

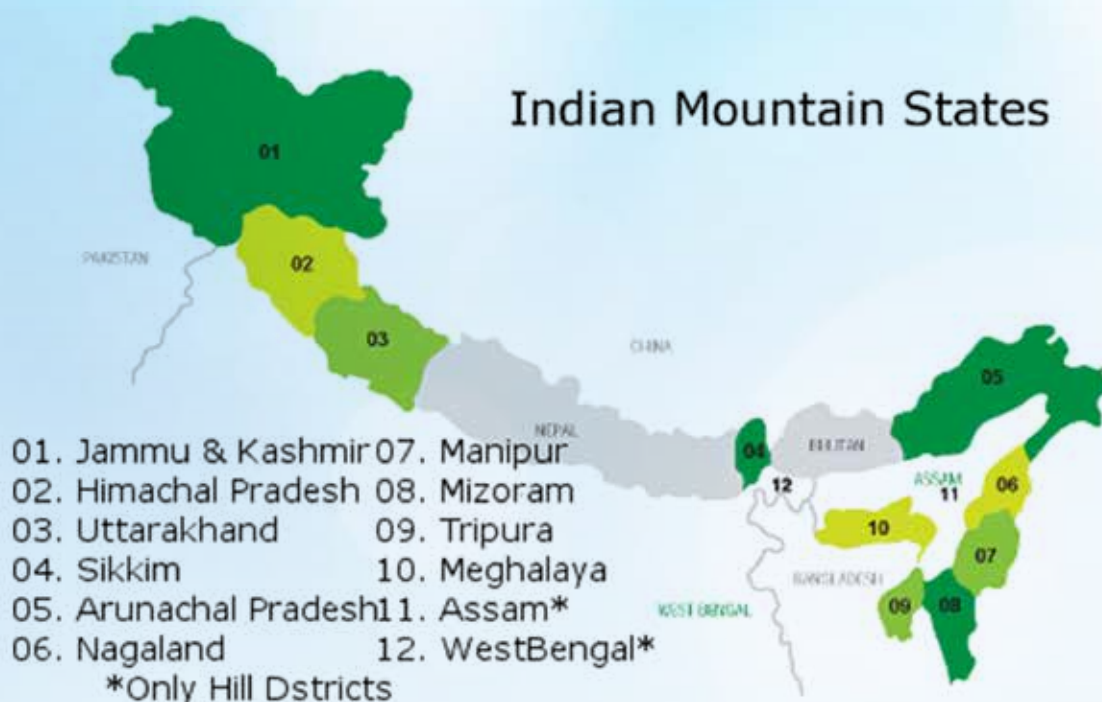


Itanagar, Arunchal Pradesh

7th, 8th, 9th October, 2015



Indian Mountain States



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Introduction

The Indian Himalayan Region for the rest of the world is a beautiful pristine land, a bounteous haven of peace and happiness. For the adventure seeker it is a challenging physical feature to be conquered, for the naturalist, a treasure house of flora and fauna to be studied, and for the culture- seeker, a source of spiritual upliftment and aesthetic pleasure. While the mountain states in the Himalayas are undoubtedly a canvas on which nature and culture have splashed their hues in abundance and with the boldest of strokes, and although the mountain people can teach the world many a lesson on joyous living and dealing with adversity, the region is among the most disadvantaged and challenged. There are stark gaps between these areas and the plains. The situation has gotten further aggravated by the remoteness and poor connectivity of these regions, with the sparse population here getting hugely marginalised in the overall development process.

Understanding the need to evolve a new paradigm to address the development needs of the people in the region, the Integrated Mountain Initiative (IMI) has set out a platform to bring about a revolution in the mountain states of the Indian Himalayan Region and usher in a new age of development and progress.



Integrated Mountain Initiative (IMI)

The Integrated Mountain Initiative (IMI) is a civil society movement involving the 11 Indian Himalayan mountain states, the hill district of Darjeeling of west Bengal and two hill districts of Assam namely Karbi Anglong and Dima Hasao, with common vision of “making people of India proud of our mountains”. The forum is a collective initiative for recognising the value of mountain regions and enabling the people to realize the potential by integrating knowledge and experience of multiple stakeholders. It is an inclusive and collaborative initiative of large numbers of constituents who are united by a common vision.

The Integrated Mountain Initiative aims to bring mountain concerns to centre stage in regional, national, and global agendas through sustained and informed dialogue between all stakeholders. It provides a functional discussion platform for Indian Mountain States with the determination to follow up what gets collectively agreed upon. It thus provides a forum to all Indian mountain states to discuss the mountain agenda both horizontally and vertically on a continuous basis and bring effective policy mechanisms into place.

Sustainable Mountain Development Summit (SMDS)

In pursuit of this objective, IMI decided on an annual conclave of 11 Indian Mountain States under the name and title of ‘Sustainable Mountain Development Summit’. Each year 3-5 salient themes engaging the immediate attention of and relevant to the mountains and hills would be taken up for threadbare discussion and debate. Conclusions and recommendations emerging from this exercise would be pursued by IMI subsequently.

Thus, under the aegis of IMI every year a Sustainable Mountain Development Summit (SMDS) is organized to bring mountain concerns of regional, national and global agendas to a centre stage through sustained and informed dialogue between all the stakeholders. It provides a functional discussion platform for mountain states with determination to follow up what gets collectively agreed upon.

The first Summit was held in Nainital, Uttarakhand, in May, 2011 on the themes of hydro-power projects, adaption measures under the climate change scenario, rural tourism, and community forestry. SMDS–II at Gangtok, Sikkim, in May 2012, held deliberations on water, mountain livelihoods, communities and forests, with climate change and innovation being flagged as cross-cutting themes posing significant challenges to the mountain region. The Summit saw the adoption of the Gangtok Declaration, which emphasized the importance of the sustainable mountain development agenda for the future. SMDS–III was held in Kohima, Nagaland, in September 2013 on the themes of forests, water, and agriculture. Although there were thematic overlaps across the three Summits, the focus, during each Summit, was on different sub-

topical issues within the larger thematic areas.

Other events took shape and grew alongside the SMDS, and these include the Himalayan Photography Competition, the Legislator's Meet, the Policy Maker's Dialogue, the Youth Summit, and the National Workshop on Mountain Cities. In order to ensure that the initial momentum and enthusiasm generated during the SMDS would continue, it was resolved that a Meet of the Mountain States (MoMS) would be convened between two successive SMDSs.

MoMS is an avenue for sharing the outcomes of the preceding SMDS with a larger audience, at the national capital of New Delhi. It is also a forum for advocacy, particularly directed towards sensitizing national policymakers and mountain diaspora about mountain issues.

Sustainable Mountain Development Summit -IV (SMDS-IV)

In the Meet of Mountain States meeting on 11th December 2014 at New Delhi, a contingent of delegates from Arunachal Pradesh under the leadership of Shri Chowna Mein, Minister, Agriculture and Horticulture, participated in the deliberations. In the meeting the house unanimously proposed Arunachal Pradesh to host the next Sustainable Mountain Development Summit (SMDS-IV). The Minister in consultation with the delegates from Arunachal Pradesh concurred with the proposal of IMI. Hence, the baton for organizing the Sustainable Mountain Development Summit –IV was passed on to Arunachal Pradesh.

The fourth edition of the Sustainable Mountain Development Summit (SMDS-IV) thus was held in Itanagar, Arunachal Pradesh, on 7th, 8th & 9th of October, 2015. The organisers of



the Summit were the Sustainable Development Forum Arunachal Pradesh, a not-for-profit organization registered in Itanagar. The Government of Arunachal Pradesh lent support in organising the Summit.

The Summit in Itanagar provided much insights into many challenges that the mountain states are facing in terms of scientific exploration, documentation, preservation of rare and high value species, recognition of indigenous knowledge system, intellectual property rights, conservation efforts (ex situ and in situ), eco-system services – its valuation and market linkage, mechanism for equitable redistribution of green bonus at the community level etc. Another important issue where deliberation was of much value was the issue of ownership and exploitation rights of the natural resources in many of the mountain states.

Although the Constitution of India guarantees ownership rights of natural resources to the tribal people in many mountain states, in practice many of the laws enacted by legislatures negate these rights. Therefore, there was a lot of ambiguity here, which needed larger debate and deliberation. On the other hand, giving full and unregulated rights to the indigenous people may lead to wanton destruction of the natural resources thereby negating the conservation goal of the country. Therefore, the question was how one draws the balance between indigenous community rights and national priorities. Also, within the indigenous communities, uncontrolled ownership may lead to destruction of the egalitarian and equitable character of the many indigenous communities, the very reason, for which special rights have been enshrined in the Constitution for them. The SMDS-IV brought to the fore all these issues and came up with better insights in coping with these challenges.

Like the previous three Sustainable Mountain Development Summits, the three day event in Itanagar was dedicated to deliberations, sharing of experiences and formulation of recommendations for policy, development action and research interventions. Keeping in line with the format of earlier Nagaland Summit, the deliberations were strong on participatory processes of dialogues, sharing of ideas so that each session emerged with actionable suggestions and recommendations.

At the same time, great deal of significance was given to research papers and publication as before. Research papers were earnestly sought and selected papers were collated into single presentations so that it formed the lead thematic paper for the participants to initiate their deliberation. As authors of the papers participated in the discussions, there was ample opportunity for them to discuss and share it during the group sessions.

