rs 1.5 from bank, Rs 4.5 lakhs as cash incentive from government. This same kind of incentive can be introduced to shift the home stays to solar heaters, zero waste etc. as sustainable path.

The Chair asked the panelists to say more on policy issues.

Panelists comments :

(i)The concept of sustainable tourism needs to be defined so that all are working with a framework and guideline which the service providers and the tourists are aware of. Hosts should understand their role while tourists should be made into responsible tourists. Once it is defined the strategy and the policy will emerge. These policies will have a holistic view of economic, social, environmental aspects of the region and diversity of situations will have to be taken into account. One size fits all cannot be the way. All these policies will have to be brought in sync with the other government policies. And to make the policy work a system of rewards and penalties will have to be set in place after defining the fundamental principles of Sustainable tourism.

(ii)It is wise to learn from other mountain regions about dealing with Climate Change and sustainability issues. He pointed to Winter sports in Switzerland which is endangered due to less snow now and warmer temperature. But now they have installed artificial snow makers. He called it a way of adaptation. They also use fleece blankets to insulate the snow from the sun. The Swiss had in fact come to Ladakh to learn how to conserve snow and was testing the technology.

(iii) The issue of what not to do in pursuit of tourism must be learnt from Sikkim, a front runner in tourism. Sikkim has made a lot of mistakes. Thoughtless pursuit of tourism has erased the entire natural beauty of the prime tourist spots of North Sikkim - Lachen and lachung - by haphazardly building huge concrete multi-storied buildings as hotels and lodging with concrete and tiled compounds. These types of buildings are not comfortable for tourists to stay in. But now they cannot change it. Instead of preserving the landscape they built a mini Gangtok up there. She hoped that the budding tourism in Nagaland would learn from Sikkim. "When I see Khonoma, I'm happy, but I'm scared to think what will happen in future, please learn lessons from others experiences," she said. And she underlined that these decisions as to which way their tourism goes has to be decided right now. "Do the right thing. Don't follow the wrong steps. Start by doing the right thing. We need to learn from Sikkim's mistakes" she emphasized.

(iv) The New Draft tourism Policy has categorically stated that local materials are to be used, including locally-grown food and other items. But what NOT to use is not mentioned. He agreed that Sikkim experience has a lot to teach. They have separate Eco Tourism policy and Tourism policy. The need is to define the parameters of sustainable tourism



which all the organizations with IMI could work on and give an annual assessment of performances of different destinations.

(v) Tourism has single largest potential of being the provider of employment. One aspect of sustainable tourism catering to the issue of employment is to create new destinations. He pointed out that out of the 600 odd districts in India, only 25 districts have vigorous tourism activities. Less than 10% of India has any kind of tourism happening. 20 places in India gets 75% of all tourist foot falls. Creating new destinations will create huge employment even if only 50 new destinations are worked on.

(vi) The tag that north east has of being a bio-diversity hotspot is a brand that can be used to develop destinations. He called for incorporating ideas of sustainable tourism through experiential tourism. Expeditions taking students to villages to expose them to values of sustainability and thus spread the word through tourism.

The Co-Chair added that Sikkim has set up a system of training village guides, birding, trekking guides but there is a need to standardize this. As for the answer to the question about what actually are the points that attract tourists from the rest of India to the mountains, he said that the answer to that is that it is the indigenous culture, traditional ways and the lifestyles that draw them to the region, besides the natural beauty of the mountains.

The Chair in his final remark said the discussion has highlighted the need for a policy on pro- mountain constructions and architecture keeping it simple minus the frills. For example there is no need of a bathtub in Sikkim mountains. The fact is European tourists are accepting traditional toilets in Sikkim. The advice is that the tourists should be given the experience without being extravagant. It would be appropriate for the Government of India to look into setting up a policy to take up the issue of architecture using local materials and hill technology to be used for the hills, while ceasing to promote marble and granite which have to be transported long distance.

Chairman thanked all.



# SYNTHESIZING TO PROMOTE LIVELIHOODS AND ENTREPRENEURSHIP FOR YOUTH

Chair: Shri P D Rai, Councillor, IMI

Co-chair: Shri Ramesh Negi, Vice President, IMI

Co-chair: Dr. Lalbiakmawia Ngente, Vice President, IMI

Shri P.D. Rai called the meeting to order with the remarks that the discussions since yesterday and today in the Agri-business were very powerful with lots of suggestions. Similarly Shri Ramesh Negi who had chaired the session on Sustainable Tourism had told him he was buoyed by the discussions in that session. Now we are here to bring all those discussions together in line with the aims of this conclave.



He called on the rapporteurs to present their reports of the different sessions. The comments and interactions however would have to be curtailed due to time constraints.

**Shri Ajera** presented the report of the session on Sustainable Energy, which had been chaired by Dr Lalbiakmawia Ngente:

The main points were:

Engaging youth in livelihood and entrepreneurship based on the study by IRENA 2017. It is expected that by 2030, one fourth of the country's energy demand can be met by renewable energy generating over a million jobs in solar energy and 1.80 Lakhs in wind energy.

By 2020 we expect more skills training in this particular field. The estimate of entrepreneurship in Solar at district level will have value creation of Rs 325 crores and about 15 to 20 lakhs people at district, block and cluster levels can be employed with Rs 20 lakhs to 50 lakhs annual turnover and, at village level 100 associates with a turnover or income of Rs 50,000 to one lakh per annum.



Top actions for key educational institutions were:

Skill training institutes with special training models in renewable energy e.g. training for electricians, short-term electrical trainings, selection of people in terms of age to give training to people of older generation, because older people are likely to stay back at that particular area. This is in order to retain the knowledge.

Top three actions for the government agencies or the funders are:

(i) End users should have access to low cost and tailored finance, moving incentives from products supply purchase to end users consumption.

(ii) Policy stability - the sudden withdrawal of subsidies, disturb entrepreneurs who want to invest.

(iii) Lastly, the extended responsibility policy is required for panel and battery manufacturing.

Top actions for Industry:

Encourage innovative models for different use cases, designs according to the profile needs of the users, incubation and finance support to energy entrepreneurs, train and support grassroots organizations in order to reach the last mile users, voluntary extend responsibilities for product manufacturers,

Top actions for civil society:

All national and state organizations should advocate for the above actions with education institutions, government and industry. Grassroots organizations to engage with energy entrepreneurs to use cases and customize finance needs.

Solar energy may not be best for north east due to heavy rain and clouds as compared to other high altitude states like Ladakh. So, the need is to use other forms of renewal energy such as water, wind and biomass.

**Ms Abanda Wahlang** presented the report of the session on Sustainable Agriculture: The session was interactive, informative and inspiring. Potential of agri-tech is great. It has raised over \$2.6 million in the last 5 years, which is an impressive and promising figure. Start-ups have raised over \$5 million to bring artificial intelligence and robotics.

Some of the actions for the main key players are -

(i) Educational institutions are vital for creating an ecosystem for entrepreneurship. Examples in Indian Himalayan region of CoEs are what IIT Guwahati and GB Pant institute spoke about mapping the emerging technologies to improve farm productivity and value chain in the IHR.

(ii) Prioritize value chains and also the establishment of funding programs in integrating existing data. Gaps are there in combining all the data in agri-tech and hence the need for collecting, integrating and standardization of data in order to create models, and prioritize value chains so that they are accessible to the end users like the farmers, especially the small farmers.

(iii) Importance of policies to support investment in artificial intelligence and machine learning, policies are integral in implementing AI in agriculture sector. In Meghalaya there is no agriculture policy though government is working on it. Without having a policy it will be challenging for introducing these agri-techs and AI in the sector.



(iv) Need for incentives and frameworks at the national level to encourage participation in the high value low volume products

Actions for Industry:

There should be collaboration from Industry with the other institutions like educational institutions and government agencies in developing a specialized value chain, expanding production, creating and supporting grassroots and entrepreneur ecosystems.

More research and development is needed on niche mountain produces to develop value chain.

Actions for civil society:

There should be emphasis on crowd sourcing for traditional and mountain specific knowledge for prioritizing value chains and community platforms and looking at a holistic approach, market linkages and village seed banks etc. Questions and comments veered around hope for more information on how to get low volume high value chain for the mountain regions, how agri-tech and AI would influence women and their traditional knowledge base and the traditional working systems, their community based knowledge management, integration of middlemen as the session found the role of middlemen quite integral and instead of eliminating them from the equation, they should be integrated as the middlemen have most of the knowledge of the supply chain and the feasibility in agriculture production. It was also mentioned that the biggest problem in agriculture is the lack of documentation of crowd source knowledge and there was a suggestion that collecting and digitizing traditional knowledge is very important. Focusing on the roots of the community in the hill states and mountain regions is of great importance as it should become a priority to integrate traditional knowledge with agri-tech or artificial intelligence so that we can see more perspectives in this region as it is seen in other regions in India.

**Shri James** presented the report of the session on Sustainable Tourism:

The discussions were deep and elaborate. The main points were:

(i) the discussion centered around the definition of sustainable tourism, tourism products, renewable energy, government policy on sustainable tourism and employment opportunities.

(ii) Tourism has the single largest potential for job creation, and hence engagement of youth in livelihood and entrepreneurial activities is high. Globally for every dollar invested in manufacturing sector 30 job opportunities are created which is far higher in Tourism. There are 600 districts out of which 25 to 30 districts are with tourism infrastructure. 20% of these places received 75% of tourist foot falls. These figures have great implication for the potential of tourism to act as a catalyst for job creation and raising the local economies.

(iii) Priority action for creating an entrepreneurship ecosystem calls for different agencies like the educational institutions, planning schools to include sustainable architectural ideas and practices on tourism modules, standardization of sustainable practices.

(iv) Government agencies and funders need to relook at ecotourism policies and incorporate participation of local communities, appreciation and highlight local success stories, policies of integrating renewable energy and other sectors into eco-tourism policies.



Actions for the industry:

The industries sector was called upon to re-think tourism products from sustainable point of view. Moving away from mass tourism to sustainable experiential tourism, focus on high value low impact tourism, culture as a part of tourism, and focus on local traditional lifestyle, unique culture, practices, which make up experiential travelling, all of this linking with the renewable energy sector.

Action for civil society:

There is need of advocacy for realistic context based sustainable, participatory policies. North east is a biodiversity hotspot and developing this into a sustainable tourism, instilling ideas of sustainable tourism into travelers experiences as part of the experiential tourism, and providing an overall conducive environment, as well as capacity building, infrastructure and security.

**Ms. Alino Sumi's** report of the session on Sustainable Agri-business:

The session focused on key agriculture inputs which are seeds, machinery, technology etc. Commodities could be raw or processed, but for developing agri-business, facilitative services such as, insurance, credit, marketing, storage, packing, transportation, marketing, distribution, etc would be necessary.

There are many challenges in India – on the one hand, there are food shortages, and on the other, food wastages. This could be solved by effective agri-businesses, providing a huge opportunity for the youth to promote their livelihood and their entrepreneurship. It was mentioned that Rs.900 crore was put into venture funding sector.

Priority action for creating an entrepreneurial eco-system includes-

(i) Educational institutions i.e, CoEs need to identify niche mountain products state-wise, e.g medicinal plants, aromatic plants, flowers, fruits, etc and the government agency should come up with policies like incentivizing niche mountain products, over-arching branding for each state for marketing endemic products, and policies to support capex investments in AI and machine learning.

(ii) Strengthen and re-invent existing institutions like KVICs.

(iv) Incentivize big players to engage in agri-business of premium mountain products.

Actions for the industry:

The industry sector can play a big role in providing guidance and mentorship to entrepreneurs in IHR on value addition, improved designs, quality marketing strategies, and also research and development on how tech and value chains can be tailored for mountains.

Actions for civil society:

Civil society must encourage start-ups based on community model, which can be done by aggregating low volume high value products, and preserving traditional practices in micro-incubation centers where this knowledge can be shared with entrepreneurs for prioritized value chain; promote organic farming so as to produce for higher price, which will also allow mountain products to sell better; premium endemic products should be considered vital, for which more research should be taken up.

The Chair lauded the wonderful and succinct presentations of the thematic sessions. He then asked Dr. Lalbiakmawia Ngente, Co-Chair, to make his presentation, integrating the Sustainable Energy and Agri-business sessions.



Dr. Ngente said what had clearly come out of the two sessions on Sustainable Energy and Agri business was the need for resource mapping and knowledge sharing on the best practices and on relevant data across the region. In discussions both the sessions highlighted the enormous opportunities that exist for creation of jobs for youth, to raise the economy, raise the GDP and living standard.

But in order to come to that stage in both the sectors there is an urgent need for skills trainings, capacity building, strengthening research and development on these subjects. The need for creating easy access to low-cost finance tailored to the need of end users is urgent. He also highlighted the need for a product specific policy. Some of the policy gaps need to be looked into more seriously and have to involve the legislators and parliamentarians in order to take the issues forward.

Prioritizing of investable mountain products without going for all the products available has to be done especially in agri-business. The best products have to be verified and taken forward. He said that the recommendations put forward by the rapporteurs will have a meaningful impact on the youth. He was happy that a large number of young people were present in this Summit. He hoped that many present in the summit, would go back to their villages and start new ventures for the betterment of fellow citizens.

Shri Ramesh Negi, Co-Chair summed up the discussions on the themes of Sustainable Agriculture and Sustainable Tourism:

He said that from the previous discussions of the Summit he found that there exists a capacity and a digital divide between the marginal farmers and the small farmers and the others who are capable of having an access to the technology, credit or innovation. He said the successful model of Sahyadri which was presented here had shown that there is a need for area based approach and something new could be thought on similar lines, there are many Government based Krishi Vigyan Kendras and many other extension services but they are not going to be adequate or accurate. Their data related to testing etc, are wanting, so the way forward is rather to work through autonomous institutions and organizations at the local level, district level, block level through organizations which are professional like Sahyadri. The Nagaland experience in Tourism that was presented here shows how an autonomous professional organization coming out of the community can be the drivers of entrepreneurship as they have a big stake in it. The whole community can be charged, motivated and changed. He said Government interventions tend to be sporadic and inadequate.

He also said there is a need for a shift in what is being produced in the Himalayan region. There is also a need to consider a shift in what is being produced in the context of market, human resource and technology. There is need to think of a fresh product/area mapping. The role of the middlemen as aggregator needs to go into the system with better monitoring and sensitizing or developing alternative models.

On tourism he said there were excellent speakers and panelists which resulted in clarity over “what is a tourism product” and that every place may have a generic tourism product or a niche item which needed to be mapped.

He said the data put forward by a panelist, Shri Hari Nair, that hardly 40 or 50 districts in India have tourist destinations is very revealing and it is a sure indication that of the huge scope it presents for developing new destinations or greenfield destinations where all the considerations of technology, sustainability design parameters could be invested and do things in a better manner. In this effort governments could be asked to provide



support for connectivity, infrastructure etc.

He said the presentations also highlighted that community based tourism are possible only when it is a community initiative. Having a very big hotel by itself might not be very useful. Two experiences that Meghalaya and Nagaland presented were encouraging and showed that being inclusive leads to the project being able to engage the vulnerable sections of the community, like the school drop-outs who can be a challenge from the law and order point of view and solve local unemployment. Linking these elements with the community customs, local crafts, local cuisine, local folklore and culture offers the experiential tourism that is sought after.

He was impressed by the Meghalaya and Nagaland projects. These two projects have shown the great work that is possible here. He suggested that there needs to be further discussions based on the session of Sustainable Tourism to develop a policy framework which can be jointly developed for tourism by taking into account all the points raised here. These can go as suggestions to all the states in the Himalayan region asking them to incorporate them into their existing policies. He was also encouraged to know that Arunachal Pradesh had already set in place a building code for tourism where they defined that only local architecture based homes could register as home stays which is the biggest issue. The Chairperson reserved his comments and fast forwarded to the next session that was on building entrepreneurship in the Indian Himalaya states. He asked the IMI State Chapters and participants to reflect on what the State Governments, state based educational institutions, and the civil society could do to promote an entrepreneurial ecosystem.

## ON BUILDING ENTREPRENEURSHIP ECOSYSTEM

Chair: Shri Sushil Ramola; President, IMI

Co-Chair: Shri Gaigongdin Panmei, Financial Advisor, NEC

Shri Sushil Ramola introduced the key speaker, Shri Srinivas Ramanujam, Head, Villgro Innovation Foundation, and the panelists Shri B. Paul Muktieh, NEDFi, Shri Anirban Ghose, Transform Rural India Foundation, Shri Amba Jamir, Development Consultant, and IMI member, Shri Hari Nair, Founder CEO, Holiday IQ.

Shri Ramola outlined the objectives of this session saying that we need to think together about how to build a sustainable development ecosystem for the mountain regions, which will lead to holistic development and an inclusive society. He said the only way for this to happen is through sustainable businesses. This session will bring in all the previous discussions which talked about the elements of an ecosystem and try to move forward to see how that ecosystem could actually be created. So what could be the priorities to create that ecosystem? He said the talks had underlined the huge potential in the Himalayan region. What he was looking at was to create 100,000 entrepreneurs. This is not impossible to do going by the population of the Himalayan states which is about 5 crores. If every family has one person who is looking for work outside of the normal ones, it meant that there was a bank of at least one crore (if a family is taken as



a unit of 5 members) persons to tap. And out of this, around 10% are the youth which means there is a potential of 10 lakh persons who could become the entrepreneurs that the Summit is looking for.

He said one could easily create a vision for getting one lakh individuals enrolled as entrepreneurs in the next 10 years, while helping to create the necessary enabling environment for them to become successful entrepreneurs. And what it does for the IHR in terms of sustainable employment potential is really big. On an average there'll be many who will be the Sahyadris and they would have a turnover of 800 crores and they would employ 1,000 people. There'll be some who will employ one or two. So, on an average if one unit employs 10, there is a potential job creation for 10 lakh people. And if each earns an average of 3 lakhs a year, what is created is employment worth Rs. 30,000 crores in the next 10 years and there after every year, he said. Then on the income side if an average potential of Rs one crore per entrepreneur is taken one is looking at an economy of One lakh hundred thousand crores per annum with these one lakh entrepreneurs. It's a humungous number potential and it is achievable going by all the discussions on the potentialities of agriculture, value added agriculture, medicinal plants, aromatic plants, floriculture, horticulture, tourism, alternative energy, waste, digital technologies etc.

"So, the challenge we want this panel and the conclave to dwell on is that this is the vision, this is the dream and we want to create an income potential of 100,000 crores through these ten areas," he highlighted. He asked the panelists to envisage a situation where each state picks up three areas from these, so the question here is how to move towards achieving that target. Can this summit start by creating a blueprint for that to happen? He asked the panelists to focus on that. He felt that all can happen through the elements of "policy interventions, investment and funding sources, skilling and support for entrepreneurship, access to knowledge, research, community involvement and preserving traditional knowledge and so on, creating market linkages and creating institutions which can be self-sustaining."

This is the kind of challenge that the IHR needs to start thinking about. This panel then must try to assimilate all the learning from the previous sessions and take forward the issues, he said asking key presenter, Shri Srinivas Ramanujam talk about his experience, while heading the Villgro Innovations Foundation, an incubator of entrepreneurs.

Shri Srinivas Ramanujam, while speaking of his 20 years' experience as head of Villgro in supporting and incubating social enterprises, said he would focus on two companies, Biosense and Promethean Power Systems, whose work he found inspirational and which could offer some lessons as one looks at building entrepreneurship in the hills.

Biosense was started by Dr. Abhishek Sen, a doctor, who, while doing his stint in rural Maharashtra, had found rampant cases of anemia. The routine treatment of giving iron tablets to pregnant women was followed but the doctor found that the problem was that the women would take the tablets but not ingest them. But Dr Abhishek quit his job and wrote his JEE and got into IIT Bombay and then, along with three others, got down to building this product, a device which could be plugged into a phone to scan for anemia in any patient. With this device they had been working with primary health centers, anganwadi worker. They found 2 million anemic women from scanning 4 million. Villgro has been associated with Biosense almost seven years and are now scaling up and going into multiple products.



The other company, Promethean Power Systems, which, also may have a lot of relevance to the North East and Himalayan region's markets is an entrepreneurship venture started by a PhD student who invented and patented a thermal battery which could be used in a mobile unit to chill milk even when there is no electricity. It can be loaded to the truck to chill milk and transport it without getting spoilt. He said it was a crude prototype when Villgro came into the scene. Villgro helped him to get connected to Hatsun Agro, India's largest dairy products company which tested the device, liked it and asked them to scale up. They also got investors and they are going ahead. He said they have something essential for the community.

He spoke of two other companies from Northeast region, one called Tamul Plates based in Barpeta, Assam making disposable plates from areca nut waste and another in Siliguri called, Organics, promoting native rice.

"Why does Villgro believe in social enterprise model? We believe that if we want to create lasting impact it has got to be something different, innovative and in a way that changes the behavior of the community adopting it in such a way that the community wants it, are willing to value it, pay for it, which makes the entire idea sustainable and the idea could also get scaled up," he said.

He quoted a British Council study which revealed that there were a number of social enterprises in this country and a significant number of them, work with the disadvantaged and underserved communities. He said he felt that Villgro has a huge role in galvanizing and helping this ecosystem thrive and help the social entrepreneurs build their models which are sustainable. His company aimed to inspire, mentor, give a little bit of money in the early stages of innovation for profit enterprises. He also said that they are section 8, FCRA compliant, because most of Villgro's funding comes from abroad.

He said Villgro chose to limit its focus on Agriculture, health care, education and skill development and work with enterprises which are in pilot stage and ready to scale and have a few paying customers. After the initial handholding they hand over the enterprise to the competent people to scale up. In the last 19 years they worked with 276 enterprises, 200 of which were grassroots micro-entrepreneurs. Out of giving Rs. 57crores they've been able to leverage Rs.180crores.

He said Villgro believes in four things in galvanizing the space for entrepreneurs. Firstly, they need a platform, which can discover ideas and new enterprises and for this they created a platform called IPitch where entrepreneurs are asked to send in their ideas. This was open to other funders who want to find enterprises they can support. This is followed up by a convention where funders, banks, entrepreneurs and business companies can interact. Secondly, Villgro also has a small venture capital fund to help enterprises raise some more money after the handholding is done. But even as these grassroots support is being extended, the efforts have to be made to ensure that the other parts of the structure are working such as, the general infrastructure. Thirdly, mentoring is considered one of the most important links for a successful handholding process. Villgro goes to the extent of paying its mentors who will ensure that the enterprise gets the best advice and benefit from the network of the mentor. Likewise, on the knowledge inputs, he said that it reaches out on behalf of the entrepreneur to the technical institutions to help them build their capability. Lastly, Villgro's own networks are used to build partnerships for the budding entrepreneurs instead of starting one from scratch. Shri Srinivas felt that all this ensures a clear pathway to sustainability. He said right from the stage of the IPitch they try to figure out whether the company concept is really good, visit the field, incubate them, monitor, and exit after about 36 months. For Villgro success is when a funder sees



value in the enterprise they have backed and decides to invest in it.

Villgro also has what he called a Diagnostic Panel, which breaks down the journey of an entrepreneur with them into 100 day sections to enable analysis of the problems and issues an enterprise may face in its course. An expert view is taken to solve problems and advice. This has been very helpful and guided enterprises towards success.

He also said they had used the knowledge garnered here to set up a Villgro in Kenya. In India the program is funded by UK-based DFID with 5 million pounds over five years out of which they built the capability of incubators in four places namely, the IITs in Kanpur and Calcutta and focused on building capability in the low income states in the plains. They helped at least 150 businesses. DFID is looking to continue with phase II. We need to multiply this and will try to create more Villgros, he ended.

The Chairman lauded the insightful presentation as a primary builder of ecosystem through incubation, acceleration, and being not only a friend, philosopher, guide, and financier but also acting as a mentor to provide all the support to the budding entrepreneur. He said that the question now is how to make a large number of Villgros because these are needed to create the ecosystem required to taking up the challenge of creating 100,000 entrepreneurs in the next decade.

He introduced Shri B. Paul Muktieh, Chairman and CEO of North East Development Finance Institute (NEDFi), who studied at IIM, Ahmedabad, and has 30 years experience in development banking, holding various capacities and pronounced him the right person to answer questions in terms of how to create a financing and support platform for entrepreneurs.

Shri Muktieh said as a person working for a development banking institute he found that improving the 'Ease of Doing Business' (EDB) indicator is the main factor for improving the ecosystem. He pointed out that entrepreneurs still have to struggle to get clearances, get businesses and land registered, etc. This is a huge stumbling block for entrepreneurs and discourages them. He said as far as the EDB is concerned the North Eastern states rank at bottom, with the exception of Assam. Even though Meghalaya has declared a Single Window clearance system, it is only a screening process after which entrepreneurs have to forget the clearances.

The second thing required is to bridge the gap between academia and industry and work more closely. Incubation centers have to be improved to be able to handle all issues for entrepreneurs as these are central to creating a good ecosystem for entrepreneurship. But these do not have any good mentors and even in the IITs or the Bio-tech Park, good mentors are not available. He said that experts need to be brought in to these incubation centers as mentors for helping young entrepreneurs because those who are in start-up today need a lot of help in terms of management, connection to the funds, getting connect to the market and access to seed money which incubation centers have to give.

Thirdly, society should be able to accept more risk taking, and accept failures and be ready to give entrepreneurs more chances. He alluded to a study on skill-gap requirement in the NE as well as to an aspiration study where it was found that in all the states about 97% to 98% of the parents, teachers, students, still look for government jobs as their top preference. "Even us bankers we do not give them a second chance," he said.

The chairman called on the next panelist to talk on how and where do we find entrepreneurs? After all is said and done how to find these people and how to get them



in sufficient numbers and of the right attitude, he asked both Shri Anirban Ghosh and Shri Amba Jamir.

**SHRI ANIRBAN GHOSH,**  
TRANSFORM RURAL INDIA FOUNDATION (TRIF):

There are various paths that bring people into entrepreneurship and there are different levels of entrepreneurship from the nano (village) level to the big ventures, which require different kinds of support. He said there is a third category, made up of people having education, travelled quite a distance in the last 10-15 years, large number of graduates and post-graduates in districts and towns from middle class families, many of their parents being traders or in government jobs whom he called the F2 generation of the trading communities of these blocks, districts and towns. They are not interested in their father's businesses but are looking for smart businesses, with a business mind-set, having access to capital, but have very little support in terms of ideas, and the kind of incubation support Villgro talked about.

To have entrepreneurship in large numbers as envisaged, there is a need for Villgro-like incubation centers to take these up in a step by step process. He said TRIF and Syngenta have together brought out a playbook for creating nano-entrepreneurs in the Agri-entrepreneur space. They are focusing on fixing the broken supply chain around agriculture, both on the input and output end. Along with Tata Trust a dedicated organization called, the Agro Entrepreneurs Growth Foundation (AEGF) has been created to focus on expanding the Agro-entrepreneurs across the country. This has the target of promoting 1,00,000 agro-entrepreneurs over the next seven years. He said the signing of memoranda with the National Rural Livelihood Mission, State SRLMs has begun, while they are now working with communities on the ground to identify potential entrepreneurs. These then go through a very structured training process, both technical skills in agriculture and business, entrepreneurial motivation and business development effort. Besides this, they are offered a small seed capital to start the business, followed by a nine-month handholding support.

"It is a very structured program. The success rate is more than 60-70%," he said. He talked about the second category and the initiative he was involved with in which they are attempting to get mass rural entrepreneurship in the blocks, towns and districts. He said people are showing interest by visiting the centers. While most of the factors such as process of ideation, creating the business plan, etc have been cracked, they are finding it difficult to get business finance to these because the finance requirements are quite large and these are individual people. Getting the MUDRAS to work is very difficult, he said.

The third segment is the entrepreneurship which is largely being done across the country and said that organizations like Villgro can help set up such incubation hubs in specific places across Himalayan area. He suggested that they could work with IIM Shillong where there is already a center which could be structured into a very efficiently functioning entity with the kind of experience Villgro has.

**SHRI AMBA JAMIR:**  
FOUNDING MEMBER, IMI

He made a pitch for recognizing the social capital existing in the mountain societies, which gives people a chance to experiment but does not condemn failure. He said that





mountain farmers are new to modern entrepreneurship and that the skills of being an entrepreneur have not been inculcated in them from a very young age.

He felt that entrepreneurship has to be taught at a very young age so that it is inculcated in them. He made a differentiation between 'enterprising' and 'entrepreneurship' which are two very different things, pointing out that mountain people are enterprising but do not have the skills for entrepreneurship and this is where some support and training is required. They are enterprising in the sense that they are ready to do anything for a cause, ready to do anything for

the community. Young people go around selling things for the cause of the community, getting more resources than anybody else in a short time, but there is no business planning in terms of how they are doing it.

That is where we have to identify who are the bridge-builders who can leverage and capacitate these young people," he said. In Nagaland, there is the Village Development Board, where there is a component for youth to get loans from the village community. However in the absence of ecosystem for entrepreneurship the youth do not get handholding, guidance and skills to make use of this money with proper business plans he said. The enablers like the financial institutions also need training to engage with the entrepreneurs and show them the right way. He said rural entrepreneurs need to be engaged in a different way from the urban based ones. To be an entrepreneur from the mountains with a mountain product is a challenging thing.

It is this difficulty that is driving young people out of the communities to other states. "They are no longer engaging in the traditional land use and management, they are no longer engaging with the resources in the villages and the aspirations have changed and if we are talking about entrepreneurship hoping they will make money out of the resources that is there in the communities, we need to re-ensure that connect is revitalized so that they have a stake and interest in them as people who are managing the resources themselves and not only as people who will exploit or facilitate the exploitation of the resources," he said.

So, it is not only the financial capital that is important but the strong social capital that the community has needs to be figured into the calculations of what a good ecosystem should offer, he said. It is this whole issue of social capital which is so strong and which really facilitates young people to go out and do things, take risks, and come back and start again. Unlike the banks where there is no second chance.

The Chairman thanked Shri Amba Jamir and Shri Anirban Ghosh for bringing in new thoughts into the discussions for building ecosystem for entrepreneurship. These are the concepts of 'nano entrepreneurship' and 'social capital' to engage with the communities. Gathering the threads of the discussions so far, Shri Sushil Ramola, Chairman, lamented that though the youth have the aspirations to do well, they are not equipped to plan. The normal education they undergo does not prepare them for any kind of profession or even a job, leave alone starting out on an entrepreneurship. Most struggle for government jobs.

They are then caught between the hunt for the government job and the farming which their parents do which they do not want. The idea is to get these people interested,



enroll them, build their capabilities, handhold them and support them. He asked Dr Abhijeet to think about what are the few things that an institute like IIE could do to build the entrepreneurial ecosystem for this category of people. He reiterated the challenge he had set to hold a vision of creating one lakh entrepreneurs in the next 10 years and how this can be done by creating opportunities in the mountain regions in Agriculture, E-agriculture, technology-oriented precision farming in various areas, eco-tourism, sustainable tourism, alternative energy, waste, etc. “With this challenge how can we as panelists here, handle these different elements and put them together.”

He then introduced Dr. Abhijeet Sarma, director of Indian Institute of Entrepreneurship, Guwahati, who has worked in micro finance, rural livelihoods, and, has been associated with many institutions..

### **DR. ABHIJEET SARMA:**



The Jan Dhan Yojana, a Government of India scheme for improvement of livelihood opportunities and help tribal people in entrepreneurship based on forest resources and traditional knowledge was inaugurated that very day, he said as a pointer to the steps being taken at the Government level to set the structure for entrepreneurship to grow. This scheme is under the Tribal Cooperative Marketing Development Federation of India (TRIFED). From here it will be launched in other states of the region.

Secondly, he said a new element of entrepreneurship has appeared in the North East in the shape of a growing number of ‘youth with fairly good competencies’ who want to start their own ventures. This group is seen in Assam, Nagaland, Mizoram, Meghalaya, adding that the group had great potential because they are scalable. But for this element to really become a force, the interventions required are very different from anything that has been discussed so far in this conclave, he said seeking the cooperation of all in this effort. The first incubation centre to deal with this new group of entrepreneurs is being started he said.

In the mountain economies, particularly at the grassroots, aggregation is the key for any livelihood venture to really go forward, he said. He pointed out that without building the social capital and institutional strengths it would be difficult for the entrepreneurs to go ahead on their own. While northeast has a very vibrant social capital functioning, institutions like cooperatives are totally defunct. He said that this is ‘so ironic.’ He however felt that with new mechanisms in place like producers companies etc. they provide the connect and thereby the much needed aggregation in this area where most of the livelihoods are so dispersed. What is needed is thus to make institutional mechanisms such as FPOs or FPCs viable through a strong rating mechanism. Banks will only come in through a rating system, he pointed out.