As in the previous Summits, themes were selected for the SMDS-IV keeping in mind the concerns of Arunachal Pradesh as well as the other mountain states. In order to ensure selection of the best brains amongst the experts, SMDS-IV for the first time had anchors for each theme. The

anchors were responsible for structuring of the themes, collection of expert papers, collating and preparing the background paper, which became the lead paper for discussion at the Summit. The following IMI Councillors were appointed as anchors:

Sl	Topic	Name and Designation of Anchor
1	Disaster Risk Reduction	Dr. R.S.Tolia, President, IMI & Councillor, Uttarakhand
2	Forests	Shri Sushil Ramola, Secretary, IMI & Councillor, Uttarakhand
3	Mountain Agriculture	Shri P.D.Rai, Councillor Sikkim & MP (Lok Sabha) Sikkim
4	Legislators' Meet	Shri P.D.Rai, Councillor Sikkim, & Secretary General, GLOBE
5	Policy Makers Dialogue -Chief Secretaries' Conclave	Shri Alemtemshi Jamir, Vice- President IMI, & Councillor, Nagaland

The following themes were discussed at the Itanagar Summit:

1. Disaster Risk Reduction

The SMDS –IV assumed immense relevance and significance for Arunachal Pradesh as well as the other mountain states of India as it was being organised in the aftermath of the massive earthquake in Nepal, which once again, brought to attention issues of national policy on disaster and the vulnerability of the mountain states. Disaster being a constant reality in the Himalayan region there was an urgent need to look at the learnings from repeated disasters, particularly in terms of risk assessment mechanisms, state of preparedness, risk reduction mechanisms and rehabilitation processes. The quest for anticipating and understanding disaster better, formulating the right policy, planning for risk reduction, institutionalizing of mitigation mechanism in a sustained manner, are issues that earnestly required more in-depth discussion and deliberations at this juncture. Therefore, the primary objective of the Itanagar Summit was to deliberate on the various facets of disaster and come out with tangible policy recommendations and pragmatic solutions to the challenges of natural disaster management in the mountain region.

The Summit aimed to develop tangible policy recommendations and pragmatic solutions to the challenge of natural disaster management in the mountain region.

2. Forests

Forests are the next big resource strength of the mountains. Forest conservation takes on a different dimension in mountain states like Arunachal Pradesh and Nagaland where forests are communally owned. Hence there was a need to formulate effective mechanisms for involvement of communities and their knowledge in conservation efforts.

In the light of climate change negotiations, the ecological services provided by mountain regions and compensatory mechanisms for these services need further informed debate and discussion.

Yet another critical issue is the ambiguity with regard to ownership and exploitation rights in respect of natural resources in a tribal State like Arunachal Pradesh. While the Indian Constitution guarantees ownership rights in respect of natural resources to tribal people, in practice many of the laws enacted by legislatures negate this right. At the same time, full and unregulated rights without ensuring a real sense of ownership, may also lead to wanton destruction of natural resources, negatively impacting the conservation goals of the State and the country. Therefore the balancing formula between tribal rights and natural resource conservation priorities was a critical challenge which was given due attention.

3. Mountain Agriculture

Mountain communities being primarily agrarian, improvement of agriculture, particularly the horticulture sector for livelihood enhancement is imperative. Mountain agriculture also faces the disadvantage of low output due to traditional practices with minimal scientific inputs, pre-dominance of shifting cultivation, and the prevalence of poor and marginalized farming communities. The Summit intended to look at the potential and opportunity in mountain agriculture with a renewed focus on innovation and investment, scientific inputs, organic cultivation, crop-diversification, and the involvement of the private sector in farming, marketing and post-harvest management.

SMDS-IV had two important parallel thematic events – The Policy Makers’ Dialogue and the Legislators’ Meet

a) Policy Makers Dialogue – Chief Secretaries’ Conclave

With the doing away of the Planning Commission and the setting up of the NITI Ayog, the new reality that seems to be kicking in is that the States will be forced to rethink their ‘planning and budgeting’ exercise especially the erstwhile Special

Category States. Hence there was a need to first understand what the substantive changes in policy are, how it is impacting Special Category States, and then look at redressal mechanisms. The Chief Secretaries' Conclave brought together the Chief Secretaries of the 11 mountain states to deliberate on these important issues.

b) Legislators Meet

The 4th Indian Himalayan Legislators' Meet provided a platform for legislators from mountain states to voice their common issues and concerns, to deliberate and make an action plan for climate change legislation. Around 40 State Legislators and Members of Parliament attended this Meet which drew greater attention this year in view of COP 21 being held in Paris at the end of this year. The Hon'ble Speaker of Arunachal Pradesh hosted the Legislators' Meet.

SMDS –IV also featured two more side events such as the Agriculture-Horticulture Exhibition, and the 4th Indian Himalayan Photography Competition. Cultural programs were also organized to showcase the diversity in the cuisine and culture of the state of Arunachal Pradesh

Objective of the SMDS-IV

The overall objective of the Itanagar Summit continued to be in line with the objectives of the previous other Sustainable Mountain Development Summits of IMI, which is to provide a platform for Indian Himalayan states to come together to discuss issues of development priority, as well as, to find ways to influence national and state public policies.

Zero Waste Protocol

Keeping in line with the philosophy of sustainable development, the SMDS – IV in Itanagar endeavoured to be a Zero Waste Event by following the zero waste protocols. As much as possible, use of plastics, papers, print materials, flex banners etc. was minimized. Food was locally sourced from local farmers. Electronic communications was used, as much as possible, in order to reduce consumption of paper. Gift / Documentation packs were made from local material and by local artisans. Car pool was used for ferrying delegates during the Summit to reduce the carbon footprint of the Summit. However, as this was the first time the concept of zero waste was tried by the organizers, waste reduction may not have been absolute but the attempt was made to get there.

Participants profile

Like in the previous Summits, SMDS – IV endeavoured to bring together some of the best legislators, academicians, scholars, development practitioners, government representatives, NGOs, civil society, and media from the Himalayan region and beyond to come up with tangible solutions to the challenges faced by the mountain region. A large number of legislators, government officials, civil society organizations, academicians, scholars and media formed the contingent from Arunachal Pradesh

The three-day event at the Itanagar Summit was attended by 316 delegates representing 12 mountain states, including 40 legislators, 45 thematic experts/ resource persons, and, 22 partners and associates. Some of the partners of SMDS-IV were the state governments of Arunachal Pradesh, Uttarakhand, Sikkim and Nagaland, and, organisations such as Forest Resource Management Project Uttarakhand, IHCAP, UNDP, Swiss Agency for Development and Cooperation (SDC), NIEDA, LEAD, GIZ, ICIMOD, Arghyam, and APBRDA. The Arunachal Times based in Itanagar were the media partners.





Sustainable Development Forum Arunachal Pradesh (SDFA) - Executing agency

The state affiliate of the Integrated Mountain Initiative, the Sustainable Development Forum Arunachal Pradesh was the organizer of the SMDS – IV. It is a not-for-profit forum, registered in Itanagar and comprising of civil society, academia, entrepreneurs, legislators, government officials, youth and media with the objective to collectively discuss and work towards a sustainable development pathway for Arunachal Pradesh and other mountain states. Its aims and objectives are in alignment with that of IMI.

The organizing committee of SMDS-IV consisted of the SDFA founding members. They were entrusted with the organization of the Summit and the events that led up to it.

Sl	Designation	Name
1	Convener	Smt. Fantry Mein Jaswal
2	Organizing Secretary	Shri Nalong Mize
3	Director of Events and Programmes	Shri Rezina Mihu
4	Member	Shri Egam Basar
5	Member	Shri Okit Paling
6	Member	Shri Gandhi Darang
7	Member	Shri R.K. Taj



Thematic Sessions and Outputs

I. Disaster Risk Reduction

Introduction

The Himalayan region, by virtue of being young and growing mountains has a history of natural disasters that has affected the ecosystem including inhabitants and natural resources in devastating ways. In addition to this geological fact, climate change is altering rainfall patterns which leads to more instances of very intense rainfall, which has led to several flood events in the last few years. However, are these disasters? **It is loss of life and property that makes a nature induced event a disaster.** This vulnerability to climate events is influenced by poverty which reduces peoples' access to alternatives and security networks, by changes in livelihood which increase dependence on external market-driven factors, and by a lack of safety systems. There appears to be a widespread consensus that irrespective of the magnitude and intensity of a natural hazard, its impact on the lives, resources and property can be significantly lower, if development pattern adopted is in accordance with its character of ecological fragility.

To address some of these fundamental concerns and find answers to pressing questions pertaining to the science, policy and society aspects related to Disasters the central theme of the fourth Sustainable Mountain Development Summit (SMDS-IV) was dedicated to Disaster Risk Reduction (DRR) in the Indian Himalayan Region (IHR). Through a working group of multi disciplinary experts and government and civil society representatives from all states of the IHR, the event deeply delved into issues related to efficacy of science concerning natural disaster, risk assessment, preparedness and risk reduction, innovation in technology, policies and enactment of laws for development in mountain regions.

The thematic working group was extended with the requisite stimuli through key note address made in the plenary by Prof Santosh Kumar, Director SAARC Disaster Management Centre. Prof Kumar recognized the high vulnerability to

disasters faced by mountain communities which are characterized by low coping and adaptive capacities. He pointed out the direct linkage between adaptive capacities and the risk rating level for vulnerable and excluded groups. He stressed upon the fact that inequality and social exclusion determine that certain social groups or sectors suffer more in extreme events and disasters because of their place within a system of unequal social power relations and underlying vulnerabilities. Prof Kumar thus emphasized on the need for inclusive Disaster Risk Management (DRM) which aims to address these underlying vulnerabilities. Inclusive DRM promotes equal rights and opportunities and the dignity of the individual while acknowledging the diversity and contributes to everyone's resilience, which means not leaving members of a community out because of their age, gender, disability or other factors. As a word of advise from sector expert, Prof Santosh emphasized the need for managing the uncertainties while taking care of right to life with dignity and thus keep a strong vigil on well being of distressed and affected communities while bringing a framework for modelling, planning and managing disasters. Forward and backward linkages play an extremely significant role in managing disasters and thus need to be planned with utmost care.

This was followed by a series of informative and educative presentations by experts including scientists, academicians, civil society representatives, government delegates and sector specialists from bilateral and multi-lateral cooperation. A snapshot of key messages conveyed by diverse group of speakers is provided below.



Shri Kamal Kishore, Member, National Disaster Management Authority shared a succinct and impactful 5 point guidance in dealing, managing and preparing against Disasters in mountains. These include:

Availability and access of data: There is a dearth of scientifically compiled and validated data at all levels in the country. Any kind of disaster risk planning and preparedness needs systemic data on multiple variables including glacier inventory, floods, droughts, other forms of disasters, pattern of precipitation, occurrence of extreme events, impacts of slow onset et el. Hinging the plans on anecdotal information or on interpreted/ inferred data which is often contradictory weakens the fundamental block of building resilience. Central and state governments thus need to have proper data and also technical analysis and sharing of the same between relevant agencies.

Robust Vulnerability Assessments (VA): The VAs being conducted have to be more rigorous and multi layered which also includes an element of multi-hazard risk assessment. These assessments need to be carried out both of bio-physical and socio-economic indicators with an eco-system based planning approach. Concerned agencies in different states need to learn the know-how of conducting these assessments locally.

Focused Action Planning- the need of the hour is to reduce risks, enhance resilience but plan and prepare for an immediate response. The action planning has to be more inclusive and participatory while being backed with scientific data and assessments.

Capacity building- any disaster management preparation and planning exercise will be complete only if adequate measures are taken towards building local capacities. Any amount of scientific precision in the plan as a document will not contribute in resilience if the local capacities of all key actors, including communities, is not geared up to execute the same.

Professor Ajay Gairola Associate professor, IIT Roorkee, Centre for Disaster Management focused on Earthquake Early Warning (EEW) Systems. While explaining the model of a quake resistant buildings designed by experts, he emphasized on the need to create and replicate similar design of buildings which use bricks, with a hole. He shared that used vehicular tyres fitted in wall columns gives resistance to the structure. While drawing a comparison between 'technological initiatives motion network' in Japan and India with help of K-net and KIK net. Prof Gairola mentioned that there are 1000 stations installed at ground surface and around 700 stations in all over Japan against 293 stations in India. The need for region wise segmentation of EEWs as per required scientific parameters was strongly recommended.

Dr Mahua Mukherjee, Architect and Associate Prof, IIT Roorke presented a multi hazard analysis including food vulnerability conducted for Uttarakhand. The expert suggested that such rigorous interdisciplinary work involving mapping several kinds of hazards, needs to be done

on a larger scale. She stressed upon the need to make development planning more sustainable through technical education and integration of building bylaws and land use planning with DRR information. Measures like networking, use of technology, integration of local wisdom in planning and creating demand centric help from outside community were some of the key suggestions made by Dr Mukherjee for building safe mountain habitats.

Dr David Molden, Director General ICIMOD spoke about lessons learnt from Nepal in his presentation and conveyed an underlying message that people in Himalayan region and adjoining Gangetic Plains need to learn to live and deal with earthquakes and other disasters. Dr Molden explained that some of the most damaging and longest-lasting effects of the Nepal earthquake were psychological, which was worsened by recurring quakes and tremors in the region. This led to traumatising many physically able people who could thus not come forward to help with relief efforts thereby reducing effectiveness of operations. He stressed that psychological effects have huge economic repercussions in the long run.

It was noted that most of the buildings in Kathmandu were still standing, as reinforced concrete seemed to work better than traditional houses in terms of earthquake resilience. He emphasised on the four priorities outlined in the Sendai framework- understanding disaster risk, strengthening disaster governance, investing in disaster risk reduction, building back better. Dr Molden detailed the effects of the earthquakes on traditional livelihoods and the lessons that can be learnt. He shared that the damage was worse in the countryside where 8 million livelihoods were affected. Seeds are traditionally stored inside the house in breakable containers and were thus scattered by the earthquake. Traditional varieties have ecological and cultural value so a protection method such as seed banks should be found. He also emphasized on the need of post disaster psychological counselling as also on collaboration among Himalayan countries to improve learning in terms of providing services and measures required to reduce damages and mortalities.

Shri Piyush Rautela, Executive Director, DMMC, Govt of Uttarakhand, shared facts and lessons from the 2013 flash flood in Uttarakhand. He reminded the gathering about how during a crisis situation, deaths occur not only due to the disaster, but also after it, during rescue operations. The process of rescue and rehabilitation often gets complicated due to several unforeseen circumstances. He shared some of the main challenges faced by the State in the 2013 flash flood which included paralysis of government machinery due to lack of preparedness, breakdown of all communication links, difficulty in understanding language of tourists' from different regions of the country, absence of media coordination and management, absence of any mechanism of release of timely information bulletins etc. It was shared that after this disaster, amongst other measures, Uttarakhand created the State Disaster Relief fund – SDRF, developed mobile applications for different trekking routes, constructed 50 new helipads. The State government also revised building by-laws and retrofitted 5 schools with the support of NTU Singapore and

IIT-R to demonstrate safe building structures.

Professor **MH Wani**, from Sher-i-Kashmir University spoke about the 2014 floods in Kashmir, while emphasising the need to look at the ecological reasons for flooding. While recalling how the disaster unfolded, the Prof shared that on September 2 there was heavy rain followed by an alert released on September 4 and within a couple of days by September 6 floods hit Kashmir. Besides the calamity in the form of heavy rainfall, several other factors exacerbated the impact of the flood some of these being - unplanned urbanisation, reduction in forest coverage from 67 % to 15% and minimal preparedness of local communities and administration.

Dr DK Paul, Emeritus Professor from IIT ROORKEE while sharing insights from the Sikkim earthquake emphasized on the issues related to infrastructure management and engineering which caused complete systems failure of water distribution and power supply. He shared that bridges relatively withstood the shock and contributed in survival of a majority population. This goes to show that when designed properly bridges can survive quakes. The strong underlying message conveyed by the expert was about that of the need for scientific and resilient infrastructure designs in hilly areas while popularizing systems like community radio for early warning and uninterrupted communication in the event of a disaster.

Dr SM Joshi, Chief Project Director, JICA presented the idea of mainstreaming forestry in DRR. He shared that Forests have the potential to play a powerful role in dealing and managing disasters and pointed out that Forest department, across the IHR states require capacity building in disaster management and preparedness. After 2013 Uttarakhand disaster, the government has included forest department as one of the key actors in developing disaster management plan..He also explained the recent technical cooperation being extended by JICA to Uttarakhand Forest department. Amongst other interventions, JICA extends innovative model site development and capacity building for forest department personnel.

Wing Commander Praful Rao, President, Save the Hills (a civil society organization) spoke about the importance of public awareness and community engagement and preparedness to deal with any kind of disaster. He presented a case study on Darjeeling and cited how landslides have recurrently trapped thousands of people disturbing their lives and livelihoods. He stressed that there is a need for proper planning and management to deal with large landslides and suggested measures like setting up an apex body to look into landslides, installation of community based early warning system, and awareness generation regarding the measures one can take for self protection. He further suggested that a Centre for Excellence of Mountain states and community empowerment plan should be created.

Shri Dharni Ratno, Executive Director, NEIDA, Tata Trust presented the post disaster interventions including immediate relief and rehabilitation support extended by the Tata Trust in

Nepal. Some of the interventions include setting up centralized community kitchen programme with Akshaypatra foundation which provided food to 18000 people twice a day in 17 relief camps. He pointed out that some of the challenges that paralysed Nepal after the earthquake, were falling of rocks, debris clearance and highway restoration, complete political instability in the wake of bandhs and strikes, and people affected with earthquake trauma. He highlighted some efforts made by the Trust to plan need based interventions in collaboration with a local organization to embark on immediate reconstruction of schools, health post, and water supply network in local spots, and recommended a similar approach in such instances.

Shri Mustafa Khan from Swiss Development Cooperation presented a case study from Kullu district where a detailed and scientific vulnerability assessment was carried out as a collaborative effort of the HP Government and SDC. Khan recommended the need for up scaling the extreme flood and biodiversity assessments for better planning for preparedness. He pointed out morphological indicators and potential climate triggering factors, which help in better information access. He concluded his presentation by saying an integrated framework for vulnerability hazard and risk base must be included in the planning and thinking at different levels.

Dr. S.K. Parcha Scientist from Wadia Institute presented issues related with Science and Technology in managing disasters. He shared information regarding glacial lake inventory in Uttarakhand according to which there are 1266 glaciers. Such inventory will not only help in assessing the potential disaster but also in understanding the state of cryosphere in Uttarakhand.

Shri Saurav Roym, Program Leader, TATA Relief Group explained how people suffered from Post Traumatic Stress following the Nepal Earthquake and for a long time resisted entering their houses to go and sleep.

Professor Shikil Ramshoo while emphasizing the importance of sharing data informed that there was only one Seismogram before Kashmir earthquake happened and only after the disaster struck the region, were more equipments added. He pointed out the need of knowledge and also sharing of knowledge within an ecosystem. There is a lot of data in this country but limited willingness and mechanism to share- these symptoms need to be corrected immediately for the disaster prone IHR and country.

Discussions on the floor

Knowledge shared by expert speakers and civil society representatives from diverse fields and across the IHR was thought provoking for the participating delegates. The multiple perspectives triggered an exhaustive discussion and brain storming, key points of which are summarized below:

In the context of Mountains, an objective definition of disaster is required. What is a disaster? Private losses are never accounted for in disasters. It appears to be vertically driven, and there seems to be a final, state-driven word on what damage has been done.