He narrated a discussion he had with the Samruddhi Finance representatives working on value chain and said that they are looking at:

- 1) whether there is a viable institutional mechanism to do this and the need to do this strongly leveraging on the social capital.
- 2) need for a very strong level of mentorship linking. For example, there is an organization in Pune, whose sole work is to connect the entrepreneurs to the ecosystem of service providers which help the entrepreneurs to grow. He said that the region lacks these specialized service providers. In this region even the small job like getting a municipal



license, or how to do a GST filing, is a bothersome process. This specialized ecosystem which can serve their needs can help the entrepreneurs to grow.

3)The market connect- he said the technology is there but the entrepreneurs need handholding which means that mid-level players who are working in market end and which can do the connecting need to be identified. Only when these major loopholes are plugged will the entrepreneurs go forward and reduce the risk element which Shri Paul Muktieh was talking about in financing.

The Chairman appreciated the points brought up by the speakers and asked the other panelists Shri Hari Nair and Shri Srinivas Ramanujam to throw light on where and how the work of building the ecosystem for entrepreneurship can start using whatever technologies and resources that are available.

### **SHRI HARI NAIR:**



Speaking from the tourism context with which he is familiar, he opined, the biggest problem is that with technology racing ahead at such a pace, people particularly entrepreneurs and budding entrepreneurs would be struggling to keep pace with. That is where a lot of attention has to be paid, he said, emphasizing this with “even people who’ve been for years in technology do not know what’s going on.” Bridging this gap is an opportunity. He saw great opportunity in tourism referring to the outputs of previous session where it was presented

that ‘there are only 50 districts out of the 700 in India where there is any form of tourism’. Taking the three contiguous districts of each of those 50 districts up for creating similar vibrant tourism entrepreneurial ecosystem, he figured there would be a surge in entrepreneurship in these Greenfield 150 districts. The existing entrepreneurs and the new entrepreneurs would easily connect being neighbors sharing the same cultural background. The level of operation would also be no different, he reasoned.

Connecting this to the Chair’s original challenge of creating 100,000 entrepreneurs, he took this ahead by assuming that the target set for the tourism sector is 25,000. Then if this number is divided among the 150 districts one is talking about creating 200 micro entrepreneurs in each of these 150 districts. He believed that this could be done easily with the help of technology to create awareness of the new destinations as well as to connect the entrepreneurs. He said this framework for spurring tourism ahead is a larger way of linking tourism with entrepreneurship.

### **SHRI SRINIVAS RAMANUJAM:**

He felt that taking technology out of the labs to the fields is one way of multiplying both the positive impact of technology on agriculture or health and of creating agri-tech based entrepreneurs. He said one of these routes could be by creating franchises. For example, soil health tests everyone talks about but does nothing about could be given a boost by taking advantage of the portable soil testing kits made by companies. “So getting those kits out either through extension programs or identifying a bunch of micro





entrepreneurs, training them and let them do soil health tests, would be a way for them to earn some income,” he said. When the reports of the soil tests are there, the farmers get introduced to science and technology and see their fields in a new way and they are motivated to improve farming. The distribution of these kits through the KVICs, the KVKs and other NGO bodies in this region can be a great way to introduce technology and see what the output of technology is and what kind of information and insight the community can use. He said this seems the only way this is going to work for health kits, soil kits, drones technology etc.

### **SHRI B. PAUL MUKTIEH:**



He said introduction of simple technology at the nano-entrepreneurs level has brought in rich dividends in the NEDFi experience. NEDFi had brought in master trainers from Thailand after observing that the region, which has a large community of skilled weaving and handicraft artisans as well as materials of all kinds in abundance. The reason being that local artisans despite their traditional skills however were not able to produce export-standard handicrafts. The trainers from Thailand brought in small technologies through which the locally available natural fibers could be put to use such as water hyacinth, which the Government of Assam has taken in a big way.

In the last five years, the new found potential of water hyacinth alone started off 5,000 new entrepreneurs, all of whom are doing well. The product quality had improved manifold due to those small technologies brought from Thailand. He said initiatives like these can break open the spaces for fresh entrepreneurs, where the use of technology can create quality and standardization of products which will create the markets for themselves.

### **CO CHAIR, SHRI G. PANMEI'S REMARKS:**



There are many government schemes, projects, ideas and reports from consultants, but these are not leading to successful entrepreneurs. The question is what can be done? “We have a tendency to focus only on success stories. We need to also look into stories of failures where people have come up with great ideas, they have great foundation but along the way, midstream they lost the scheme and they fizzle out. I have some experiences of going through as a taxman. We have been seeing many entrepreneurs facing a lot of problems. So what can we do? There is no dearth of money, or ideas. There is no dearth of schemes, as far as the government of India is concerned. So what can be the solution to the failures?”

### **SHRI PAUL MUKTIEH:**

There are many government schemes but most remain unutilized. There are no takers for these schemes because these are schemes with a credit component which people find problematic. Even schemes with 75% subsidy in the Organic Mission went without



takers because these schemes are back-ended. He said that during a discussion on the failure of the scheme in the north east with the Union Additional Secretary of Agriculture, he had told him that “even if there is 100% subsidy it will not take off.” The reason being that all these subsidies are back-ended, which means that when project is envisaged the entrepreneur has to go through the banks which have to fund that project and only after the project is completed they will get refund of the subsidy. Most of the government schemes are all back-ended. The subsidies are being given two or three years after the project has come on steam and most of them have closed down also. But after several discussions with Delhi the NEDFI had managed to convince the authorities that the subsidy should be front-ended for entrepreneurs to be able to use them. NEDFI would of course be the monitoring agency and thus the Ministry had agreed to give the subsidy upfront or pro-rata. He said that this is the first scheme where subsidy is being given front-ended.

He emphasized that all Government schemes need to be front-ended for them to be implementable. He further said that a lot of handholding is required in the agriculture sector. In the north east region the farmer groups FPOs, the FPCs are not in a position to form companies. The Companies Act is very difficult to abide by. NEDFI has formed a business facilitating centre where these units are helped. He said that in one case, they had sent a mentor to a place producing pineapples. In the course of helping the producers he had himself become an entrepreneur by setting up a pineapple processing unit there to help them. Now his unit gets orders from Europe.

“That is the kind of mentoring and handholding that is required for our areas. Awareness has to be there, a mentoring scheme whereby the entrepreneur can go to those people and ask questions, right from online registration to GST filling, we have to do handholding of these young entrepreneurs,” he said.

### **CO-CHAIR, SHRI G. PANMEI:**

He agreed that subsidy had to be front-ended. Speaking from his experience, he emphasized that no amount of funding, including a 100% subsidy will be of any use unless other aspects are taken into consideration. He illustrated this with a story of a very successful and very committed farmer from Nagaland who had started an organic farm with the involvement of some foreigners, but he could not export the products because they did not have a ‘fair trade certificate.’ Shri Panmei said the market has moved on from Organic certification to Fair Trade Certification and even to something called the Rain Forest Certificate etc. which are part of the developed world countries compulsory criteria for businesses. There is no alternative system of certification and that they are all working in an environment or in an ecosystem which dictates that ‘one size fits all’. Even in the North East the diversity is so great that what is suitable for Assam may not be suitable for Manipur or Nagaland. So this needs to really be broken down, he said, posing the question to Shri Abhijeet Sharma as head of the Institute of Entrepreneurship for his comments.

### **SHRI ABHIJIT SHARMA:**

Answering the first part of the question first, he said that he felt strongly that the schemes failed in the region because, there has been huge credit market distortion where a small group of people are rotating and having the cake because awareness has not percolated to others. The institutional mechanism does not support or provide for the new people to come in, and thirdly there is a lack of credit histories because of the fact that most of our institutions are informal, he said. In formal Institutions there is



built up history, which is what the formal institutions require, and hence they are not co-opted into the formal institutional mechanism. He called for an alternative mechanism to ensure that people who had the qualities were not denied support only because they failed to make the criteria required by formal institutions. Otherwise the people who are already in the formal mechanism are the ones who fail and keep coming back through other mechanisms, a fact the authorities have to be wary about. He cited the example of Samuti Finance which bases its assessment on what they call value chain, looking at the asset base and using that as a mechanism for financing which ensures that people who have the capabilities but who do not fall within what is called the formal mechanism of evaluation are not denied access to support.

As for certifications that are required, he said that NEDFi has done one 'window to the other world.' He stressed that linking up livelihoods with other sectors of life to create a social enterprise rather than just a product is the way to get ahead for the North Eastern region which is full of possibilities. For instance, if a farmer in Nagaland is setting up an organic farm, it is not just a product. He is creating environmentally friendly goods, he's working with marginalized groups of people, and these are stories that can be linked with other mechanisms and that is only possible if there is a connect to the larger world, he said. There are funds available for enterprises ensuring good environment and social good. "We need to connect to the global world much more where some of these alternative mechanisms are available which will make things easier for the formal financial institutions and also for the entrepreneurs from these mountain states.

The Chairman Shri Sushil Ramola asked each panelists to come up with one breakthrough innovation and requested Co-Chair Shri Panmei to continue and open the session to the floor.

### **CO-CHAIR SHRI PANMEI:**

One of the issues inevitably faced by entrepreneurs is taxation. He said that ecosystem for entrepreneurship has to address this as it is one of the challenges that even the most highly educated or experienced entrepreneurs often fail to resolve. In the race to get ahead, taxation is forgotten. He called on the participants to share their experience of dealing with tax problems.

### **Shri Neichetu Doulo:**

He was surprised when the Income Tax Department taxed him and other investors for investing in a small finance company in Nagaland. He said that people had invested their savings into the company to buy equity but this was taxed. His contention was that as per the Income Tax laws as tribals in a tribal state they are exempted from paying Income Tax.

### **Shri Jeevanandhan duraisamy:**

His issue was that the auditors were not interested in auditing his company because their dealings are all white. Secondly, when doing government contracts they do not provide them the GST exemption certificates, which becomes a problem when they want to claim exemption and other GST linked issues makes it very difficult for small companies and start-ups to function. The most challenging for start-ups is that the Chartered Accountants (CA) themselves seemed unsure about the various requirements to be fulfilled. He also said that hiring specialist CAs is not possible for start-ups as they cost a fortune. He said that for start-ups like his CAs find it difficult to understand for evaluation.



To explain the seriousness of this problem of finding sound CAs to advise start-ups, he said that in Kolachi, the town he hails from in Coimbatore there are hundreds of start-ups there but everybody faces the same nightmare, he said. He expressed that the incubation support urgently needed is not there and start-ups are tired out chasing these issues instead of concentrating on the enterprise. Fines are paid every month by them because of their inability to complete their documentation required by the Law.

### **Shri Panmei:**

He clarified that there is no exemption for any category of people who are owners or equity holders in any registered company. The Income Tax exemption section 10(26) of the Income Tax Act is only for personal income earned by the Scheduled Tribe in a Scheduled Area. A tribal earning income in another non-scheduled area has to pay income tax. There is no exemption at all if the earning is from a company's business. He further explained that the taxation departments have become very transparent.

He fully endorsed the point brought up about scarcity of specialized CAs and said that at one point of time the authorities had shortlisted 7 universities in the country including the North Eastern Hill University (NEHU) to start a course fully financed by the Government of India to guide entrepreneurs and handhold people who want to do business and help people prepare GST, Income tax returns etc. But that did not happen due to various reasons.

He said it is obvious that here there is an urgent need for policy support as the problem for entrepreneurs is acute. He referred to the North East Industrial Development Policy, which was a well intended policy for the North East, but became a massive failure. It was in operation for 20 years and it failed miserably. So now with this background, he urged the Summit to make recommendations so that the North East has a solid policy support to sustain and create the ecosystem for entrepreneurs that this Summit has been talking about. These include the incubation centers, specific support during the gestation period which every start-up will pass through. He was confident that the government is listening and that they are willing to go a long way to meet the needs and requirements of the entrepreneurs and the people. "We have to raise our voice, bring our opinion, our requirements to the correct platform", he ended.

To Shri Neichetu Duolo's point, he said investors, and specifically those from the mountains will have to start sorting out their documents.

### **Shri Srinivas Ramanujam:**

In response to Jiva's questions he said that Villgro had managed to bring down all the compliances required to a manageable list and that they had prioritized the list into critical and non-critical, in a dashboard with technical support to help the entrepreneurs keep track of the paper work.

A participant from Arunachal Pradesh, who runs a food processing unit, Spice Zero, wanted to know how to handle business expansion outside the state vis a vis taxes, to which the Chairman directed her to a tax expert. Shri Panmei offered to advise her after the session was over. The Chairman urged the panelists to name one single thing they thought is important for entrepreneurship to bloom. Shri Srinivas Ramanujam said the Directorate of Biotech's incubation center was very successful and could be emulated. He said that huge push from Government of India had lead to the creation of one of the best functioning centers that promotes R&D in biotech, bioscience and agri- technology.



One of the panelists talked about creating a framework to give Adventure Tourism a push as it is a potential niche for expansion in the North East. He gave the example of the Assam Mountaineering Institute which had started out as a small unit teaching basic stuff and bicycling tours but now has a turnover of Rs. 80 Lakhs.

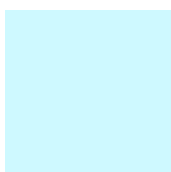
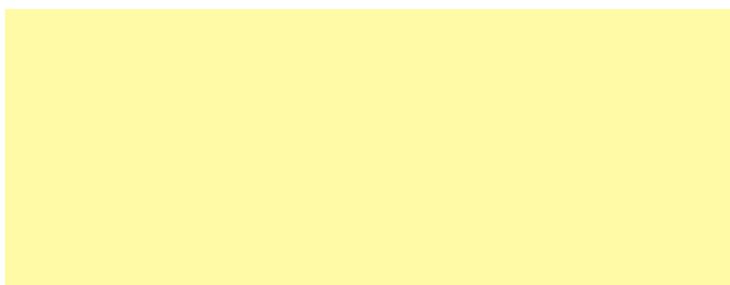
Shri Paul Mukthieh invited all entrepreneurs to NEDFi where loan is available at 8% for one crore, which he called a very concessional rate. NEDFi has a business facilitation center for all the N.E. states with mentors to handhold free of cost. He also said that NEDFi has a venture capital company with Rs. 100 crores and it is open to all those who are from the North Eastern states.

### **Shri Amba Jamir:**

He said the financial institutions need to wake up and see the potential and talents present in the young people such as arts, music etc. rather than concentrating only on conventional business ideas.

Chairman: Summing up the session he said that the discussions have shown that there is a general need to rethink about policies - separate the successful policies from the ones that have failed, collate the lessons learnt from these, study the existing laws and rules and their implementation, explore community linkages, recognize the social capital, and the need to build equity and inclusion. Another factor that has come out strongly is the need to bring in the youth and once they are there, to build their capabilities and handhold them through their journey. He said that all the speakers stressed the importance of building their confidence because this is a journey of a person who thinks he had nothing, depends on government and dependent on parents.

He was happy that many ideas came up. He said that work will need to be concentrated on selling the mountains as a differentiated product by bringing up its unique qualities. There is need to work on defining that unique identity and package it to be sold. "The work of building institutions would start right here from this table itself where there is an incubator, a funder, a body like NEC and others. Our task is to find the mechanism to get them together and converge and this is what we take away from our discussions" he said.





# VALEDICTORY PROGRAM

Chair: Shri Alemtemshi Jamir, Co-chair Dr Vincent Darlong

Chief Guest: Prof B K Dutta, Member, NEC

Guest of Honor: Shri Moses K Chalai, Secretary NEC

Dr Vincent Darlong, while welcoming all said he was privileged to have been acquainted with the Chief Guest and Guest of Honor. Prof Dutta was his Professor when he was a student in NEHU. He was a good teacher and knew how to communicate with young people. He said the Summit was privileged to have such a person with so many years of research and teaching experience. And now as NEC member, he believed his vast experience in the academic and research field will help transform what the summit had been discussing into policy and development initiatives.

Dr. Darlong said that he had also worked with Shri Moses Chalai, Secretary, NEC & Guest of Honor during the latter's stint as the head of NERCOMP, a project funded by IFAD and Government of India. It was during the time when insurgency was at its peak and was one of the first externally aided projects in the North East. He praised Shri Chalai as the man who had turned a doubtful project into a great success; his leadership raising the NERCORMP as one among IFAD's best projects in a global assessment. When the project came to a close in 2017, it was awarded as one of the projects which had prepared one of the best closure reports.

The welcome address was followed by a presentation on Outcomes and Recommendations of SMDS VIII by Shri P D Rai.

While bringing out a comprehensive statement right after the discussions was not possible, he said he had surmised the varied discussions inside the halls, outside it, in the four thematic sub-sessions and the panel talks and, he had configured them around five outcome points:

Shri PD Rai further said that a number of policy items which need to flow to the policy-makers would be taken up in the next day's session with the legislators. One of the issues to be put before them is the issue of tax literacy. Another is Climate Risk Insurance. These are two very pointed items that need to flow through immediately, he said. Need for alignment of Government schemes to be better targeted. Someone will need to look at a holistic design in order to look into the plethora of government schemes put them together to ensure there is access to these schemes and, in what manner these can come through. He, however, said it was disturbing to hear that the Ease of Doing Business (EDB) in the North East is low. He stressed on the facts that people are facing a lot of problems with issues related to the Companies Act, like in Sikkim where entrepreneurs have to go to Siliguri, Guwahati, Kolkata and even Rajasthan to register their companies. He also said the issue of companies not being able to get their clearances is what stops them from taking off. There are many companies which are bogged down due to Tax illiteracy. These compliances are where the IMI needs to work on and it is required for the policy makers to mull over and take some concrete action, he said.



In terms of what IMI will do immediately after the valedictory session it had been decided that IMI, Villgro and one more organization will join hands with IIM Shillong to build their incubation center. He thanked

Prof Sanjeeb Kakoty with whom already one meeting was held and hoped this would be the first positive outcome of the conclave.

The mapping of all the high value low volume produce across the region can be collated on the basis of what is already existing data. He said there was already one or two such products where there is a huge amount of traditional knowledge that connects to the communities and from there we build this platform for agri-prenuers and move towards this huge task which the President of IMI, Shri Sushil Ramola outlined, the creation of 100,000 entrepreneurs in the next 10 years. Another mapping exercise is to bring scattered data in silos on emerging technologies in areas of AI, robotics, machine learning into one platform. The call is for these to be mapped and enlist those that can be applied in IHR and especially to build into a system by which we are able to narrow the digital divide. This had come out very clearly in the first session on Sustainable Agriculture. It can be put together by IMI with the help of other partners and with an element of policy support which we look toward from the Government.

Most important point that came up was about the stories and how to link to these stories to create an Indian Himalayan Region brand. First there is the need to work to get a consensus around this. So this is not going to be an immediate project but the IMI needs to get working on. Also it is required to collect all the stories from all the different states which then will be able to weave into this brand from where entrepreneurs who are existing and in future will be able to move in alignment.

Shri Hari Nair had important points about managing mountain tourism sustainably. How tourism in the hills can be linked with agriculture and horticulture, culture, biodiversity etc is something which needs to be worked on.

Whether it is access to knowledge or policies, attracting business, skilling, access to markets or incubation, these are all the areas where an ecosystem can be built with the help of all. He said that there are many more areas and described the whole conclave as very enriching, and immensely robust educational process.

Presentation on how IMI State Chapters can take forward the recommendations of the SMDS VIII by Ms. Priya Shrestha and Shri Roshan Rai:

Shri Roshan Rai said that the most used word during the session was “Disruption” and it was apt that a person like him representing a non-state was asked to talk about how the state chapters take forward the recommendations of the SMDS VIII. He stated the following: The states and IMI members would like to take the disruption forward and seek a decentralization of the SMDS. Many recommendations have to be contextualized to the local situations. Even though a uniform language is used for the IHR it is known that there are differences. Everything that has been presented makes sense but it all needs to be discussed further at the local level.

The question of representation is also important. He said in Darjeeling they are constantly haunted by the question as to whether they really represent Darjeeling. Since now Darjeeling has been bi-furcated into two districts, can we still retain the name ‘Darjeeling Himalaya Initiative’, he wondered.



As civil society organizations leading the front they face many challenges which is both a burden and an opportunity. If they are to have any meaning and impact in people's lives they need to expand their base and bring in more membership. The discourse cannot remain within a small group. He said they need to recognize the fact that civil society alone cannot bring about the changes the group hopes to see. More people have to be involved and the IMI has to become more visible. They will have to work towards that, he said. This time it was amazing to see the number of young college students involved in the Summit and this is something they dream of in Darjeeling. He said that in Darjeeling they have to work to influence the magistrates and the administration that runs the districts and work with all the differences and conflicts that exist there.

He said their unit holds an annual function called 'Call Of The Mountains'. In that forum they will discuss all the recommendations made here and will work towards making the DHI work visibly.

The call to action is to put all these thoughts into action and make a difference to people's lives. One of the important programmes of the DHI is the celebration of the annual International Mountain Day annually. This is one of their strong campaign platforms during which they spread the word and get the youth involved. It is here that Sikkim and Darjeeling had the highest number of people coming out to do the Himalaya clean-up campaign. "We will do what we need to do to get our stories heard and get them addressed," he ended.

Ms Priya Shrestha said IMI is an outreach of 12 mountain states and it is up to the constituent partners to take forward the recommendations in their own areas. She said IMI's new strategy and direction for the future will be taken up because the members are on this platform for their passion for the mountains. This is what brings IMI together. She said the other point agreed upon is that the IMI occupies a special position as it has built a unique space of 12 mountain states, which are trying to get their unified voices heard. There is no other body like this, not even the ICIMOD, she said.

She said The Himalayan Cleanup drive and the Zero Waste Himalaya have been taken to the 12 states. "As state chapters we need to look at which recommendation we can take forward," she ended.

Mr Alemtemshi Jamir, Chair of the session called upon Ms. Fantry Mein Jaswal, Secretary IMI to talk about Dr. RS Tolia Award.

Ms. Fantry Mein Jaswal explained that this program is held every year during the SMDS as a tribute to Late Dr. RS Tolia who was the Founding President of IMI. Dr RS Tolia conceptualized the idea of IMI, got like-minded people on board and led it from the front as its founding President. His passion and commitment towards improving the lives of mountain communities is what drove him. His vision and commitment for the formation of a pan-Indian mountain movement not only unified diverse mountain states of India but also inspired others. His deep understanding of the links among people, cultures, livelihoods and mountain environment undoubtedly influenced a generation of researchers, organizations and policymakers. He was truly a Man of the Mountains. He passed away in December 2016.

The Dr. RS Tolia Award was instituted in 2017 to recognize and reward the exemplary work of individuals/organisations whose work has created an impact or has the potential to impact sustainable prosperity and well-being of the people of the Mountain Areas. The primary purpose of the award will be to recognize, motivate and exemplify individuals/



organisations whose work has created an impact or has the potential to impact the lives and sustainability of Mountain areas positively.

The award includes a citation and cash amount of Rs. 1 lakh.  
A short film on Dr Tolia was shown.

Ms. Jaswal announced the name of Shri Sachidanand Bharti from Uttarakhand as the recipient of the Dr. R.S.Tolia Award- 2019. She then read out the citation:

Shri Sachidanand Bharti is eminently worthy of this award as he is an inspiring figure of dedication and commitment and one who has been the driving force behind the community efforts to regenerate the dying forests of his state. He is one of the legends of Uttarakhand. Decades of relentlessly working to bring back the water sources by using traditional methods and inspiring the community to plant trees in the barren mountains has ensured that his home district of Pauri Garhwal has become a symbol of hope in the backdrop of increasing water scarcity not only in the country but globally. He started his work about 36 years ago through his small group called the Doodhatali Lok Vikas Sansthan in his village Ufrainkhal. About 12000 natural water reservoirs called chaals were built and saved by them.

He was a college lecturer but inspired by the Chipko Movement he returned home to save the trees and forests in his own area. Women form a large part of his green army as they form the silent strength of the movement and they have also organized themselves in self help groups called Mahila Mangal Dals across 150 villages. There is nothing new in the movements to regenerate water and forest but what Shri Bharti has done is create a movement inspired by a symbiosis of traditional practices and ecological philosophy.

Prof B K Dutta, Chief Guest was called upon to give away the award to Shri Sachidanand Bharti.



Accepting the award Shri Sachidanand Bharti graciously thanked IMI saying that IMI has honored and dignified his humble work in a remote corner of the mountains. The Award is the love of the people of the IMI extended to him and the people in the villages who were the actual work force. He said the water scarcity issue is a global phenomenon now. Water scarcity was an unknown thing in the mountains but for the last 30 years his Himalayan state of Uttarakhand has been experiencing water scarcity and this was because the forests have receded as no one cared to conserve the trees and the forests. He said for the last four decades, he had been working with the people to reforest the mountains.

The people have successfully organized themselves and by applying their traditional knowledge they have recharged the mountain ponds, streams and springs by bunding and reforesting the water catchment areas.

He thanked IMI and others including Uttarakhand State Council of Science and Technology (UCOST) Director General, Dr Rajendra Dhobal for recommending his name for the award. He would otherwise have remained a 'peacock dancing in the jungle' unseen, unknown and unsung.



## PASSING OF THE BATON:



Shri Tony T.C. Marak, President MIMDI passed on the baton to Shri STS Lepcha, Vice President SDFU who will be the host of SMDS-IX in Uttarakhand in 2020. Shri Marak said MIMDI was privileged to have hosted SMDS-VIII. He felt that the continuity of decisions and actions need to be maintained and suggested that in the next summit to be held in Uttarakhand people who were present here should give their testimonies and reports of what they had done to follow up on the recommendations they had just passed in the SMDS VIII. Receiving the baton Shri STS Lepcha said he

hoped that the flavor of mountains will continue. He opined that the Western Himalayas and the Eastern Himalayas exhibited great differences in seasonal growth of vegetations, the biodiversity and culture of the people but what was similar were the problems encountered due to the geography of the mountains. “We are different but our issues are the same,” he said, lauding the IMI movement to take up these issues.

Session Chair Shri Alemtemshi Jamir recalled the talk of the Meghalaya Chief Minister challenging all to take up the Zero Waste path and the key note address of Dr Eklabya Sharma which he said was a guideline for IMI to follow. He hoped IMI would put more emphasis on action and analysis of what the organization has been doing and study its impact. He said IMI is important because the Himalayan mountains are so important that it has been referred to as the third pole and the source of all water which forms the great major river systems flowing out of the Himalayas. “Today the civilization of the world might be led by the West, but in the past the origin of civilization was the banks of these great Himalayan rivers,” he said.

He said mountains need a closer look because they are declared remote, distant, fragile, which is in fact, most susceptible to natural disasters and where help cannot be reached on time. He said that this has made people in the mountain poor and unable to ‘develop’ in the same way as other parts of the world and thereby the need for formation of a platform like IMI is to take forward the ideas for mountain development. One of the important steps taken by the IMI was in its interactions with the Planning Commission and its members at that time, particularly Shri B.K. Chaturvedi who had advised the delegation then ‘that instead of a government forum it would be better to have an NGO forum to bring up mountain issues in a united way, instead of approaching the Government of India or any other authority state-wise.’ This is how the IMI came about to bring a collective force to their demands for attention. He thank IMI and all its partners for making the Summit a success. Shri Alemtemshi Jamir then introduced Shri Ram Muivah, the outgoing NEC Secretary and asked the incoming Secretary, Shri Moses Chalai to address the gathering. Shri Moses Chalai, who was newly appointed as the Secretary of the NEC congratulated IMI and MIMDI and appreciated the great efforts they had made. He said the times dictate that the mountains must take its space to face the challenges that are fast emerging. He looked on the IMI as an organization strong enough to make policy inputs to the policy makers and to people who execute the plans



and policies. But these inputs will have to be based on deep studies and analysis. He said at any given time the union departments were working on many challenges and keeping open channels for suggestions. To make the voice heard the mountain people will have to come up with compelling reasons, he said. Already IMI is in 11 states and UTs. Coming together in a single platform is the first important thing and compelling enough. "Ideas have to be compelling; otherwise they will not be taken into account," he said. The IMI can be a force to articulate and present it in a way that it is taken seriously into policy. He hoped that this could be done as many precious years are lost when policy is not correct.

Taking the cue about policy inputs Shri Alemtemshi Jamir informed the House that IMI had been interacting with the 15th Finance Commission and these efforts resulted in the Conclave of Himalayan States hosted by the HCM of Uttarakhand in Mussoorie in July 2019. There, a concrete resolution was passed to jointly move the Government of India to make special allocation for the mountain states based on the concept of ecosystem services provided by the green cover of the Himalayan mountain states. He then requested the Chief Guest, Prof Dutta to address the participants.

Prof B K Dutta, who had patiently sat throughout the two days of discussions on building ecosystems for entrepreneurship in the mountains, gave his insights and suggestions from the vantage point of his decades of experience as an academician and researcher in the northeast region. He said that the tribes of the region have a rich heritage of traditional knowledge and this needs to be given due importance in any area of work for developing any sector whether it is agriculture, medicinal plants, tourism etc. Recalling the several references to the need for making lists of stories of the region he referred the conclave to a compilation of three volumes of traditional knowledge from field studies conducted by his students.

He lamented that so far there is no comprehensive documentation of the rich biodiversity of the region, and this is the main reason why every now and then there are 'new discoveries'. These are not new species but just things that were not recognized earlier. He supported the much criticized jhum cultivation calling it "best for the hills" and that any scheme to improve hill agriculture must be to preserve and improve it. "It is the age old practice of hill agriculture which helps to preserve the rich genetic diversity," he said, pointing out that jhum fields have been recorded to have as many as 56 crops in a single field, something unheard of in modern agriculture. It is also organic by default. He said all medicinal plants as found in Himalayan states like Arunachal Pradesh or other parts of North East are all organic because they are found in their natural state. They are grown by nature and the community preserved them, a practice which again is another traditional method which needs to be preserved.

Commenting on the business of tea plantations in the Barak valley, which are the biggest business enterprises in the region with crores of turnover, Prof Dutta was critical of the industry which had failed to solve its problems of water scarcity during dry seasons over the decades. He said they could easily set up rain water harvesting systems to conserve water for the dry seasons and recalled how he had tried to work on it with them. "But this industry has not learnt to do this and instead complain and blame the government for their woes without looking for solutions to their problems. The tea plantations have failed to look after their laborers by giving them their just dues or taking care of their plantations. Though they are the biggest source of livelihood and revenue for the North East, they remain the biggest drain on the region.



His current stint in the NEC has revealed a lot of good work being done through various forums including the much talked about NERCORMP which had helped to build value chains in piggery, turmeric, ginger, tea, etc through innovative ideas. However, post-harvest technology and absence of processing units is the missing link between the growers and success. They have to be set up to save tons of wastage of perishable produce, he said. New ideas are floating around for age-old products of the region like tea and bamboo by using technology to make them into premium items of the hills.



Dr Lalirin Kharpuri extended her heartiest thanks on behalf of MIMDI and Integrated Mountain Initiative and brought the Summit to a close which was followed by a grand cultural performance of song and dance by the students of MLCU, Shillong.





