Glaciers are one of the most important resources and thus need to be mapped and studied periodically. Furthermore the analysed data needs to be made public in a language which is relevant to their lives and easy to understand. This will bridge the science- society gap.

Information regarding critical issues need to be made Public. For instance, Can hydropower withstand earthquakes? There is significant risk and more information needs to be shared.

There is a need to draft a policy for disaster-affected people/ communities.

More vulnerable segments of a community such as elderly, women and children need to be targeted while planning any DRR.

There is an urgent need to make live demonstrations on how to construct resilient buildings and infrastructure in mountain context. Alongside, states also need to have measures like debris disposal policy. In Uttarakhand, a phenomena called as riverbed aggradations has been observed recently. Such aspects need to be studied.

A study of traditional architecture is required. Road construction needs to be strengthened. Many road accidents, where people die en-masse after vehicular accidents, are because of poorly made roads. Not necessarily disasters.

Different states have interpreted NDMA Act differently. Assam Gujarat and Bihar have a fully functional SDMA, but not other states. This needs funding support.

Other developmental issues were also discussed. For instance, the ecological costs of infrastructure. Uninterrupted power supply: powerhouses with no distribution systems in place are making dams in Kashmir. This includes the importance of pursuing case studies that evaluate ecosystem services first, before the project is built.

Develop general weather awareness and emphasise on youth skill development

Working group recommendations - a roadmap for states for DRR planning

Collective wisdom generated through thematic deliberations, expert opinions and community knowledge and experiences helped the working group devise a set of defined recommendations applicable across the IHR. These recommendations were complemented with commitments from relevant actors representing different states in the DRR working group. The recommendations and commitments were shared in the plenary on the concluding day.

A summary of key recommendations which forms a road map for each Mountain state, is presented below:

I. Risk Assessment

The core purpose of risk assessment is to adequately and timely inform decision making for necessary actions required. These thus need to be applied risk assessments wherein the Hazard Risk and Vulnerability Analysis (HRVA) framework is covered after being duly validated by local communities.

Besides HRVA other aspects such as micro zonation for hills for better planning and management need to be considered during risk assessments

Sharing trans-boundary data on risks and vulnerabilities is equally important. Agencies like ICIMOD can play a significant role in facilitating transboundary knowledge creation and sharing.

II. Action Planning for Disaster - Response and Recovery

Several districts in mountain states do not have a District Disaster Plan. This needs to be rectified most immediately. Furthermore at the national level 548 out of 675 districts do have a DDP. However the effectiveness of these plans remains an area of concern. The process of designing the plan is thus more important than the plan itself. Planning encourages decision-makers to address important issues.

Awareness campaigns for communities and other stakeholders/ actors in DRR will not sufficiently address the specific needs of disaster response and recovery. There is an urgent need to develop and impart diploma courses on disaster management, which should be customized for different stakeholders according to their envisaged role specification.

Lifeline buildings such as schools, hospitals, child care homes et al must be retrofitted on an urgent basis.

A robust communication plan has to be developed as a part of disaster response plan. A working alternative such as community radio or any other communication means needs to be inbuilt imagining breakdown of routine communication sources soon after a disaster.

III. Action plan for Disaster Risk Reduction

As elaborated above, diploma and crash courses on disaster management (response,

recovery and reduction) need to be imparted to different stakeholders along with raising awareness within society.

Retrofitting of life line building as also that of traditional buildings needs to be taken up. Such measures have proven extremely helpful in reducing the aftermath of a natural hazard.

IV Data generation and dissemination

Collecting necessary primary data at regular intervals should be a must. Data is being collected by many groups, including community groups. Thus systemizing and analyzing the data collected is an equally important task to be undertaken.

The existing networks are of great value and relevance for collaboration. Adequate steps must be taken to keep these networks alive and responsive. Avoiding deterioration to networks goes a long way in terms of data sharing.

Density of observational data needs to be increased.

Data collection should be complemented with crowd sourcing.

V. Long Term Risk Reduction

Land use planning with possible disaster in mind is necessary as a measure for long term strategy. In this regard micro-zonation of land will aid in better land use planning. Slope density norms need to be put to application.

VI Other Recommendations

Risk assessment in the mountainous states to be completed on fast track mode.

Mainstream DRR in planning and finance processes.

Critical infrastructure should be strengthened by individual sectors.

Each sector should identify the priority risk and take up programs for disaster risk reduction.

An agency to be set up to monitor DRR activities so that duplication of efforts can be avoided.

Actionable measures to make economically weaker sections more disaster resilient to be explored.

Efforts to be made to make capacity building programmes gender inclusive. All capacity building programmes should have 50% female participants.

Should make a provision for Social Psycho Care for post disaster areas and should

cover schools, women and health posts.

Building by-laws for mountainous regions to be formulated and implemented.

Participants from the States present at the Summit pledged their cooperation and contribution to the above. It was hoped unanimously that by the time of the next SMDS these recommendations would be implemented.

Immediate next steps and commitments- before the next SMDS

Participating state representatives made the following commitments which need to be fulfilled before their participation in the next SMDS:

100% coverage in terms of District Disaster Management Plans across all mountain states in the IHR

Establishment of fully capacitated model DDMA in at least one district in each state

Structural and non-structural retrofitting in one public building in each state.

States present pledged their cooperation and contribution to the above. It was hoped unanimously that by the time of the next SMDS these recommendations would be implemented.

2. Forests

Introduction

Forests are a prominent feature of Indian Mountain States. Many of these states maintain a forest cover of more than 75% of their geographical area. The development model as it is practiced today creates pressure on forests, and its imprints include reduction of forest cover, emission of green house and poisonous gases, and the release of toxic chemicals. No doubt climate change has been a compounding factor.

About 275 million people in India, mainly scheduled tribes and forest dwellers, directly depend on forest resources for livelihoods and about 100 million people live on land classified as forests. According to one estimate, 40 percent of India's poor live in about 1.73 lakhs forest-fringe villages. Poverty in forest areas is mainly due to insecurity of tenure and deprivation of access rights to forest resources – both pointing to the need for forest tenure and governance reforms.

The summit discussed policy institutions and governance, community and enterprise and forest and water. The 'Forest' thematic group had fifty-seven delegates representing government and non-governmental organizations, while some were social workers, researchers, people from media and concerned citizens. They were from Arunachal Pradesh, Meghalaya, Assam, Sikkim, Mizoram, Nagaland, Madhya Pradesh, Karnataka, Manipur and Himachal Pradesh. Key issues and concerns related to sustainability of mountains and forest specifically were addressed during the screening of presentations.

Deliberations at a glance

On second day during the plenary session, Shri BMS Rathore, Chief Policy Adviser ICIMOD, addressed the thematic keynotes on forests, focusing on the potential of IHR. He stressed that community participation need encouragement, capacity building and financing.

The first session under the sub-theme 'Policy, Institutions and Governance' was



headed by Dr. Rajan Kotru, Regional Program Manager ICIMOD, who spoke about the importance of policy analysis by decision makers. He stressed the need of analyzing and correcting the cross-sectoral policies that are often in confrontation with the forest sector policy. There were three speakers under this theme. Dr. Topi Basar, Professor National



Law University and Judicial Academy, Assam, emphasised on harmonization of cross-sectoral laws, while Shri. K. Vidyasagar, Conservator of Forest, HIMMOTTHAN brought up the issue of estimation and distribution of payment of eco-system services (PES). Ms. Chicu Lokgariwar, Consultant, Arghyam, raised the issue of inclusion of women in decision-making processes.

The second session under the sub-theme 'Community and Enterprise' was chaired by Shri STS Lepcha, MD, Forest Corporation of Uttarakhand who spoke about the new Ministry of Skills and Enterprise Development by Government of India. The session proceeded with a combined presentation by Ms. Bandana Shakya, Associate Program Coordinator ICIMOD, and Dr. Prasanna Samal, Scientist, GBPIHED on the conservation of livelihood by landscape initiatives. Dr. K.K. Jha, Prof. Indian Institute of Forest Management, Madhya Pradesh accentuated the marketing and conservation of non timber forest products (NTFP). Shri Kamal Medhi, Landscape Coordinator of Western Arunachal Landscape highlighted the importance of community for conservation.

The third session under the sub-theme 'Forests and Water' was headed by Dr. Yogesh, Chief Conservator of Forest, Arunachal Pradesh, who explained the importance of water and its significance in forests. The session had two speakers, first was Dr. Subash Dhakal, Deptt. of Rural Management & Development, Govt. of Sikkim, who presented the outcomes of spring shed development in Sikkim under the programme Dhara Vikas. Shri Kenneth Pala, Sr. Technical Expert GIZ, pointed out the challenges of land tenure system and issues of ground water, and the ineffectiveness of government to draft a policy related to climate change.

This was followed by three panel discussions focusing on community participation in forestry regimes, policies and recommendations related to sustainable forest management and scope of the implementation of payments for eco-system services. Dr. PP Dhyani, Director, GBPIHED chaired the first panel and Dr. Topi Basar, Shri Pawan Kaushik and Shri BMS Rathore were the panellists. Dr Kotru pointed out that the costs of climate change will be extremely high

if socio-demographic changes marked by out-migration of men and youth from the mountains continue. He stressed that this needs to be also understood in view of approximately 50 Million people living in mountain states migrate to urban centres and become energy-guzzling citizens as compared to very low carbon-footprint they leave behind.

The second panel was headed by Dr. Yogesh with Shri Nischal Gautam, Dr. Lokho Puni and Ms. Priyadarshinee Shrestha as the panellists. The last session was chaired by Shri STS Lepcha and the panellists were Shri Sunder Subramanian, Dr. Rajan Kotru and Shri K. Vidyasagar. In conclusion Dr. Kotru stated that so far very few incentive based mechanisms having been piloted show good experience but for their up scaling there is need for direct and indirect Government investments enhancing conservation and local livelihoods against performance on GHG emission reduction.



The following issues were raised during the summit and through discussion the delegates came up with its causes and recommendations.

Issues and recommendation

Through expert inputs and deliberations amongst delegates, various issues related to status of Forests in Indian mountain states were identified. The group worked on a deeper analysis to deduce the key reasons/ causes that lead to the current scenario and also made specific recommendations to address the same. Causes and recommendations for each of the identified issues have been summarized below:

1. Issue: Weak legal rights to forest communities:

The indigenous communities in the Indian Mountain States play a key role in conservation and sustainable use of region's endangered forests, yet their legal rights to forests are weak or unclear unlike their customary rights.

Causes	Recommendations
The current laws and policies do not integrate the customary indigenous management traditions and ownership rights of the communities.	Need inventory, mapping and registering of community based forests regimes by Forest Survey of India and also lead need to be taken by the state governments.
The lack of synergy between formal laws and customary laws and practices.	Forest Right Act (FRA) needs to be amended in line with specific need of the State/Region (applies particularly to NE).
Relationship and stewardship of people in conservation is not recognized.	

2. Issue: Limited community participation

Role of community participation in landscape approach, ownership in natural resources, representation in decision making process and preservation of their traditional knowledge needs to be assured.

Causes	Recommendations
Panchayati Raj Institutions (PRIs) are not effective in bringing community participation due to traditional system in their operations.	Rules and rights fixed through joint forest management (JFM) need to be operationalized in consultation with community by converging the roles of JFM and PRIs, using the existing guidelines.
Lack of trust of community leaders on the forest department. They believe that forest department has usurped the community land (e.g. USF land, which is perceived as forests department land).	Since BMCs have added yet another layer of top-down mechanism, institutional complexity need to be analysed and confusion needs to be removed.

3. Issue: Inefficient capacity building of community leaders, institutions and government officials in conservation of natural resources.

Causes	Recommendations
The absence of singular platform for the key stakeholders and concerned departments to converge and build a dialogue.	<p>Identify youth (both men and women) and existing CBO leaders as leaders and local champions and train them in all aspects of local level development and conservation</p> <p>Bringing legislators and other key stakeholders on equitable level of information on the issues of the forests-community domain</p> <p>Need to prepare joint convergence village level plan (including capacity building). The process needs to be institutionalized (example, how MBDA does it in Meghalaya).</p> <p>Bring awareness about forests, water and community interrelationships (issues and solutions) in school curriculum</p> <p>Targeted communication of learning to all stakeholders</p>

4. Issue: Limited availability of scientific data

The existing scientific data on mapping of community forest is not reliable for which knowledge management of the same is required.

Causes	Recommendations
Lack of revised scientific data mapping of community forests.	Preference should be given to integrate science and technology in conservation of natural resources
Absence of documentation of traditional knowledge	Research and development programme including documentation related to forestry and wildlife management, water and indigenous knowledge and best practices
	GIS based information including digitization of boundaries

5. Issue: Role of women in decision making

Though women in the mountains are the best risk managers, their role in decision-making process (through panchayats) as well as in traditional institution is still limited.

Causes	Recommendations
Lack of acknowledgement for impact of women activities in villages	Gender inclusive decision making at all levels (including knowledge impact of women activities in villages and success stories) has to be encouraged and mainstreamed at all levels of decision-making.

6. Issue: Weak policies

Weak top down policies lead to loss of biodiversity through alienation of local stakeholders.

Causes	Recommendations
Due to limited understanding of eco-system services and its methodological issues, mainstreaming is still problematic. PES faces a critical threshold because of existing models, which are not at a scale and up-stream, down-stream perception still not clear. But since this area of ecosystem services is entirely new and since benefits are dispersed and stake holders' interests are not focussed, political economy may not concentrate on it.	Prepare PESs not only on monetary basis but rather rationally (REDD+, Water) and customize to local landscape but performance oriented (<i>Link C&D Landscape Plan to Equitable Incentives (Direct-Indirect) Public and Private Investments</i>). IHR needs more consolidated datasets "on Valuation" and analysis from different methodologies which include distinct focus also on Cultural and Support Services.

7. Issue: Legal framework

Existence of ineffective legal framework in developmental issues like conservation, water and fire management demands reforming of policies.

Causes	Recommendations
Forest rules and policies in NE are ambiguous hence constantly challenged by private sector and by government agencies having interest in the forest and also the absence of singular uniform mainstream approach to policy framing.	Necessity to formalize interface with decision makers, policy-practice-science. Requirement Build and sustain learning and advocacy networks.
Defence has priority/control over land adjoining forests on international border areas.	Create pilots for sustainable forests management which demonstrate the new models in action
Policy making yet to become inclusive enough	Emphasis on livelihood and employment aspects to reduce the dependence on forest
Singular uniform mainstream approach to policy framing	Decentralization of rule making with freedom to customization as per local conditions
Top down approach for making laws and rules	Need to empower and strengthen local village Panchayats, Gram Sabhas and Indigenous cultural institutions
Dealing of forest issues by non forest department	Different sets of policy instruments of forest management in Himalayan states as per community and conservation needs
	Use existing institutions and peoples representative for policy framing
	Commission and undertake policy assessment review to identify gaps/overlaps and disharmony

8. Issue : Human-wildlife conflict

Human-Wildlife conflict (and instances of co-existence) were also discussed

Causes	Opportunities
Illegal trade in wildlife parts/products	To link bio-diversity conservation with rural livelihoods
Hunting, Gathering, Shifting and cultivation	Harness scientific knowledge on biodiversity, ecosystem functioning and services
	Developing guidelines and specific strategies for conserving maintaining and promoting biodiversity

Generic/ Overall Recommendations :

Alongside specific issue based recommendations, the group also arrived at a consensus to extend following overall recommendations for conservation, growth and improvement of Forests in the Indian mountain states:

Educate (engage) government to improve shifting cultivation in NER as part of landscape management plan at village level

Shared vision to be created (community and state together) and other stakeholders together to develop IHR forestry sector vision 2030, which helps in unlocking potential of forestry for sustainable mountain development.

One size does not fit all: given the diversity of local level community institutions in IHR, the policy must allow space to these institutions for sustainable forest management.

Need to create theme specific working group (within IMI constituents to start with) for the implementation of actions.

Need to prioritize common resources which have livelihood potentials such as ecotourism/ other recreational activities but benefits to be shared fully to community

Revenue generation from forest ecosystem services to be explored and this needs to be backed up by proactive management of Forests.

3. Mountain Agriculture

Introduction

While the mountains in India are known for their organic and exotic agricultural produce, challenges for farmers and those associated with agricultural produce in high-altitude regions of India are many. The hills that support abundant production of crops like ginger, turmeric, pineapple, large cardamom, king chilli, among others are now battling more climate-related vulnerabilities than ever before. But that is not all. Gaps in value chain, loss of livelihoods and absence of mountain-tailored policies could be major threats to mountain agriculture in the future.

To find solutions to such problems, deliberate on where the gaps lie and set a new vision for sustainable agriculture in the mountains, experts and delegates of 12 mountain states of India attended the discussions on this thematic session of Sustainable Mountain Development Summit–IV.

From challenges faced by small and marginal farmers in the northeast region and gaps in the value chain and post-harvest management to policy options to attract more youth to farming and develop mountain and organic products as niche yet sustainable food, many critical aspects were intensely discussed in the thematic sessions. Policies for promoting mountain agriculture products and improving post-harvest management were also at the core of talks.



Session at a glance:

The two-day session on mountain agriculture started with a keynote address from **Dr Ramesh Chand, Member, NITI Aayog**, in the plenary. While highlighting specific characteristics and issues related to Mountain Agriculture, Dr Chand focused on importance of bringing about a systemic change by introducing a holistic process, which will replace the individual-oriented fragmented approaches.

The expert Member from the nodal national planning entity explained the farming system in Mountains by emphasizing the symbiotic relationship between agriculture-livestock-forest. He pointed out that Agriculture practices in Mountains are not only subsistence-oriented but organic by default in nature and is thus uniquely integrated and interdependent. Agriculture and Animal Husbandry comprises inseparable components of hill farming systems that is 80% rain fed. Livestock forms an integral aspect of agriculture while overall system remains strongly linked with common property resources such as forests, pastures, rangelands and biodiversity, for access to various forms of natural resources including fodder.

Forests, which forms the resource base for agriculture and livestock are one of the valuable natural resources and thus important in socio-economy of rural life. The Himalayan forests have an important role in providing ecosystem services at local, regional and global levels and are highly vulnerable to natural disasters. In such prevailing conditions relationships of communities with the natural resources has been in existence as a part of tradition. Dr Chand stressed upon the need for collective focus on land and property rights as need of the hour. He pointed out that absence of such an approach leads to exploitation of marginalized local communities, majority of which are still practicing subsistence agriculture.



To combat the challenges and help farmers grow beyond subsistence agriculture, there is a dire need for robust research on one hand and extend aid to help farmers, said the Niti Aayog member. Giving example of Analong ginger, Tezpur litchi, Khasi mandarin, Nagaland tree tomato, Mizoram bird eye chilly and large cardamom, a few products that have benefitted from registration geographical indication, the expert suggested that this should be encouraged for more products that come from mountains. He also suspended the belief that mass production of

agricultural area depletes its ecology as a myth. An example of Punjab and Haryana as two states that are at an advantage for using electrification, technology and infrastructure for agricultural growth was brought to fore. He further suggested the need to debate on provisions of food security act for the states in North East.