## ORGANISING COMMITTEE



**Left to Right:** Subhashish Dasgupta, Rihok Rymbai, Nadeem Pakyntein, Lakynti Kharpuri, Wankmen, Dr. Larilyn Kharpuri, Dr. Vincent Darlong, Tony Marak, Eric K. Dkhar, Mihin Dollo, Gardinia Nongbri, Lucy Kurbah, Phiba Syiemlieh, Janice Shadap, Gifty M. Phawa, Rilanglin Kharpuri, Zaman Eddie Tongper  
**Others:** Evan Diengdoh, Khrawbok Kharwanlang, Kitboklang Nongrum, Donboklang Marbaniang, Diego Sangma, R Eugene Lamare, Minorita Lyngdoh



## IMI GOVERNING COUNCIL



**Sushil Ramola**  
President



**Ramesh Negi**  
Vice President



**Lalbiak Mawia Ngente**  
Vice President



**Fantry Mein Jaswal**  
Secretary



**Priyadarshinee Shrestha**  
Joint Secretary



**PD Rai**  
Councillor



**Gopal Rawat**  
Councillor



**Alemtemshi Jamir**  
Councillor



**Rajendra Dobhal**  
Councillor



**Vincent Darlong**  
Councillor

## IMI SECRETARIAT TEAM



**Golan Naulak**  
Programme Coordinator



**Prerana Baisnab**  
Programme Coordinator



**Amreeta Das**  
Research Analyst



**Vikram Kumar Jha**  
Accounts & Administrative Officer



SMDS VIII Organizing Committee		
SI No	Positions/Tasks	Name of the Official/ Person Incharge
1	Advisors	Shri Ram Muivah, Secretary, NEC & LM, IMI
		Dr Glenn Kharkongor, Chancellor, MLCU
		Dr V.T. Darlong, VC, MLCU, Shillong & GC, IMI
2	Convenor	Shri TTC Marak, President, MIMDI
3	Co-Convenor	Prof (Dr) B.K. Tiwari
4	Organising Secretary	Dr Subhashish Das Gupta
5	Co-Organising Secretary	Dr Larilin Kharपुरi
6	Treasurer & Finance	Shri Eric K. Dkhar
		Dr LarilinKharपुरi
		Ms Badalam Dkhar
		Ms Lakynti Kharपुरi
7	Registration	Ms Aksana Neah ChMarak
		Ms Gifty Merry Phawa
		Ms Marbudki Dhar
		Ms Lucy Kurbah
8	Venue	Mr Zaman Tongper
		Dr Egira Shadap
		Mr Evan D Diengdoh
9	Sound System	Mr Pondrous Suting
		Mr Pyndap
10	PR & Publicity	Ms Rilang Kharपुरi
11	Accommodation, Transport, Reception at Airport	Shri Mihin Dollo
		Shri Evan Diengdoh
		Dr Kitboklang Nongrum
		Dr R. Eugene Lamare
		Mr Wankmen Kharbuli
		Mr Diego Sangma
		Mr Khrawkupar Kharwanlang
		Mr Praneet Upadhya
		Mr Wanlambha Nongrum
12	Food/Catering & Zero Waste	Ms Gardinia Nongbri
		Dr Larilin Kharपुरi
		Ms Gifty Merry Phawa
		Ms Janice Shadap Marbaniang
13	Souvenir, Conference folder, Participation Certificates, Field visit coordination	Dr Kitboklang Nongrum
		Dr Donboklang Marbaniang
		Ms Rilanglin Kharपुरi
		Mr Wankmen Kharbuli
		Mr Deigo Sangma
14	Cultural Programme	Dept of Music, MLCU
15	Recording of proceedings	Mr Sanat Chakraborty
		Linda Chakchuwak
16	First Aid/ Medical	Ms Rihomika Rymbui
		Ms Nadeen Pakyntein
17	Master of Ceremonies	Dr Fabian Marbaniang
		Dr Chelmelyne Dhar
		Dr Egira Shadap
		Ms Rebecca Kingbawl
		Mr Eric Kevin Dkhar



## LIST OF **ATTENDEES**

Sl. No	Name	Designation	Organisation
1	Alemtemshi Jamir	IMI Councillor	IMI
2	Lalbiak Mawia Ngente	Vice-President	IMI
3	Fantry Mein Jaswal	Secretary	IMI
4	Prem Das Rai	IMI Councillor	IMI
5	Priya Sreshtha	IMI Councillor	IMI
6	Rajendra Dobhal	IMI Councillor	IMI
7	Ramesh Negi	Vice-President	IMI
8	Sushil Ramola	President	IMI
9	Prerana Baisnab	IMI Sec	IMI
10	Amreeta Das	IMI Sec	IMI
11	Namrata Rawat	IMI Sec	IMI
12	Golan Naulak	IMI Sec	IMI
13	Amba Jamir	Member	IMI
14	Bharti Gupta Ramola	Member	IMI
15	Dr. John Zothanzama	Member	IMI
16	Egam Basar	Member	IMI
17	Lalchuangliana	Member	IMI
18	Ms H. Theresa Darlong	Member	IMI
19	Nalong Mize	Member	IMI
20	Pawan Kaushik	Member	IMI
21	Prof Lalnuntluanga	Member	IMI
22	Rezina Mihu	Member	IMI
23	Rigzin Spalbar	Member	IMI
24	Roshan Rai	Member	IMI
25	RP Gurung	Member	IMI



26	Thingreiphi Lungharwo	Member	MI
27	TTC Marak	President	MIMDI
28	Mihin Dollo	Vice- president	MIMDI
29	Subasish DasGupta	Secretary	MIMDI
30	Gardinia Nongbri	Joint Secretary	MIMDI
31	Eric Kevin Dkhar	Treasurer	MIMDI
32	V.T. Darlong	GC Member, IMI	MIMDI
33	S. Chaudhury	Advisor	MIMDI
34	S. Kakoti	Advisor	MIMDI
35	Larilin Kharpuri	Member	MIMDI
36	B.K. Tiwari	Member	MIMDI
37	Evan Donkupar Diengdoh	Member	MIMDI
38	Donboklang Marbaniang	Member	MIMDI
39	Kitboklang Nongrum	Member	MIMDI
40	Lakynti Kharpuri	Member	MIMDI
41	Rebecca Kingbawl	Member	MIMDI
42	Janice Shadap	Member	MIMDI
43	Giftty Merry Phawa	Member	MIMDI
44	Biairoihun Shymbim	Member	MIMDI
45	Mr. Anirban Ghose	Co-Lead	TRIF
46	Mr. Ashish Gupta	Manager-Research	NASSCOM
47	Mr. Benjamin Vinitio Chishi	Programme Manager	EA Homestay
48	Mr. Brij Mohan Singh Rathore	Chief Policy Advisor	ICIMOD
49	Mr. Dhrupad Choudhury	Chief Scaling Operations	ICIMOD
50	Dr. Eklabya Sharma	Deputy Director General	ICIMOD
51	Dr. Mustafa Khan	Team Leader	IHCAP-SDC
52	Dr. Rajesh Joshi	Scientist	Sikkim Regional Centre, GBPant



53	Dr. Suhas P Wani	Ex-Director	ICRISAT
54	Ms Elizabeth Yamben	Entrepreneur	DWELLER
55	Mr. Fazle Muztaba	Entrepreneur	Envo
56	Mr. Karma Bhutia	Entrepreneur/IMI Member	Sikkim
57	Mr. Kenneth Pala	Senior Advisor and Regional Coordinator	GIZ
58	Mr. Krishan Singh Rautela	Associate Project Officer/ IMI Member	ADB
59	Mr. Manish Shankar	Associate Vice President	INTELLECAP
60	Mr Hari Nair	Founder	Holiday IQ
61	Mr. Devakishor Soraisam	Entrepreneur	MANGAAL
62	Mr. Roshan Mascarenhas	Senior Programme Manager	SELCO Foundation
63	Mr. Srinivas Ramanujam	Chief Operating Officer	VILLGRO
64	Mr. Neichute Doulo	Founder	EA
65	Mr. Neikedolie Hiekha	Entrepreneur	Eco Tourism Khonoma
66	Mr. Raghuram Lanka	Assistant Vice President	Reliance Jio
67	Mr. Reuben Gergan	Sr. Project Engineer/ IMI Member	LREDA
68	Mr. Rothell Khongsit		Village Development & promotion Tourism Cooperative Society- Meghalaya
69	Mr. Siddharth Sharma	Chapter Director	Startup Grind
70	Mr. Vilas Vishnu Shinde	Founder	Sahyadri Farms
71	Nagakasthile MP		SELCO Foundation
72	Mahendra S Lodhi	Scientist	G.B Pant Institute
73	Himangshu Baruah	Entrepreneur	FINDERBRIDGE



74	CS Shabong	Asst Director of Agriculture (Information)	Government of Meghalaya
75	H Lyngdoh	Asst Director of Horticulture (Fruit Preservation)	Government of Meghalaya
76	N Surgit	Project Director	NERCORMP
77	Jagadish Kaishram		NERCORMP
78	Kamesh Wahengban	NRMO	NERCORMP, Candel
79	Atul Chakravarty		DPD, Meghalaya
80	CS Shabong	CF (CC, RFT)	F & E D, Meghalaya
81	Shri V Kharlukhi	DCF (SF & ENV.)	F & E D, Meghalaya
82	Senti Jamir	DPD, Karbi Anglong	NERCORMP
83	Andrea Bazeley Agitok Sangma	Student	TISS
84	Pragyan Jyoti Baisnab	Student	
85	Tapa Khoda	Advisor Spice Ziro	Spice Ziro
86	Mary Hmar		DOD
87	Doanald Mawlot		NERCORMP
88	Medalihin Dympep	SD	NERCORMP
89	Dalanglin Nongdhar	AAO	NERCORMP
90	Linda Chhakchhuak	Journalist	
91	Raj Khongor Basumaty	Program Manager	Entrepreneur Associates
92	A Jyrwa	Reporter	DD News
93	P Lyngwi		AIR
94	Dhruba Jyoti	Director(Finance)	NERCORMP
95	Rida Suchaing	Reporter	DDK
96	Sejidu		ERES
97	Paiastar Khongjee		



98	Arduk. C. Khyriemjer		NERCORMP
99	Raju B	SA	NERCORMP
100	N K Marbaniang	Technician	NEC
101	Th. Aditya	Ph.D	IIM
102	Semsang DB	Ph.D	IIM
103	Naman	Ph.D	IIM
104	Sanat		Grassroot Option
105	B R Dan	UDC	NEC
106	Samita Sharma	Program Assistant	ICIMOD
107	Nanki Kaur	Regional Programme Manager	ICIMOD
108	Nawras Pradhan	NRM Specialist	ICIMOD
109	Babul Dkhar	Reporter	Highland Post
110	Gunajit D Sarma	Programme Coordinator	SELCO Foundation
111	Gautam Boro	Skills & Training Manager	SELCO Foundation
112	D C Lyngdoh	Office Assistant	NEC
113	F K Mani	LDC	NEC
114	A Kharshing		NEC
115	Sanabam Singh	STA	NEC
116	Abhijit Sarkar	Consultant	NEC
117	Lizair Hek		NEC
118	Stevenly L	J Consultant	NEC
119	Amy Syiem	J Consultant	NEC
120	Anisha Wahlang	E Office	NEC
121	Pravind K	UDC	NEC
122	S K Roy	Steno	NEC
123	S Mishra		NEC



124	D Roy	UDC	NEC
125	Ranita Basak	MTS	NEC
126	S Das	MTS	NEC
127	N Vaiphei	MTS	NEC
128	Manav Dey	Reporter	NEC
129	Francis	Reporter	NEC
130	H B Rocky	Director	NERCORMP
131	Kailianlal	Dir(Tech)	NERCORMP
132	Khehmaink		
133	Peri Brahma	Content Writer	Finderbridge Tourism
134	Puspa Govan		NGO
135	K Moses Chalai	Add Secretary	NEC
136	Dr Glenn C Kharkongor	Chancellor	MLCU
137	Dr. Vincent Darlong	Vice Chancellor	MLCU
138	Dr Maribon Viray Sangma	Controller Examination and Evaluation	MLCU
139	Fabian Marbaniang	HoD, DEC	MLCU
140	Dr Bonnie Nicol	HoD, AHS	MLCU
141	Dr Porsara Kharbhih	Psychology	MLCU
142	Phidary Kharlukhi	HoD, TTM	MLCU
143	Dr Mebanlamphang Lyngdoh	HoD, Music	MLCU
144	Zaman Eddie Tongper	Faculty, TTM	MLCU
145	Rilanglin Kharpuri	PR Manager	MLCU
146	Deigo Sangma	Faculty, DSW	MLCU
147	Janice Shadap	Faculty, DECM	MLCU
148	Lucy Kurbah	Faculty, CScs	MLCU
149	Khrawbok Kharwanlang	General Admin Executive	MLCU



150	Phiba Isa Syiemlieh	Faculty, Dpsy	MLCU
151	Rebecca Kingbawl	Faculty, DEC	MLCU
152	Rihokmika Rymbai	Faculty, AHS	MLCU
153	Wankmen Kharbuli	Faculty, DSW	MLCU
154	Dr. Egira Shadap	Faculty, DEC	MLCU
155	Minorita Lyngdoh	Faculty, CScs	MLCU
156	Nadeen Pakyntein	Faculty, DSW	MLCU
157	Dawanisa Dhar	Faculty, DEC	MLCU
158	Dr. Chelmelyne Dhar	Faculty, DEC	MLCU
159	Lavinia Mawlong	Faculty, Gender Studies	MLCU
160	Dr. Zalmusanga Ralte	Faculty, Professor, DEC	MLCU
161	Rezina Mihu	IMI Member	SDFA
162	Oji Tacho	Member	SDFA
163	Ms H.P. Oka	Agriculture Entrepreneur	Spice Ziro
164	Ambru Mili	Volunteer	SDFA
165	Ruzing Bellai	Project Director	NERCORMP
166	Rigzin Spalbar	IMI Councillor	IMI
167	Rigzin Wangmo Lachic	Operator, Dolkhar Hatti	Hatti Dolkhar
168	Rinchen Angmo	Artistic Director	Art of Motion
169	Thingreiphi Lungharwo	Member	IMI
170	Brajakumar Singh	Deputy Director	Environment Dept.
171	Alen Khongsai	IDO	NERCORMP
172	Lalchuangliana		
173	Lalbiakzuala Ngente	Architech	MSDF
174	Lalawmpuia	Student	Mizoram University
175	Abigail Lalrinkimi	Student	Mizoram University
176	Lalhmangai Hzuala		



177	MS Dawngliana	Student	Mizoram University
178	Lalmuan Puii	Student	Mizoram University
179	Lalnuntluanga	Member	MSDF
180	Thungdemo Ovung	Entrepreneur	Nagaland
181	Dr. Sosang Longkumer	Bio-entrepreneur	Nagaland
182	Dolly Kikon	Professor	Melbourne University
183	RP Gurung	Member	IMI/ ECOSS
184	Pawan Kaushik	Member	IMI
185	Ms H. Theresa Darlong	Member	IMI
186	STS Lepcha	Managing Director	Uttarakhand Forest Development Corporation
187	Ratan Singh Aswal		
188	Sumanta Sharma	State PPP Expert	Uttarakhand Government
189	Major Yogendra Yadav		
190	Jeevanandan Duraisamy	Entrepreneur	Climate Smart Technologies
191	Abhijit Sharma	Director	Indian Institute of Entrepreneurship
192	B. Paul Muktieh	Chairman and Managing Director	NEDFi
193	Prof Biman Kumar Dutta	Member	NEC
194	K. Moses Chalai	Secretary	NEC
195	Khrieketoulie Shuya	Student	DETE, MLCU
196	Elizabeth Langdoh	Student	DETE, MLCU
197	Kato Awomi	Student	DETE, MLCU
198	Mewanshanbor Lyngdoh	Student	DETE, MLCU
199	Wanrilyne Diengngan	Student	DETE, MLCU
200	Omen Warjri Panor	Student	DETE, MLCU



201	Rikhi Phebe Panmei	Student	DETE, MLCU
202	Hope N. Sangma	Student	DETE, MLCU
203	Chinaoso Siro	Student	DETE, MLCU
204	Joshua Kharbuli	Student	DETE, MLCU
205	Ridiam Lakashiang	Student	DETE, MLCU
206	B. Zomuanpuia	Student	DETE, MLCU
207	Riakor Surong	Student	DETE, MLCU
208	Joshua L. Haokip	Student	DETE, MLCU
209	Euphrasia Siangshai	Student	DETE, MLCU
210	Eleazer Mary Kyndiah	Student	DETE, MLCU
211	Joshua Metha	Student	DETE, MLCU
212	Bamelaa Wahlang	Student	DETE, MLCU
213	Damelaa Wahlang	Student	DETE, MLCU
214	Algore Shira	Student	DETE, MLCU
215	Neelamroi Passah	Student	DETE, MLCU
216	Merijoy Nongsiej	Student	DETE, MLCU
217	Fairleenda Kurbah	Student	DETE, MLCU
218	Rubu Napi	Student	DETE, MLCU
219	Josiah Rongmei	Student	DETE, MLCU
220	Juncy Ferie Basaiawmoit	Student	DETE, MLCU
221	Evanylla Pala	Student	DETE, MLCU
222	Reple Buam	Student	DETE, MLCU
223	Samhunlang M Nongdhar	Student	DETE, MLCU
224	Banudshan Lawriniang	Student	DETE, MLCU
225	Yoowanka Dkhar	Student	DETE, MLCU
226	Baphrangdor Thangkhiew	Student	DETE, MLCU
227	Fortunately Paslein	Student	DETE, MLCU



228	Shrija Debbarma	Student	DETE, MLCU
229	Kisang Reang	Student	DETE, MLCU
230	Chapram Kiran Devi	Student	DEC, MLCU
231	Allo Sumi	Student	DEC, MLCU
232	Rubio Sangriang	Student	DEC, MLCU
233	KH Zodin Sanga	Student	DEC, MLCU
234	Lumperilla Thonglaru	Student	DEC, MLCU
235	Krissie Khongwir	Student	DEC, MLCU
236	Ibandalin Lymba	Student	DEC, MLCU
237	Kamcha Panka	Student	DEC, MLCU
238	Remisha Wanniang	Student	DEC, MLCU
239	Manuel Lynshing	Student	DEC, MLCU
240	Badapbiang Syiem	Student	DEC, MLCU
241	Alino Sumi	PhD Scholar	MLCU
242	Abanda Wahlang	PhD Scholar	MLCU
243	T J Singh	PhD Scholar	MLCU
244	Ofilia Dora Pakma	Student	MLCU
245	Hubuanamang Ganmei	Student	MLCU
246	Habakkuk Momin	Student	MLCU
247	Drowelshon khriam	Student	MLCU
248	Daneil Kharbangar	Student	MLCU
249	Wanlambha Nongrum		MLCU
250	Praneet Upadhya		MLCU
251	Derrick N Massar	Student	MLCU
252	Pangchak Marak	Student	MLCU





# INTEGRATED MOUNTAIN INITIATIVE

## **MOUNTAIN LEGISLATORS' MEET 2019**

SMDS - VIII, 6TH NOVEMBER, 2019, SHILLONG, MEGHALAYA

“TOWARDS BUILDING SECURE LIVELIHOOD  
OPPORTUNITIES FOR MOUNTAIN YOUTH”



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## A C K N O W L E D G E M E N T S

The successful conduct of the Legislators' Meet 2019, Shillong, would not have been possible without the active and full support of many people and organizations. I cannot thank them all here but nevertheless I will have to mention a few of them.