Diversification of agricultural produce, for example by introduction of an exclusive product or in a season when no other state can produce it or same product with different attributes was another area which needs to be focused upon. He concluded the address saying, problems are common but solutions are not.

The first thematic session on Day 2 was chaired by **Shri Hage Khoda**, Commissioner Agriculture, Government of Arunachal Pradesh. He insisted that if agricultural practices across the northeast region are similar, so are challenges. For instance while Arunachal has the largest area in the region, it has lowest population density. Also the reliance of people on Jhum cultivation, also known as the slash and burn agriculture, cannot be denied. The secretary highlighted the importance and potential of horticulture particularly orchid cultivation in adding diversity to the region's agriculture. The official pointed out lack of processing units and post-harvest management are also issues that needs to be dealt urgently. He backed Prof. Chand's perspective on land ownership rights, further insisting on need for technological intervention at various levels, combined with support from market. Success of kiwi production in Arunachal Pradesh was cited as an illustration.

While **Dr Navin Anand**, expert from Uttarakhand gave some examples of how important value chains in mountain areas are and why they have been operating in some hill regions of the country, a presentation by Ms. Farah Rahman of BASIX focused on livelihood issues pertaining to mountain regions. Ms. Rahman presented an interesting perspective on diversity of livelihoods, variety of challenges under which mountain communities operate and the potential to capitalize on the same. Promoting Mountain Products is the theme chosen for this year's celebration of International Mountain Day.

Shri Sunder Subramanian, an independent consultant at FAO and a LEAD Fellow talked about the obstacles that hinder Himalayan mountain products from going the "niche" way and what could be the way forward to make them exclusive.

Ms. Binita Shah of SUPA focused on effective delivery mechanism that can help organic agriculture boom in India, with an intention to keep holistic mountain development high on agenda.

Meanwhile, **Shri Khorlo Bhutia** presented the journey of Sikkim Organic Mission as a success story towards achieving holistic development of mountain agriculture. This was followed by a panel discussion which deliberated on climate change related vulnerabilities, including soil erosion within Himalayan agriculture systems. Along with resilience, adaptation strategies and scaling up of agro techniques and research were also a priority for experts at the panel.

The panellists included **Shri Amal K Purkayastha**, Senior Consultant, Deptt. of Agriculture, Govt. of Arunachal Pradesh, **Dr Sarla Khaling of ATREE**, **Dr Ravikant Avasthe, Jt. Director ICAR**, and **Dr R Bhagwati** of ICAR. A case on how women farmers in Nagaland combat land degradation was presented by Shri Kedino Zango of UNDP.

The last sub-theme session was largely a discussion about improvising existing public policies and finance for mountain agriculture. It was co-chaired by **Shri Hage Khoda** and **Shri Dhrupad Chowdhary** of ICIMOD who was also the anchor for all the deliberations.



Financing and credit models, along with a new vision to institutional arrangements, were explored by **Shri Divyashish Sharma** (in his joint presentation with Shri PD Rai) and **Shri CSR Murthy** of NABARD. Citing some statistics, Dr BM Pandey of ICAR specifically mentioned that most of the mountain states in the northeast were deficient in production of cereals, pulses and oilseeds. This, therefore, came as a primary challenge.

Thereafter, **Dr S V Ngachan** of ICAR presented a vision 2050 for North-Eastern Himalayas. According to him, reports clearly suggest that majority of the population of the region thrive on jhum and presently, about 0.88 million ha area in the north-east is under jhum.

After all the discussions, a presentation citing all the key recommendations and issues was presented to an audience of about 200 delegates. To make the consultations more inclusive and encourage participation from attendees and speakers both, a group exercise was organised. For this, everyone present in the discussion were requested to put down their key recommendations on meta cards. The suggestions have been included in this report

Issues and recommendations from consultations

A. Mountain Livelihood:

Knowledge economies are winner economies. At a time when mountains are struggling to retain their youth in the absence of adequate job opportunities, knowledge and skill building could show a way forward. This becomes more important as in the absence of opportunities and adequate availability of labour even the investment that the States draw cannot be used.

Issue : High Level of Unemployment & Migration

Recommendations:

‘Green’ and ‘Digital’ prosperity (G+DP) seems to be the most promising area for the region.

Human capital has to match available natural capital, and vocational training in green and digital skills has to be strengthened.

N Need to improve prior skills and knowledge in agriculture and livestock production.

A Agriculture department could promote production through Farmer Producer Organizations (FPOs)



Best practice example

Himachal Pradesh Horticultural Produce Marketing and Processing (HPMC) marketing model for processed fresh and surplus fruits could be an example for others to follow. The body provides all services to the fruit growers for marketing of fruits and has built a modern system of marketing in the country. Meghalaya's Mawlynnong, also known as cleanest village in India, boosts eco-tourism and entrepreneurship. This could be a model for others

B: Value chains and market linkages

Mountains cover one-fourth of world's surface and are home to 12 per cent people. In hilly districts, while the percentage of small and marginal category land holdings is 93.4 per cent, average size of land holdings in hills is only 0.81 ha. Also, farmers in remote locations of the mountains are in more disadvantaged situations. In such a scenario, the activities needed to deliver a valuable mountain product in markets also take a hit because of poor access to markets:

Issue: High transportation cost in the market chain and weak bargaining power in Input and Output Market (because of production size)

Recommendations :

Collectivisation - Producers groups and livelihood collectives & Collective inputs and output management across the value chain – way for better direct marketing through producer groups.

Classification of farmers - Extra support to remotely placed farmers on priority. Classification of customers for bulk sale and consumers for retails could improve producers linkage to market.

Streamline forward and backward linkages - Having the sustainable linkage with ensured in infrastructure like road connectivity. Companies to ensure contracts in favour of farmers, present practice by companies like WalMart, Mother dairy, Emami can be scaled up

Marketing federation for surplus produce -Promotion of cooperatives for women for agri-horticulture products

Technological Intervention for reducing post-harvest risk- Advance processing, Innovative transportation methods , better storage for the produce

The trade-off is in terms of reducing production risk factors of farmers, minimising costs of the value chain activities and minimising post-harvesting risks will be the key

Best practice example:

Uttarakhand Gramya Vikas Samiti's innovations in linking federations with "Integrated Child Development Schemes", "take home relation scheme", integrated multi-purpose processing hubs and eco-tourism and promotion of traditional crops through SHG federations could be sought as a model

C. Marketing of mountain products (including development of organic and sustainable products)

Mountain products stand for products coming from the hills and mean more than just food. While number of European countries are working to give these products a niche appeal and access, India still lags behind. Moreover, presently the northeast does not have any market intelligence, processing or storage agencies that are crucial for the markets of mountain products

Key issues

Lack of defined policies & ineffective enforcement of existing policies-

Unique produce from small holders farmers fails in competition with large scale products, lack of community participation & insufficient funding for the state from centre for boosting organic agriculture.

Recommendations:

Administrative requirements of complex process of certification of organic produce as Niche should be kept at minimum. Enabling policies can lead to establishment of market to niche mountain products

LISA(low input sustainable agriculture - Area of exploration . Along with traditional food security Nutritional security of people in mountain should be high on agenda

Up scaling Organic & sustainable mountain produce -by Tying up with SME's and Consumer Supported Agriculture (CSA)

Sikkim's 'organic' journey:

While the state was traditionally organic with less use of fertilisers, it decided to accelerate its transformation into a totally organic state in 2003. The preparation that lasted from 2003 to 2010 included discouragement of chemicals, capacity building, infrastructural development for post-harvest management, including certification. While Sikkim Organic Mission was launched in 2010, in next five years (2010-15), institutional Mechanisms such as state-level committees were devised.

D. Towards sustainable agricultural production in the Himalayas

The North East is home to rare species of cereals, pulses, oilseeds and plants with medicinal values. Orange, pineapple, kiwi, walnut, almond, ginger and large cardamom are few of those. Shifting agriculture that leads to degradation, but also a source of livelihood for many, is one of the key traits in the region. About 1.6 million hectare area is under shifting cultivation in the NE region.

Experts seem to be concerned over soil, one centimetre of which takes 300 to 1,000 years to form but can be destroyed within seconds. Out of 4.0 million hectare net sown area of the region, roughly 1.3 million hectare suffers from serious soil erosion problem. Annual soil loss in India stands at 5,334 million tonnes @ 16.4 t/ha/year

Key Issues

or insufficient access to technology, dependence on multiple middle-men for cash crops, depleting soils, climate change, fixed prices in distant markets, danger of loss or extinction of valuable bio resources
Unique produce from small holders farmers fails in competition with large scale products, lack of community participation & insufficient funding for the state from centre for boosting organic agriculture.

Recommendations:

For Legal regulation (Soil Act) for soil conservation

Enforcement of land rights , developing land use plans, PLUP (participatory Land Use Planning) & women involvement in development of community resource management plans

Adaptation to climate change by ensuring Crop diversity/ stress tolerant crops

Finance/Credit

Finance has a vital role to play in helping the rural poor to diversify their sources of livelihoods and reduce hunger, become more resilient to periodic shocks and prevent them from falling into poverty traps.

The World Bank in its sector policy paper had stated that “credit is often a key element in the modernization of agriculture. Not only can credit remove financial constraint but it also accelerates the adoption of new technology...” But the present finance-related policies or coverage has made it difficult for farmers to access credit.

The loan disbursed in the North Eastern States is 7 times less than the National Average, and it

is 3 times less in the Mountain States on population basis. Moreover, mountain states account for 1.87% of the total Ground Level Agricultural Credit for India, with the share of North-East region limited to just 0.53%.

Therefore, innovative financial solutions and incorporation of mountain specific requirements are essential to address the productivity challenge in a sustainable manner:

Key Issues:

Low product value, triggered by problems like lack of incentive for co-investment, lack of capital

Recommendations:

Need to Evolve Innovative Financial mechanism to address the inherent specificities of mountain agriculture including from RBI / NABARD.

Access to credit is limited in mountains. Agencies must work to change the credit norms. (collaterals based on institutional guarantees/ land tenure certifications from appropriate local agencies).

Financing requirement of FPO's to be addressed based on their stages of life cycle

Region faces the issue of non- existence/ inadequate land records. Government should maintain the land records.

Bankers may evolve innovative lending methods like use of joint liability groups,

Involvement of NGOs and community-based organizations as banking correspondents and relaxation in the lending norms.

Risk insurance tailored to mountains, subsidy on transportation like air freight/subsidy for perishable products from mountains are other possible solutions

Best practice examples:

Japan's innovation to make farming a viable option for youth

Japan reversed the trend of declining number of hill farmers by embarking on a policy to support niche based high value farming and exploring income generating options for the hill farming communities. There is a thus a need to conduct cost-benefit analysis of innovative financial delivery mechanisms, such as payments for ecosystem services, index insurance, safety nets

When Switzerland compensated mountain farmers for ecosystem services:

About 68% of Swiss mountain farmers received benefits to the tune of US\$ 150 million per year in the form of direct payments and interest free loans for additional work involved in sustainably managing watersheds and landscapes.

Overall recommendations

Recognize that fundamentals of mountain livelihoods are based on linkages between agriculture-livestock-forestry-land based activities

Recognize that mountain farmers are small-holders with fragmented land holdings – need to create opportunities to make small farming viable

Need for pragmatic methods and methodologies for mitigating climate change risks to mountain livelihoods

Acknowledge role of indigenous land races for nutritional security of mountain communities.

Parallel Events

1. Indian Himalayan Legislators' Meet

Background:

The Legislators Meet at the Sustainable Mountain Development Summit (SMDS) provides a platform for Legislators from mountain States to voice their common issues, deliberate, create awareness and make an action plan for climate change legislation. The meet has been bringing together Legislators from all 11 mountain States since 2012.

The 4th edition of the Indian Himalayan Legislators Meet was held on 8 October 2015 under the chairmanship of Shri Nabam Rebia, Hon'ble Speaker, Arunachal Pradesh Legislative Assembly. It was organized by the Sustainable Development Forum Arunachal Pradesh (SDFA) in collaboration with GLOBE India and with support from UNDP and SDC.

Over 30 Legislators from Himalayan States attended the meet and highlighted their local concerns and formed consensus on a common stance for the 11 mountain states of India in relation to Climate Change and the international negotiations surrounding the issue. The major focus of the meet was 'Disaster and Climate Change' in the context of the recent disasters in



Uttarakhand, Kashmir and Nepal, and the COP21 negotiations slated to take place in Paris in December, 2015.

Meet at a glance

Shri Bhubaneswar Kalita, MP Rajya Sabha and President GLOBE India in his introductory address, highlighted the importance of the climate change negotiations taking place at COP21 and stressed the need for India to take a strong stance in the matter. He also outlined the International connectivity on this aspect with GLOBE International. He stated the importance of States participating with GLOBE India to raise the issues faced at the grassroots level.

Shri Nabam Rebia, Speaker, Arunachal Pradesh Legislative Assembly in his keynote address whilst chairing the Meet, stressed the need for legislation for climate change adaptation and mitigation by linking the role of climate change to conflicts brewing around the world. He expressed concern on damage to the sensitive ecosystems of the mountains that supports the lifestyles and livelihoods of the Himalayan population. He further stressed the need to understand how State Climate Action Plans (SAPCCs) and Intended Nationally Determined Contributions (INDC) would lead to an effective international agreement during the COP 21 negotiations.

Shri Prem Das Rai, MP and Secretary General of GLOBE India, welcomed all the participants from various States. He also set the context by outlining the objectives of GLOBE and IMI and how they synergize. He expressed happiness on the participation level which has expanded with participation from Tripura and Leh Ladakh.

Deliberations:

Shri Ninong Ering, MP Lok Sabha, Arunachal Pradesh expressed concern on the state of the Himalayan ecosystem. He stated that the region has acted as a carbon sink for the entire nation and the world but it has come under enormous stress in the recent years. The need for concrete action to protect the sensitive ecosystem of the Himalayan region while also pushing for growth and development was agreed upon by all Legislators. A need for deliberating upon the costs involved of executing our Intended Nationally Determined Contributions (INDCs) and State Climate Action Plans was also observed.

Shri Mmhonlumo Kikon, Parliamentary Secretary from Nagaland stated that there must be concrete suggestion from the North East and Himalayan mountain states to be taken to COP21 at Paris in December that represents the common problems and issues. He also highlighted the possibility of expanding the forum to include parliamentarians of Nepal and Bhutan as they are from an ecologically similar region.

Shri PD Rai, MP Lok Sabha Sikkim also suggested that a connection could be established with

Legislators from Nepal, Bhutan, Bangladesh and Sri Lanka. He also stressed the importance of advocacy within the North Eastern states so that effective policies and frameworks can be worked out for climate change adaptation and mitigation.

Shri Kennedy C. Khyriem, Parliamentary Secretary, Meghalaya stressed the importance of figuring out what India was planning to do in the realm of climate change as soon as possible, and what the role of legislators would be in the adaptation and mitigation strategies. He also stressed the importance of legislators from different states engaging with their own state governments to come up with local measures to address climate change.

Shri AP Maikhuri, Deputy Speaker, Uttarakhand called for more central funding for several developmental projects and stressed the importance of involving local people in government schemes. The importance and need for strengthening scientific research in the field of climate change mitigation and adaptation and natural disaster prediction was also emphasized in the meet.

Shri Lalit Farswan, MLA, Uttarakhand stressed the need for Green Bonus to be released immediately for the protection of the Himalayan ecology and the development of the states. The strategic importance of infrastructure development in the Himalayan states from a defense stand point was also raised as the Himalayan states are also Border States.

Er. Punchok Tashi, Councilor, Ladakh stressed the need for a separate set of governmental policies that are specific for the mountain states. All the Legislators present agreed with the needs for different policies in the mountain regions keeping in view the different conditions between plains and mountains. The issue of higher costs of infrastructure development in the mountain states and the unfeasibility of implementing schemes of the central government on a budget designed for plains was also discussed.

Dr. Jemino Mawthoh, MLA, Meghalaya emphasized the need for sensitization of Legislators at the state level to enable them to articulate in a better way and to include all stakeholders for climate change adaptation and mitigation in the policy formulation process.

Shri PD Rai outlined the steps taken by GLOBE in furthering this cause through its state chapters. He further elaborated that there are many issues related to formulating the next steps to be taken at state, central and international level and further deliberation is required to decide upon concrete steps that need to be taken for the protection of the Himalayan ecology.



Resolutions

Need for GLOBE-IMI Pan Himalayan Legislators' Forum: The Legislators of Arunachal Pradesh decided to come together under the banner of GLOBE-IMI Pan Himalayan Legislators' Forum to deliberate upon the environment related policies and legislations needed to address the growing concerns in Himalayan States.

Formation of Arunachal Pradesh chapter of GLOBE India: It was resolved by the Legislators that they would create an Arunachal Pradesh chapter of GLOBE India within the next three months to facilitate the state's climate change adaptation and mitigation strategies.

Exploring possibilities in International Climate Finance: It was also decided that there is a need to look into international climate finance and identify sources of funding available for implementing innovative projects related to climate change adaptation and mitigation in mountain states.

Bringing the Global Warming and Climate Change discourse to the grassroots: The Legislators also raised concerns that the discourse on Climate Change and Global Warming was not percolating down to the local level, which hindered the involvement of the local population in adaptation and mitigation strategies. The need for better messaging of environmental issues, especially those related to the mountain states, was emphasized.

A consolidated stance and recommendations to be framed by Legislators from the mountain states before meeting Shri Prakash Javadekar, MoS I/C, MoEFCC: The participants welcomed



the decision of Union Environment Minister Shri Prakash Javadekar to meet Legislators from Himalayan States to discuss issues related to the sustainable development of mountain states during the winter session of parliament. It was resolved that Legislators from mountain states will meet before the meeting with the Union Environment Minister to deliberate and decide upon the issues to be raised by them for the betterment of all mountain states in a sustainable manner and the common issues of mountain states to be raised during COP21.

Solidarity with the proceedings of SMDS IV: While expressing their full solidarity with the thoughts, concerns, expectations and suggestions that came out of the Sustainable Mountain Development Summit – IV (SMDS IV), the Legislators resolved that they, in groups and in their own States, would seriously examine all the issues and come back in the next Summit with concrete and implementable policies, programmes and solutions to take the mantle of climate change adaptation and mitigation forward.

Formulation of District Disaster Management Plans: The resolution noted that 41 Districts across 11 mountain states are yet to formulate District Disaster Management Plans and resolved that the districts will be identified in a fast tracked manner and a disaster management plan will be formulated for each of the districts within the next one year.

Demand for a separate building code for Mountain States: The Legislators present in this meet also asserted that the building code applicable to the whole of the nation is not ideal for buildings in the mountain states. It was decided that Legislators from mountain states will raise the issue of forming a separate building code for mountains at different forums including the state legislative assemblies and the parliament.

The need for local involvement for the success of government schemes: The Legislators stressed the need for the involvement of local people in the functioning of schemes and agreed that without the active participation and involvement of the local population, government schemes could only have a very limited impact.

Need for the creation or identification of a knowledge sharing network: The need for the creation or identification of a knowledge sharing network for the mountain states where key issues related to climate change can be deliberated upon by Legislators and experts, so that effective policies can be formed in the sector was identified. It was resolved that such a network would either be identified, or created as soon as possible.