First our Convener, Smt. Agatha Sangma, Hon MP Lok Sabha. She helped the organisers with all the support she could muster and indeed in person too. She personally invited many of the MPs from the mountain States. Not all of them could attend but they were informed of the program.

Second, I have to thank the Chairman of the meeting Shri Vincent Pala, Hon MP Lok Sabha. He, without hesitation, helped in also coordinating and hosting us all in Shillong. He has made some very wise comments which are incorporated in the report.

Mrs. Ferlin Sangma and Mr. H M Shangpliang, Hon MLAs and Chairpersons need special mention. They both were part of our Steering Committee and have helped in shaping the successful conduct and outcome of the meeting.

My own colleagues from IMI Governing Council, MIMDI and the IMI Secretariat team who have worked tirelessly for this event and post event documentation need to be congratulated.

Finally, IHCAP and the SDC for funding this meeting – I thank them.

**Prem Das Rai, Co-convener**

Former MP LS & Governing Council  
Member, IMI

New Delhi: March, 2020



## **SUSTAINABLE MOUNTAIN DEVELOPMENT SUMMIT VIII**

The 8th edition of the Sustainable Mountain development Summit (SMDS-VIII) of the Integrated Mountain Initiative (IMI) was held in North Eastern Council, Shillong, Meghalaya from 4th – 6th November, 2019.

The annual Summits are a key convergence platform to share experiences, discuss issues of sustainable development, identify gaps and collectively work to arrive at policy recommendations. Every SMDS is based on a clearly laid out themes and is part of a strategy leading towards a more effective coordination amongst the Mountain States to influence policies as also to direct investments.

This year's SMDS solidified the learnings from the past SMDSs to come up with an effective strategy for sustainable development by building an ecosystem for young entrepreneurs. The identified areas critical to building an enabling ecosystem for entrepreneurs in the IHR was deliberated upon – Sustainable Agriculture, Sustainable Energy, Sustainable Agri-business, Sustainable Tourism. The Summit was inaugurated by Meghalaya Chief Minister Conrad K Sangma.

During the summit, he released a new IMI document, "Assessing the Changing Entrepreneurship Landscape in the Indian Himalayan Region"- which was prepared in collaboration with the Indian Institute of Management, Shillong.

Once again emphasizing on the gap between policies and action in the grassroots, he said that this can be bridged only through entrepreneurship. He highlighted the urgency to build up the potential of the youth to face the future which is likely to be disrupted by climate change and emerging technologies, particularly Artificial Intelligence (AI).

Through the course of the summit, presentations were made by representatives from ICIMOD, SDC, IMI, NEC, SELCO Foundation, TRIF, ADB, amongst many others. On both the days, the deliberations were divided into two parallel thematic sessions. Other inspirational stories of entrepreneurs from different states fueled the discussions on sustainable Agriculture, Sustainable energy, agri-business technology and sustainable tourism, and their potential for generating livelihood options in the mountain regions.

The two days of discussions threw up many ideas for follow-up, but almost all emphasized on the need for an entrepreneurial ecosystem by convergence of government, civil society, industry and financial institutions. It was also underlined that there was an urgent need to revitalize all government extension services.



## KEY ACTION POINTS:

- Creation of tax and financial literacy among the local entrepreneurs, and the institution of a climate risk fund to shore up entrepreneurship in the mountain region.
- Lawmakers representing the mountain states and uplands of the Indian Himalayan region need to urgently take up these recommendations at the appropriate policy platform.
- Taking a step forward in its agenda to encourage entrepreneurship, the summit came up with a decision to set up immediately a start-up incubation centre in partnership with IMI, Villgro and IIM, Shillong.
- Government schemes need to be better targeted, appropriate research needs to be done on the same.
- Need of Himalayan development brand for products/produce of the mountain region.

## LEGISLATORS' MEET – THE RATIONALE

The Indian Himalayan Region (IHR), constituting Jammu & Kashmir, Ladakh, Himachal Pradesh, Uttarakhand, Sikkim, Arunachal Pradesh, Nagaland, Manipur, Meghalaya, Mizoram, Tripura, and the hill districts of Assam (Dima Hasao, East Karbi Anglong and West Karbi Anglong) and West Bengal (Darjeeling & Kalimpong) covers over 16.2% of India's total geographical land area and host a rich diversity of culture with huge repository of traditional ecological knowledge.

Given their relatively small and scattered populations, mountain communities often go unheard in political and policy discourse of the country. Despite significant progress, technological advancement, and communication developments in the lowland areas of India, economic growth in the Himalayan States has not translated into inclusive livelihood opportunities for the rural poor, especially the youth. Poverty, vulnerability, and inequality are widespread, and access to resources and services and gainful employment opportunities are limited.

An essential question is how poverty, gender, vulnerability, social inequality, and livelihood insecurity in the mountains can be better understood and addressed giving special emphasis to the younger generation's aspirations. Strengthening skills for mountain livelihood opportunities, identifying innovative options, strategies and practices, and promoting mountain niche products and services for facilitating effective adaptation and building resilience, particularly for marginalised communities and younger generations will bring out sustainable development in the region.

## OBJECTIVE OF LEGISLATORS' MEET 2019

The Legislators' Meet is an important annual event which brings together legislators and local people representatives from mountain states to deliberate and examine key policy measures and highlight issues and challenges faced by the mountain states especially



related to the themes that are pursued in the Summit. This is hosted as an important part of Integrated Mountain Initiative's (IMI) annual 'Sustainable Mountain Development Summit' (SMDS) which addresses key challenges and opportunities of salient themes related to sustainable development of mountains and hills, raising awareness of policy changes and calling for action.

In 2019, SMDS-VIII was hosted at North Eastern Council (NEC), Shillong from 4th – 6th November by MIMDI, the IMI's Meghalaya chapter. The overall objective of SMDS-VIII was to create a roadmap for "Sustainable Mountain Initiative for Livelihood and Entrepreneurship for Youth". This theme offers an opportunity to understand the transformational dynamics based on economic, social and environmental factors, and the role youth, on whom the future sustainable mountains depend, can play.

Drawing from this, the Legislators' Meet 2019 deliberated on the outcomes of the Summit and focused on key policy interventions necessary for the advancement of the recommendations discussed during the meeting towards building secure livelihood opportunities for mountain youth.

## **THEMES OF THE LEGISLATORS' MEET 2019**

The deliberations and emerging recommendations of Legislators' Meet 2019 will focus on the outcomes emanating from SMDS-VIII under the themes listed below:

1. E-Agriculture (with Water Security in the era of Climate Change)
2. Renewable Energy and Energy Efficiency
3. Food Processing & Agri-business
4. Making Tourism Sustainable in the IHR

## **EXPECTED OUTCOMES**

The expected outcomes of the Mountain Legislators Meet 2019 are as follows:

- Engage legislators on key policy interventions necessary for taking the outcomes of SMDS VIII forward.
- Strengthen regional level cooperation to make collective submissions towards national policies on the development of mountain and hill regions.
- Identify avenues of urgent focus and potential from the perspective of legislators.
- Strengthen avenues of potential partnerships for building a viable ecosystem for young entrepreneurs of the region through support from legislators.

## **RECOMMENDATIONS & NEXT STEPS FROM THE LEGISLATORS' MEET 2019 – SMDS VIII:**

1. Climate Change and the SDGs (sustainable development goals) must be thoroughly discussed in the State Assemblies as it was found that very good ideas emerged from public representatives who have their ears close to the ground with their constituents. The impact of Climate Change is certainly being felt by the representatives. "We need policy integration on all levels" – Vincent Pala (Chair).



2. Climate change related disasters can play havoc and so a good system of dissemination of information and data science needs to be put in place. This is a policy issue that has to be taken by the various State Governments. The 15th FC has given liberal grants to take up this kind of work and so public representatives can definitely make use of it.
3. Livelihoods of young people and adults is an absolute necessity and the only way to go forward is to build entrepreneurial ecosystems in the constituencies and the States. For this to happen there has to be coordination with organisations like IMI and SELCO Foundation. Academic institutions also need to be roped in. Government of India measures can also be garnered. Skills have to be built as part of the eco-system.
4. Jhum Cultivation needs to be examined thoroughly. ICIMOD, which has done extensive work in this field, can come up with a paper which can be distributed to all the legislators and public representatives within 2020.
5. IMI will continue to engage with all the public representatives at all levels, from Parliamentarians, MLAs, State Governments and at the local level as well. It will coordinate future meetings to keep everyone engaged. At least one more meeting will be called within 2020. “Knowledge sharing is very important and needs to be encouraged” – Agatha Sangma (convener).

## SUMMARY OUTPUT OF DISCUSSIONS

1. All public representatives were of the opinion that they were updated from the briefings given by the representatives of IMI, IHCAP and SELCO. This is a valuable process that needs to be constantly done through engagement with organisations like IMI.
2. They all had a word on how their constituents were at risk from Climate Change impact and that they ought to be better prepared. They spoke of the need for early warnings and more data leading to correct information. They would like to be warned of the occurrence of cloud bursts which have taken many lives in the recent past.
3. They all expressed the vulnerabilities to these externalities and how they were to address them. Many felt the need that they ought to build more creative legislation and public policies to battle future Climate Change induced disasters in their States and constituencies. Also it would be ideal if more Climate Change curriculum be introduced in schools.



4. Many felt that all Mountain States' Legislators should propose to have discussion on Climate Change related issues in their respective State Assemblies so that they can have oversight on the policies that are formulated or under consideration.
5. They were emphatic that livelihoods needed to be extended in their own constituencies. Many of the representatives felt that market access and productivity tools were required for the youth to take up enterprises that would make it worth their while.
6. They welcomed the SELCO initiatives and many of them wanted SELCO to come to their constituencies and make a start. They would give all the cooperation that was needed.
7. Tourism was the other agenda that many felt could be taken forward. Here again it was a question of getting young people engaged and then trained to improve their skills. This is one area where there is a bright future for use of solar energy, physical and cultural assets for the benefit of young people, especially from rural areas. MP LAD & MLA LAD funds can be deployed to encourage this. In fact some are already doing this.
8. In the agriculture sector many wondered on the efficacy of Jhum cultivation and how that issue was to be tackled. This seems to be one area which needed much more clarity. This was for Mizoram and Meghalaya. ICIMOD representative, did try to clarify but there was very little time to engage on this issue. Consensus of the representatives was that jhum cultivation is unsustainable due to population increase. They wanted a solution to this issue.
9. Broomsticks also was talked about as a stable source of income for farmers for a long time. Honey and other horticulture produce were also referred to. In Tripura rubber plantation is a major revenue earner but it has Climate Change impact.
10. Sharing of some good practices also happened with farmers taking to kiwi fruit production in Meghalaya which was a great success. However, here again was the question of how marketing is to be realised.
11. Issues that many flagged were of drying up of water sources and over use of ground water. Ground water tables were going down especially as paddy of the winter months needed much more water. This necessitated a deeper understanding of ecosystem services of the forests and biodiversity, and how this was being adversely impacted by Climate Change – more directly reduced and timely precipitation.



# AGENDA OF THE MEETING

## SUSTAINABLE MOUNTAIN DEVELOPMENT SUMMIT VIII

**Mountain Legislators Meet 2019**  
on  
**Youth and Entrepreneurship in Indian Himalayan Region**  
*Towards building secure livelihood opportunities for mountain youth*

**6<sup>th</sup> November 2019 | 1400 – 1700 Hrs**  
**Conference Hall, North Eastern Council, Shillong**

**Chair: Shri Vincent Pala, MP (Shillong)**

Time (Hrs)	Session	Speaker
1400 - 1430	Arrival tea and registration	
1430 - 1435	Welcome address	Ms Ferlin CA Sangma, Hon'ble MLA Chairperson, MSCCC & SD
1435 - 1445	Opening Remarks	Shri Vincent Pala, Hon'ble MP Co-convenor Mountain Legislators Meet 2019
1445 - 1455	Context Setting	Shri Sushil Ramola President, Integrated Mountain Initiative
1455 - 1505	Special Address	Dr Mustafa Khan, IHCAP/SDC
1505 - 1520	Special Address	Mr Thomas Pullenkar, Senior Advisor SELCO Foundation
1520 - 1640	Open Discussion	Moderated by Shri PD Rai, former MP (Co-Convener)
1640 - 1655	Concluding Remarks/Way forward	Ms Agatha Sangma, Hon'ble MP Convenor Mountain Legislators Meet 2019
1655 - 1700	Vote of thanks	Shri HM Shangpliang, Hon'ble MLA
Followed by cultural program & dinner at Pinewood Hotel from 1800 hrs onwards		



# REPORT OF THE MOUNTAIN LEGISLATORS' MEET 2019

The meeting was called to order by Shri Vincent Pala, Hon'ble Member of Parliament of Shillong (Lok Sabha) and Chair of the meeting.

## **WELCOME ADDRESS BY SMT. FERLIN SANGMA, HON'BLE MEMBER OF THE LEGISLATIVE ASSEMBLY OF MEGHALAYA**

While welcoming the legislators, parliamentarians and members of District Councils, on behalf of the Government of Meghalaya, Integrated Mountain Initiative (IMI) and Meghalaya Integrated Mountain Development Initiative (MIMDI), Smt. Ferlin Sangma stated that the deliberations of this Mountain Legislators' Meet will focus on youth and entrepreneurship in Indian Himalayan Region towards building secure livelihood opportunities for mountain youth. Being the Chairperson of the Council on Climate Change and Sustainable Development, Meghalaya, Smt. Ferlin Sangma articulated the importance of the platform to move forward for the common cause of the mountains. Hoping for a fruitful and engaging discussion, she thanked IMI and IHCAP for bringing all the stakeholders together on the same platform. She also thanked the resource persons who have worked relentlessly since day one to make the program a success.

## **SHRI VINCENT PALA, HON'BLE MP, SHILLONG, MEGHALAYA (LOK SABHA)**

Shri Vincent Pala thanked the legislators for attending the meeting. He talked in brief of his association with IMI and said that IMI can help legislators by being consultants and advisors. Thereafter he invited Shri Sushil Ramola to set the context of the meeting.

## **CONTEXT SETTING BY SHRI SUSHIL RAMOLA, PRESIDENT, IMI**

Shri Sushil Ramola, briefly spoke on the previous Legislators' Meet held in Meghalaya on 11th September 2019 which was chaired by Shri Conrad Sangma, Hon'ble CM, Meghalaya. The issue of climate change and its impact on everyday life were discussed. Studies have proven that globally, we are likely to face a huge temperature increase and if we can control it within a 1.5-degree centigrade increase, we will be fortunate, however, huge amounts of work will be required to make that happen. Everywhere there is visible variability in rainfall, seasons changing, and changing cropping patterns, impacting farmers, hospitality industry, and will soon impact everyone. These were the deliberations which were brought about by IHCAP and Swiss Development Corporation (SDC). He spoke on the regional legislators' meet that was conducted in Bangalore on 25th September 2019 focusing on water policy for Himalayan futures. Legislators from different states came together to discuss how legislators can work towards policy changes and implementation which can work towards building the resilience of the mountain states. This resulted in the proposal to create a water solutions lab for Himalayan futures to deal with some of these issues.



Another important action facilitated by IMI was the Conclave of the Himalayan States on 28th July 2019 in Mussoorie. Here, IMI worked closely with researchers and state CMs to bring home the point that mountain states need devolution of funds to compensate for the ecological services provided by IHR states and to counter the impact of climate change. This recommendation was made to the 15th Finance Commission and work is going ahead with this.

Shri Ramola also briefed the gathering on the main outcomes of the Sustainable Mountain Development Summit VIII (SMDS VIII) held in Shillong. The theme of SMDS VIII was sustainable mountain livelihoods through youth entrepreneurship. The message which came out strongly was that in mountain states it is difficult to provide jobs and livelihoods through government jobs, however, this gap can be fulfilled through entrepreneurship which has high potential given the aspirations of youth today. Huge opportunities exist in alternative energy, food chains, value chains, food processing, tourism, etc. The summit was attended by many entrepreneurs and about 100 people from outside the state. He also briefed the gathering of the downstream work that is already in the pipelines as part of the post-SMDS VIII work. The biggest out of these is an incubation centre that IIM Shillong and IMI are working on together. This will enable the creation of entrepreneurs' hub. This will also bring in partners like Villgro and TRIF. The first step towards this is identifying sectors and facilitation of networks for entrepreneurs. He once again stressed that this will require huge policy changes which will need tremendous support from legislators – from both policy and management point of view.

He concluded by briefing the House about Dr. R.S. Tolia Award instituted in the name of IMI's Founding President. He thanked all attendees for participating in the Meet.

**PRESENTATION ON 'THE POLITICAL ECONOMY OF MANAGING CLIMATE RISK'**  
**BY DR. MUSTAFA KHAN, TEAM LEADER, INDIAN HIMALAYAS CLIMATE**  
**ADAPTATION PROGRAMME (IHCAP)**

Dr. Mustafa Khan spoke about IHCAP which is a bilateral project between the Government of Switzerland and India for sustaining the Himalayan ecosystem. The key points he discussed in his presentation are:

- ◆ Temperatures are rising in the mountains at a rate higher than that of the global average. Climate change risk needs to be understood much more finely than what we understand now as policy makers. Existing practices can be made much better and our ambitions need to be raised much more to respond to the threat of climate change. There is need for climate change adaptation in the Himalayas: By 2100 even if global warming is kept to 1.5 °C, the Hindu Kush Himalaya (HKH) region will warm by 1.8 + 0.4 °C (Source: The Hindu Kush Himalaya Assessment, 2019)



◆ Based on the idea of climate risk, he elucidated that there are three distinct components of risk – hazards, which comprise of phenomena like flash floods, cloud bursts, glacial lake outburst floods or even droughts; exposure, which is related to how exposed we are as a community to the hazards taking place in the mountains; and vulnerability, which means the degree to which a community is exposed to climate change.

◆ The policy interpretation of the three elements of risk were discussed by Dr. Mustafa Khan. He explained that with hazards, there is very little that the government can do because there is very little knowledge of climate science research, and capital-intensive methodologies are required to access this.

◆ With exposure, the policy interpretation would be moving the people out of the path of hazard, which is possible but requires immense political will and capital. As legislators, it is very difficult to take action before a hazard. Hazards are trackable using satellites, but mountain specific hazards like cloud bursts are difficult to monitor and predict accurately the area of impact due to topography. Tackling the vulnerability part of risk is most doable for legislators – by enhancing the capabilities of communities. Some of these measures are already taken by governments - Ex gratia payments, property damage compensations, etc. Another measure would include providing better quality seed varieties to farmers for agriculture. Overall what we are seeing right now in IHR is that expectations of the communities are rising more towards exposure and hazards.

◆ IHCAP undertook a study in 2018 with Indian Institute of Science Bengaluru, IIT-Guwahati, IIT-Mandi and Department of Science and Technology, entitled 'Climate Change Vulnerability Assessment for the Indian Himalayan Region Using a Common Framework.' All the 12 state governments worked together to create this report. The study showed the districts which are more vulnerable than others in a particular state. The key result was that out of the 12 IHR states, the low vulnerability states were Sikkim, Uttarakhand and Arunachal Pradesh. The moderately vulnerable states were Tripura, Nagaland, West Bengal, Meghalaya, Manipur and J&K. The high vulnerability states were Mizoram and Assam.

◆ The implications are clear that the Himalayan states are more sensitive than any other part of the country. Being less vulnerable does not mean that these states don't need support. It means that these states are less vulnerable and don't need support for the vulnerability part of risk, but they need support for hazard and exposure part. All IHR states are vulnerable and the ranking is relative.

◆ Projects dealing with vulnerability are now saturated. Now the time is to think about addressing risk before the hazard strikes. Very few projects are focusing on the hazard and exposure part of it. If proposals are submitted along these lines, there is a higher chance that they will be accepted, and community aspirations will also be addressed.



## **PRESENTATION ON 'SUSTAINABLE ENERGY ECOSYSTEM DEVELOPMENT'**

### **BY SHRI THOMAS PULLENKAV, SENIOR ADVISOR, SELCO FOUNDATION**

Shri Thomas Pullenkav briefed the gathering about the SELCO Foundation which works on clean energy and energy efficiency, and sustainable livelihoods through youth entrepreneurship. SELCO believes that sustainable energy and energy access is a catalyst for development irrespective of which SDG it is, be it ending poverty, health, education, gender equality, etc. Because of the challenging topography of mountainous areas, one cannot think of running electrical cables across mountains or forests. What makes a lot more sense is clean energy in the form of biomass energy, pico hydro energy and solar energy. Following this he gave some examples of the work SELCO is doing which can be introduced in the IHR.

- ◆ Energy plays a huge role in value addition. SELCO engages in energy incubation, i.e., identifying entrepreneurs working in energy. They help incubate energy enterprises and help them grow.
- ◆ Some small shops in the rural areas which do not have access to energy have been installed with solar-powered fridges for storing yoghurt, milk, poultry, etc. and through this food spoilage is avoided which helps boost business.
- ◆ Another simple machine is the solar powered sewing machine which has been installed in one centre in the Garo hills. This has increased the productivity of the tailor who can now stitch much more.
- ◆ Another example given was that of the cotton value chain. Sowing and irrigation of cotton can be improved with solar powered water pumps. Cotton picking, ginning, weaving and sewing are other areas in the value chain where energy interventions have brought about change in the lives of people.
- ◆ Chilly grinder is another example which uses decentralised energy for adding value and grinding chilly.
- ◆ Mobile food vending van power by solar energy with an inbuilt fridge which can store perishable goods.
- ◆ Usually people have to come to a central area to access health services. SELCO has tried to take health services to rural areas by ensuring decentralised energy. In Arunachal Pradesh Public Health Centre, SELCO has done both energy components plus design of the centre. There is also a boat clinic in Assam. SELCO is also working in Garo Hills with public health centres where they are powering them with solar.



Shri Pullenkav expressed SELCO's interest in working with state and district level policymakers in the IHR to design policies to make the delivery of sustainable energy easier. This would include financial models to ensure that entrepreneurs in rural areas can own the system. SELCO can help map energy requirements across various chains and programs.

**SHRI P.D. RAI, COUNCILLOR, IMI**

Shri P D Rai began by saying that this is an important issue that needs to be looked at from all angles. There are a lot of resources available at our disposal. One of the key institutional offerings of IMI is to see how to integrate all the policies and programmes across the IHR, understand the technology, human resources, and forests. What drives policymakers is how they relate all of this to the people. He further stated that policy makers should work for the people who vote them into office and are able to help them. The value addition that IMI would like to add is that when the participant policy makers leave the room, they will have some idea about how to encourage youth entrepreneurship in their constituencies in the background of climate change. The policy makers are in a position to take these offerings and connect it to the people by way of a project or in terms of policies. Policies can be at the level of local, state and national policies.

**Open Discussion (Moderated by Shri P. D. Rai)**

**Smt. Miani Shira, Mla, Ampati, Meghalaya:**

- ◆ As legislators we always think about how we can help our people. Regarding climate change, it's time for policy change.
- ◆ How can policymakers make the uneducated and village people understand the relevance and urgency of climate change?

**Shri M. Gouzamang Guite, Mdc From Churachandpur, Manipur:**

- ◆ He shared a few points regarding adaptation to climate change and sustainable development.
- ◆ Jhum cultivation is the main driver of the economy in hill areas – slash and burn method of cultivation. This type of cultivation greatly affects climatic conditions.
- ◆ Hilly areas have small streams which populate the landscape. Dams can be created on these streams which can be channelized to a pond which can then be used for Pisciculture.
- ◆ Excess water from the pond can be used for terrace cultivation and horticulture like sugarcane, etc.



**Shri C.T. Lian Guite, Member of District Council, Churchandpur, Manipur:**

- ◆ Need for government policy for small skill development units/institutes to be set up in schools.
- ◆ Small processing units in schools should be made mandatory so that kids learn from a young age. In Churachandpur, cinnamon is of very high quality. If infrastructure is made available, they can be processed in these small facilities.

**Shri S.B. Mara, Mara DC, Mizoram:**

- ◆ In the area under Mara district council, there is a need for sustainable livelihood opportunities. Most of the areas under MADC have already been surveyed.
- ◆ Could IMI help them with proposals for projects?
- ◆ There is a need for sustainable livelihood options and alternatives to replace existing unsustainable practices and for preservation of our resources.
- ◆ Sensitisation of the population in these areas is of high priority.

**Shri V.B. Byhna, MDC, Mizoram:**

- ◆ In the Mizoram hilly areas the prevalence of Jhum cultivation is still huge. Need a sustainable alternative to Jhum cultivation. Eg. Horticulture
- ◆ Computer knowledge must be given to the youth of the villages.

**Shri Deriek Salai Solo, MDC, Mizoram:**

- ◆ He stated that most villages in ADC areas grow chilli and ginger and the product is substantial for local needs. But it cannot be processed due to lack of technology and lack of power supply. Produce is procured by businessmen from Silchar at low prices.
- ◆ Instead of this, if we procure a machine to process the produce, we will be able to be self-sufficient for chilly produce in the state.
- ◆ SELCO foundation can come in here.
- ◆ Raised question to Dr. Mustafa Khan: Mizoram is one of the top vulnerable states. How was this conclusion made? Suggestions for improvement.



### **Shri Pradeep Tamta, MP (Rajya Sabha), Uttarakhand:**

- ◆ All states have different priorities. Himalayan states and their identity and culture needs to be incorporated in development policies and agenda.
- ◆ Himalayan states are vulnerable because they are sustaining the plains of India. All major rivers originate in the Himalayas. All the development activities in these states that have taken place have to some extent contributed to increasing the vulnerability of the IHR. Eg. Cloud burst has become a common phenomenon now.
- ◆ Mountain states need to be compensated for ecosystem services that they provide – this needs to be taken up with the government for formulation of policy.
- ◆ Need for policy in mountain states for sustainable infrastructure. Himalayan development authority or Himalayan development council for all of IHR can be envisioned. This initiative needs to be taken forward as states are small and cannot push for this alone.
- ◆ Landslides are a huge problem all over IHR, but no integrated infrastructure policy exists. There is no sustainable technology so far in the IHR like it is being done in many other countries.

### **Shri Dr. Azad Zaman, MLA, Rajabala, Meghalaya [West Garo Hills]:**

- ◆ Farmers in Garo Hills are investing in rubber plantations but as a consequence of this the weather is becoming hotter. We need to have a mass awareness campaign on this.
- ◆ In the plain part of Garo Hills, water-intensive paddy cultivation is depleting the groundwater reserve. Winter crop Boro paddy needs water for 120 days from the transplanting stage to the reproductive stage. Water is pumped from the ground and supplied to the paddy fields. Earlier, water would be pumped from a depth of 30 meters. whereas now, digging is done down to 60-100 meters. Groundwater reserve is reducing.
- ◆ Local produce like cashew nuts and cardamom are thriving, but they are procured by businessmen from Assam or West Bengal at very low prices. The original farmer is the worst sufferer. Market regulatory mechanism needs to be set up. Farmers are otherwise losing revenue.
- ◆ Militant organisations are under ceasefire in Garo hills. Many of the youth in the area are educated. Can we get them engaged in food processing or other livelihood programmes?



- ◆ There is a need for mass awareness campaigns on these issues.
- ◆ MLAs from Garo hills are ready to cooperate on these issues if outside parties come into the guide. Together we can organise several programmes.

**Shri Saleng Sangma, MLA, Gambegre, Meghalaya:**

- ◆ Jhum cultivation used to happen in cycles before – land used to be left fallow for at least two cycles to allow the land to heal. However, with increasing population there is no time for land to be left fallow now to heal.
- ◆ Cherapunjee no longer receives the highest rainfall. There is rampant stone quarrying in these areas which is harming the ecology.
- ◆ Many are now moving to rubber plantations in the Garo hills. Problems with such plantations have been discussed by earlier speakers – what are the alternatives? Without alternatives we cannot ask villagers to stop these activities.
- ◆ Certain practices have been inherited and ingrained in the lifestyle of the people. Therefore, when politicians try to bring about change through policies, it's difficult.
- ◆ Mass sensitisation programmes are necessary to change how people conduct practices – moral institutions like religious institutions and NGOs should spearhead this.

**Shri Jitendra Chaudhury, Former MP, Tripura:**

- ◆ In Tripura, rubber is a profitable plant yielding good prices, hence it is being taken up by more and more people – however, problems associated with rubber plantation have already been discussed. What are the alternatives to this?
- ◆ In Tripura, there are a number of hill and tribal communities. Some tribes are still practicing Jhum cultivation. There were several experiments by the government to settle them in permanent land-based activities. But only rubber has been found to be the best practice.
- ◆ 30-40 years ago, environment issues used to be limited to experts. Now, it is the issue of commoners because it impacts the lives and livelihoods of all people.
- ◆ In every state, legislators need to be sensitised about climate change and climate change adaptation.



- ◆ Request IMI to appeal to every CM and Speaker of all IHR states for Special Sessions in state assemblies on climate change adaptation. These sessions can include other representatives of local bodies and experts as it will be important for knowledge building which will influence policy making.

**Shri Pravat Chowdhury, MLA, Manu, Tripura:**

- ◆ Unemployment is increasing day by day. We need to make job opportunities available for our youth.
- ◆ There is a need to introduce an integrated funding system for pisciculture, horticulture, etc. for sustaining land-based activities and recharging ground water supply.
- ◆ The other necessary action that needs to be introduced at the earliest is climate change education in school curriculum.

**Shri Kimfa Sidney Marbaniang, MLA, Rambrai Jyrngam, Meghalaya [West Khasi Hills]:**

- ◆ Main concern in his constituency is the deforestation happening there. People are dependent on timber for livelihoods which is leading to increasing felling of trees. The challenge lies in how to balance livelihoods with ecology.
- ◆ There is a need for alternatives and solutions in order to sensitise villagers and divert from timber business to other alternative livelihoods.

**Shri George B. Lyngdoh, MLA, Umroi, Meghalaya:**

- ◆ Meghalaya has been bearing the brunt of National Green Tribunal to protect the ecology. Coal mining has been banned and thousands of livelihoods have been snatched overnight in order to protect the environment. Many stone quarries have also been closed down especially in Umroi, which has again resulted in loss of livelihoods. Our government is not prepared to balance ecosystem protection and livelihood protection.
- ◆ In the absence of these livelihoods, people are driven to illegal activities – coal mining, limestone, sand quarrying, and plundering our natural resources because of absence of sustainable livelihoods.
- ◆ The need of the hour is to make policies to balance livelihoods with ecology.
- ◆ Integration between departments is also lacking. Integrated ecosystem management information system where micro data on soil, minerals, air quality, water quality, climate variables, environmental damage, agricultural data, etc., needs to be integrated under one umbrella and made accessible.



- ◆ Small steps can go a long way. For example, waste management systems in rural markets can take a fully zero-waste approach. But people need to be empowered and trained for these. Solar energy needs to be brought into central government policy and solar lighting for villages. Affordable household solar lighting needs to be made available.
- ◆ Energy efficient schools is another area which Meghalaya needs to look at, which integrates smart energy and energy efficiency.

**Shri Marcuise N. Marak, MLA, William Nagar, East Garo hills, Meghalaya:**

- ◆ His constituency being in the heart of the Garo Hills, most of the reserved forests are in this constituency. Jhum cultivation is also practiced in his constituency.
- ◆ He has been trying to discourage Jhum and has been encouraging people to go for horticulture. Though some people are trying to take up horticulture, change in mindset is essential.
- ◆ There is huge scope for youth entrepreneurship. Horticulture is already being practiced. Many products like Betel nuts, oranges, honey, etc. have a huge scope if they are marketed properly. How can we establish processing units to engage youth and develop a network of entrepreneurs working on these areas?

**Shri Rakkam A. Sangma, MLA, Rongara Siju, Meghalaya:**

- ◆ Climate change is what will impact everyone.
- ◆ Conservation efforts have not been successful because it has come from government departments. Many people view preserving forests as equivalent to destroying traditional livelihoods.
- ◆ Education and awareness is key and should be made part of the curriculum from a young age. The message of climate change and climate consciousness should reach every corner of IHR with education.
- ◆ As politicians, we should take responsibility and frame policy for payment of ecosystem services.
- ◆ We depend on Delhi for fund allocation but all of India depends on us for water, oxygen and other resources. Therefore, the Government of India should take responsibility.
- ◆ Dr. Mustafa – Please let us know why Assam and Mizoram are high-risk, based on which indicators?



**Shri Rupert Momin, MLA, Kharkutta, Meghalaya [North Garo Hills]:**

- ◆ The production of bananas is the highest in North Garo hills in all of Southeast Asia. But due to lack of proper market linkages, it is bought at a low price by middlemen from Assam. Farmers are not getting what they should get.
- ◆ In his constituency, broom stick cultivation is done. For this, the farmers burn the land so that it is ready for next year. Traditional practice of broom plant cultivation is profitable and easy to cultivate in Meghalaya – how can we make it more organised?
- ◆ Is there a way in which existing Jhum and broom cultivation can be done in a more sustainable and organised way in Meghalaya?
- ◆ Question for Dr. Mustafa Khan – Mountain regions are at a high risk of cloud burst. This happened in 2014 in his constituency where a whole hillock came sliding down and many people died. What is the preventive measure? How can we sensitise people?
- ◆ To Mr. Thomas Pullenkar – All MLAs from Garo Hills will be very happy to be part of SELCO's work in Garo Hills. Scientists and academicians can guide the work that we are doing in our constituencies.

**Shri S.G. Esmatur Mominin, MLA, Phulbari, Meghalaya [West Garo Hills]:**

- ◆ In 2014 catastrophic floods hit parts of Garo hills, especially the plain belt of Garo Hills. Many lives were lost, houses washed away and trees toppled. Since it was caused by a cloud burst, we did not get any prior information. Is there any scientific measure we can take to be informed earlier of such impending dangers?
- ◆ To make the people aware we need a common platform where resources can be made available to anyone and everyone for sensitisation of masses.

**Smt. Ferlin A. Sangma, MLA, Selsella, Meghalaya [West Garo Hills]:**

- ◆ Much has been discussed and everyone's participation has given this meeting meaning.
- ◆ Youth and entrepreneurship is the main focus. Education curriculum has to be changed. It needs to be much more practical and entrepreneurial.
- ◆ Legislators as stakeholders must work on sustainable development.
- ◆ Legislators and bureaucrats also must upgrade their knowledge periodically.



**Dr. Mustafa Khan, IHCAP:**

- ◆ IHCAP has Climate Awareness Programmes state-wise and also various state media workshops.
- ◆ Eg: The Media Fellowship with the Government of Manipur - to take detailed stories of climate change adaptation.

**Shri Thomas Pullencav, SELCO Foundation:**

- ◆ Be it Jhum or Rubber plantation, we have to offer alternatives to people.
- ◆ SELCO will be happy to be knowledge partners with the Government of Meghalaya or work independently with Legislators.

**Shri Dhruvad Choudhury, ICIMOD:**

- ◆ What are alternatives to Jhum? Why has it become like this now? It is because of land ownership patterns.
- ◆ Alternatives – Markets, credit, tech, etc. everything needs to develop together.

**Shri Sushil Ramola, President IMI:**

- ◆ Building awareness among the masses, legislators and bureaucrats is the first step.
- ◆ IMI can engage different organisations for awareness building in Meghalaya.
- ◆ Creation of entrepreneurship ecosystem – 1 lakh entrepreneurs in next 10 years. Need to look at all levels – demand side, supply side, market side, incubation side. Not a government-led entrepreneurship ecosystem, but entrepreneurship-led.
- ◆ 15th FC: ecosystem services funding - more work is required to be done in order to build partnerships.
- ◆ Need to follow up on post -SMDS VIII work.

**Ms. Agatha Sangma, MP (Lok Sabha), Tura, Meghalaya:**

- ◆ There must be awareness and sensitisation at all levels – constituency and bureaucracy is step one.



- ◆ Best practices and knowledge sharing is very important and needs to be encouraged even more.
- ◆ For legislators, it is our responsibility to upgrade our own knowledge to make our constituency better. We have tools at our disposal like this Mountain Legislators' forum where we can learn from each other. We need to see how best practices can be scaled up. There are many civil society organisations in place which can support us.
- ◆ There are existing policies – but will need to be supported by legislators for proper implementation.
- ◆ Special sessions on climate change adaptation is a must in Assemblies.

**Shri Vincent Pala, MP (Lok Sabha), Shillong, Meghalaya:**

- ◆ Through consistent efforts by Legislators a lot of change can be generated.
- ◆ We have forums with experts and technocrats who can guide us.
- ◆ Need policy integration on all levels.

**VOTE OF THANKS BY SHRI H.M. SHANGPLIANG, MLA, MAWSYNRAM, MEGHALAYA**

He started by saying that livelihood opportunities for mountain youth are many, but we should focus on our strengths – eg. Tourism. This holds true for all of IHR. The youth need specialised sectoral training. He shared the example from his own constituency. After becoming MLA, he earmarked 12 lakh from MLA fund and engaged ETPL India limited to train 100 youth on tourism and hospitality sector for a duration of 4 months. All these 100 youth from his constituency have been well placed at the end of the training session. If each policymaker can make little contribution, we will have so many trained and employed youth by the end of this term.

The other strength is local skills. Youth need to be given training for excelling in their own trade. There is a need for uniform policies throughout the Himalayan states. We need to learn from each other's best practices and could have a similar kind of plan of action on any programme.

He thanked the MLM forum, under the leadership of IMI, for bringing together the heads of IHR government to think collectively about Himalayan futures. When all 12 states go together with a unified voice it can create a huge impact. This forum is a unique platform, bringing together three levels of legislature – MLAs, MPs and MDCs. He further thanked all participants for their contributions and suggestions and ensured that they will be taken into consideration for future action of IMI.



# ANNEX 1: LIST OF ATTENDEES WITH SIGNATURES

Sl No	Name	Designation	Email ID	Phone No	Signature
1	MUSTAFA ALI KHAN	Team Leader IHCA, SAC	mustafa.e.ihca@in	9213975028	Mustafa Ali Khan
2.	SUSHIL RAMOLA	PRESIDENT	sushil.ramola@gmail.com	9810162526	Sushil Ramola
✓ 3	MIANI SHIRA	MLA AMPATI	miani.shira@gmail.com	8415918990	Miani Shira
✓ 4.	M. Grougmaning Gite	MDX	manggite@gmail.com	9088865566	M. Grougmaning Gite
✓ 5.	C.T. Lian Gite	MDC	lianseodiffmail.com	897425922	C.T. Lian Gite
✓ 6.	SB. Mara	MDC	MA DC	873009667	SB. Mara
✓ 7.	VB. Byhma	MDC	MA DC	9436149014	VB. Byhma
✓ 8.	Derick Salai Solo	MDC	MA DC	897465840	Derick Salai Solo
✓ 9.	Pradeep Tantu	MP (Rajya Sabha)	mpg1mar46@gmail.com	903180055	Pradeep Tantu
✓ 8.	Dr. AZAD ZAMAN	MLA	dr.azadzaman@gmail.com	9005861423	Dr. Azad Zaman
✓ 12	Shri Sahy Seng	MLA	sahy.seng@gmail.com	705529657	Shri Sahy Seng
✓ 13	AGATHA SANGMA	M.P., TURA	agatha.sangma@gmail.com	9953190054	Agatha Sangma
✓ 14.	VINCENTH RALA	M.P. Skillong	mrskillong@gmail.com	9650806333	Vincenth Rala
✓ 15.	P.D. RAI	For MP/MLA			P.D. RAI
✓ 16.	H.M. SHANGPLIANG	MLA	hmsangpliang@gmail.com	9863021317	H.M. Shangpliang
✓ 17	JITENDRA CHAUDHURY, EX-MP		jkhundhury2008@gmail.com	9862567842	Jitendra Chaudhury
✓ 18	PRAYAT CHOWDHURY	MLA	premsadagax@gmail.com	9612051400	Prayat Chowdhury
✓ 19	KIMPA MALSANIANG	MLA	kinpasidney@gmail.com	9774001685	Kimpa Malsaniang
✓ 20	GEORGE B. LYNDOH	M.L.A., MCHALAYA	georgeblyndoh@outlook.com	9612170942	George B. Lyndoh
✓ 21	Marceline N. Mank	MLA	marceline.n.mank@gmail.com	7628834663	Marceline N. Mank
✓ 22	Rakkam A Sangma	MLA	rakkam.sangma@gmail.com	883728826	Rakkam A Sangma
✓ 23	Rupert Monin	MLA	rupertmonin@gmail.com	7002528663	Rupert Monin
• 24	THOMAS PULLENKUN	SELCOF	thomas@selco-india.com	9880013140	Thomas Pullenkun
• 25	Roshan Manamcho	SELCOF		9900036776	Roshan Manamcho
• 26	K. MOSES CHALAI	SECRETARY NEC	k.moseschalai@nic.in	9560695035	K. Moses Chalai
• 27	KASHAN SINGH GUPTA	Asst. Project Officer	kashan.singh@gmail.com	7017586906	Kashan Singh Gupta
• 28	R. NEGI	VP. IMT	r. negi@imt.org	90536231	R. Negi
• 29	A. JAMIA	Coordinator	amirjamia@gmail.com	943600267	A. Jamia
✓ 30.	S G E MONTAN	MP/MLA	sgemontan@gmail.com	9862288388	S G E Montan



## ANNEX 2: LIST OF ATTENDEES

Legislators' Meet 2019  
 "Towards building secure livelihood opportunities for mountain youth"  
 6th November 2019

List of attendees				
S. No	Name	Designation	E-mail ID	Phone No
1	Mustafa Ali Khan	Team Leader IHCAP, SDC	mustafa@ihcap.in	9213975028
2	Sushil Ramola	President, IMI	sushil.ramola@bable.com	9810162526
3	Miana Shira	MLA, Meghalaya, Ampati	miana.shira@gmail.com	8415918990
4	M. Gouzamang Guite	MDC	mongguite_7@gmail.com	9089865566
5	C.T. Guite	MDC	lians@rediffmail.com	8974225922
6	S.B. Mara	MDC		8730096674
7	V.B. Byhna	MDC		9436149014
8	Derieth Salai Solo	MDC		8974658469
9	Pradeep Tamta	MP(Rajya Sabha), Uttarakhand	pradeep.tamta@sansad.nic.in	9013180055
10	Dr. Azad Zaman	MLA, Meghalaya, Rajabala	drazadzaman@gmail.com	7005861423
11	Shri Saleng Sangma	MLA, Meghalaya, Gambegre		7085529652
12	Agatha Sangma	MP, Tura	agathasangma@gmail.com	9958190054
13	Vincent Pala	MP, Shillong	mpshillong@gmail.com	9650806333
14	P.D. Rai	Former MP/ IMI	pdrai8@gmail.com	9933088001
15	H.M. Shangpliang	MLA, Meghalaya, Mawsynram	hmshangpliang@gmail.com	9863021313
16	Jitendra Chaudhury	Ex-MP	jchaudhury2008@gmail.com	9862567842
17	Pravat Chowdhury	MLA, Tripura, Manu	premsadaga@gmail.com	9612051400
18	Kimfa Marbaniang	MLA, Meghalaya, Rambrai Jyrngam	kimfasidneymarbaniang@gmail.com	9774001688
19	George B. Lyngdoh	MLA, Meghalaya, Umroi	georgeblyngdoh@outlook.com	9612170942
20	Marcuise N. Marak	MLA, Meghalaya, William Nagar	marakmarcuise@gmail.com	7628834663



21	Rakkam A. Sangma	MLA, Meghalaya, Rongara Siju	rakkamsangma1983@gmail.com	8837288826
22	Rupert Momin	MLA, Meghalaya, Kharkutta	rupertmomin@yahoo.co.in	7002528663
23	Thomas Pullencav	SELCO Foundation	thomas@selco_india.com	9880013140
24	Roshan Mascerenhas	SELCO Foundation	roshan@selcofoundation.org	9900036776
25	K. Moses Chalai	Secretary NEC	k.moseschalai@nicin	9560695035
26	Krishan Singh Rautela	Member, IMI; ADB	krautela@gmail.com	7017586906
27	Ramesg Negi	VP IMI	rameshnegi56@gmail.com	9205318231
28	Amba Jamir	Councillor, IMI	ambajamir@gmail.com	9436000267
29	S.G. Esmatur Mominin	MLA, Meghalaya, Phulbari	sgemominin951@gmail.com	9862288388

## ANNEX 3: PHOTOS FROM THE LEGISLATORS MEET '19









## ANNEX 4: NEWS REPORT

NOVEMBER 7, 2019

# Mountain legislators gather in city, discuss climate change

By Our Reporter

**SHILLONG:** The Mountain Legislators' Meet was held in NEC, bringing together legislators from different mountain states to deliberate on and examine key policy measures and highlight issues from the vantage point of the mountain states.

The meet was organised by Integrated Mountain Initiative and hosted by Meghalaya Integrated Mountain Development Initiative (MIMDI) and Martin Luther Christian University (MLCU).

The conference — convened by Member of Parliament from Tura Agatha Sangma, chaired by MP of Shillong Vincent Pala, and co-chaired by former MP of Sikkim (LS) PD Rai — was attended by MPs, MLAs and representatives of Autonomous District Councils from Meghalaya, Uttarakhand, Ladakh, Sikkim, Manipur, Nagaland, Mizoram, Tripura and members of IML, MIMDI, Swiss Development Corporation, SELCO Foundation and ICIMOD.

The members raised several critical areas of concern with regard to the future of livelihoods and entrepreneurship in terms of climate change.

Member of Parliament from Tura, Agatha Sangma highlighted the importance of knowledge sharing and scaling up of best practices for effectively tackling common issues of the Indian Himalayan Region.

Member of Parliament of Shillong, Vincent Pala also added that legislators can make a huge difference if they empower themselves by upgrading knowledge and finding sustainable solutions through collaborative efforts.

The discussion highlighted the need for sensitisation of general public, bureaucracy and politicians on the issues of climate change and the ways in which legislators can use policy instruments to minimise the impact of climate change.

Acknowledging the need for a sustained, integrated effort to addressing key issues of the region, it was also highlighted that the youth and entrepreneurs will have an active role to play.

The topic of Jhum cultivation and balancing traditional livelihoods with ecology was discussed extensively.

The legislators, during the meet, also held an in-depth discussion on the importance of alternative sustainable livelihoods.

The importance of adding environmental education in the school and college curriculums was also added.

The legislators, during the meet, also acknowledged the importance of data and micro-data in guiding policy and concluded that more needs to be done in this aspect in the Indian Himalayan Region.



MLA and MPs from mountainous states of the country during The Mountain Legislators' Meet in the city.



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**F-5, KAILASH COLONY, NEW DELHI - 110048**  
**TEL: 011-40193747**

[www.mountaininitiative.in](http://www.mountaininitiative.in)