Presentations:

Making a presentation on 'Climate Change Adaptation: Role and relevance of international climate negotiations for Himalayan States', **Shilpa Chohan** a partner of Indian Environmental Law Offices (IELO) asserted Legislators from Himalayan States must engage themselves with

climate negotiations effectively, as climate change will have the most profound impacts on Himalayan communities. Due to their vulnerability and susceptibility to extreme weather events which are increasing in number and magnitude due to rise in temperature, flash floods, etc. mountain states must put in place effective plans for disaster management and undertake infrastructure building which is more resistant to natural disasters.

In his presentation on 'Global Climate Change Debate: Indian Perspective', **Shri Ram Kishan** from Climate Action Network South Asia (CANSAs) cautioned that if India fails to meet its 2020 emission targets, the costs of adaptation will increase and currently available technologies will not be sufficient. He also called for deployment of technologies to achieve negative emissions or control solar radiation as these technologies could have significant environmental impacts.

Dr. R.S. Rawal from GB Pant Institute of Himalayan Environment and Development (GBPIHED) also made an engaging presentation on 'Himalaya: features, facts and future under changing climate scenario' explaining the enormous change that is taking place in the ecology of the mountain states.

A book on the state of Arunachal Pradesh, prepared by the GB Pant Institute was also released by **Shri Nabam Rebia**, Honorable Speaker Arunachal Pradesh Legislative Assembly, during the event.

Shri Bamang Felix, MLA, Arunachal Pradesh thanked all the legislators for their participation and invaluable input in the meet, and all the organizers and sponsors for making the meet possible. While giving his vote of thanks Shri Felix also reiterated the importance of a forum for discussion about climate change for the legislators of mountain states, which are particularly vulnerable to its impacts.

Hosting of the next Legislators Meet in Ladakh

Shri P. D. Rai in collaboration with the Councilor from Ladakh suggested that the next Legislators Meet be held in Ladakh to focus attention on the region's problems. Ladakh is a clear example of the remoteness of the mountain states and aptly reflects the specific problems faced by them in trying to implement policies that were not designed with the mountain states in mind.

2. Policy Maker's Dialogue - Chief Secretaries' Conclave

Background

With the doing away of the Planning Commission and the setting up of the NITI Ayog, the new reality that seems to be kicking in is that the States will be forced to rethink their 'planning and budgeting' exercise especially the erstwhile Special Category States. Hence there was a need to first understand what the substantive changes in policy are, how it is impacting Special Category States, and then look at redressal mechanisms. The Chief Secretaries' Conclave brought together the Chief Secretaries of the 11 mountain states to deliberate on these important issues.

The conclave was attended by representatives from all Indian Mountain States, including Chief Secretaries and other senior officers nominated by different states. A delegation from United



Nations also attended the conclave to understand issues and challenges and brain storm with the state representatives on the areas where UN agencies could extend their support.

The Chief Secretaries' Conclave deliberated on the issues and challenges with an aim to carve out effective pathways for Mountain states. As a stakeholder responsible for development agenda in State- the conclave symbolically found a place in the SMD Summit

Meet at a glance

Dr NC Saxena shared suggestions from his paper on 'maximizing fund flows and outcomes in the NE states. This was based on a study conducted with UNDP support. Dr Saxena elaborated on the development challenges in the North Eastern Region, which covers the following:

The NE region comprises of eight States, has 3.75% of country's population but 8% of the

geographical area. Population density varies widely from 16 per sq.km (AP) to 397 per sq.km (Assam).

The population is sparse though the region has large geographical areas with inadequate physical infrastructure, including road and rail.

About 99% of its border, common with China, Myanmar and Bangladesh. Road and rail connectivity is hence through narrow 27 km Siliguri corridor only.

Difficult terrain, high altitudes and inaccessible areas requiring large investments on roads and other governance infrastructure.

High cost of setting and operating manufacturing units. Growth in manufacturing sector is hence slow.

Active insurgency in certain pockets.

The presentation also highlighted the policy interventions in place for growth and development in the NE Region and presented through various indicators the performance of different states in terms of growth.

Dr Saxena further brought forth critical issues in expenditure trends which NE states have been facing after March 2015 which are as follows:

CSS Funds flow not to society, but to treasury

Pattern of sharing between State and Center has not been clarified

Where would states use additional devolution? To reduce debt? Spend on additional staff? Capital expenditure? Innovative programs?

Delays in payment of salaries to ground staff

Contractual staff may demand regularization

The presentation emphasized on the need for building capacities in the NE states and indicated how different agencies could contribute in this process.

The second presentation was made by **Prof Manoj Pant** who highlighted implications (opportunities, risks, challenges) of 14th Finance Commission, the Niti Ayog on Mountain States. This was followed by **Ms Mridula Paul** presenting the concept of Development Disability Index in the context of Mountain states. The concept as developed by BK Chaturvedi Committee was explained to the delegates which was deliberated upon in context with the Indian Mountain states.. The deliberations focused on collective thinking about gaps, opportunities and actions for better preparedness

Key take aways:

The conclave was a first of its kind, when State policy makers discussed the development

challenges and opportunities and collectively explored ways of collaborative functioning. Specifically, the delegates who participated in the conclave, developed a shared understanding on the following lines:

Challenges of mountain states are opportunities - the states need preparedness on their part to avoid risks

Mountain states need appropriate capacities to deal with emerging challenges and opportunities
UNDP and other UN agencies willingness to support addressing the institutional capacity gaps of key actors is an opportunity to leverage

Felt need for a technical cell in each State to guide, advice and support states to leverage funding from “other” sources and meet compliances

Development disability index could be used as a rationale for seeking additional support for Mountain States. However the vast potential of forests for community development must not be missed out.

Have a greater say in policy making for mountain specific rules

Resolutions

As an outcome of the conclave, the delegates passed a resolution which included 5 critical points, as summarized below:

1. Urge the Government of India to continue with the policy of Special Category States status for mountain states and to bring out the policy in more clear terms for the guidance of the States.
2. Move a special capacity building program for the Indian mountain states to enable appropriate planning and development expertise in the light of the new policies of the Government of India as also to help the States to access external funds and other support mechanisms for their development. Towards such an end, the gathering urges the UN agencies, present at the Summit to take a proactive role to bring about such a process.
3. To move the Mountain States to set up Special Cells in the Government for interface with the Government of India and External Funding Agencies, for efficient planning and implementation of development programmes
4. Move the Government of India to evolve a policy for mountain states to bring out a “State of the Mountain Report” at regular intervals.
5. Move the Government of India to examine the Development Disability Index or some compensatory mechanism, especially in light of the public goods or Eco-system Services contributed by mountain states to the rest of the country and in the provision of which these states remain developmentally challenged.

Other Side Events

1. The 4th Indian Himalayan Photography Competition

On the sidelines of SMDS-IV, the 4th Indian Himalayan Photography Competition was held during SMDS-IV. The Sustainable Development Forum Arunachal Pradesh (SDFA) hosted the event. The competition has over the years become an important highlight for both amateur and professional photographers and is expected to not just highlight the salient features of the Indian Himalayan Region but more so to encourage photography as a medium to speak for and about mountains, its people, their challenges and to celebrate life in mountain as a whole.

A total of 72 entries were received on the themes of Natural Disaster, Forests, and Mountain Agriculture. There were 6 winners at the Photography Competition.

A total of 94 photographs, including 8 rare photographs from the archives of the Directorate of Information & Public Relations, Govt. of Arunachal Pradesh, 18 from the Sustainable Development Forum Arunachal Pradesh (SDFA) and 2 from the Arunachal Press Club (APC) were exhibited at the venue of SMDS-IV.

Winners in the Senior Category were:

1. First Prize - Shri Kishon Tekseng.
2. Second Prize - Shri Minken Tassar.
3. Third Prize – Jointly shared by Shri Nabam Tadi & Dr Marak Pertin.

Winners in the Student Category were:

1. First Prize - Miss Zena Pertin.
2. Second Prize - Miss Taro Sia.

The judges for the Photography Competition were Shri K.K.Chakraborty, Photography Officer in DIPR,



Govt. of Arunachal Pradesh, Shri Sunil Koijam, HoD of Mass Communication in RGU, and Shri Hali Welly, President Arunachal Photography Club. Chow Bilaseng Namchoom of SDFA was in charge of the Photography Competition.

The photographs for the competition were judged based on creativity, expression/artistic execution of the theme, quality and genuineness/authenticity of the content.

The Competition's goal was to showcase the best in mountain-themed photo essays and to recognize the best stories told through a series of still images illustrating the mountain related stories on the themes of Natural Disaster, Forests, and Mountain Agriculture.

2. Food Carnival

The Summit showcased the rich cuisine and culture of Arunachal Pradesh. Besides deliberations on policies, experience sharing and dialogues the event intended to enhance bonhomie and bonding through exposure to the rich cuisine and cultural heritage of Arunachal Pradesh. Given such an agenda, all working lunches were planned as a food festival and networking occasion.

The food carnival was presented by the Department of Tourism in collaboration with the Sustainable Development Forum Arunachal Pradesh (SDFA) led by Ms. Bengia Manna Sonam, Ms. Suwana Mungyak, and Shri S.S. Kar, Co-ordinator of Hunar Se Rozgar.

Delegates from the 12 mountain states were exposed to the cuisine of Arunachal Pradesh prepared by unassuming chefs from the Women Self Help Group called Tai Thali. Trainees from Hunar Se Rozgar were engaged to provide the support service.





The lip-smacking Tai Khampti ethnic dishes at the carnival included Ho Khao Hai (steamed aromatic, sticky Khampti rice wrapped in leaves called tong/ ekkam), Nou Kai noosom (steamed chicken with tender fermented bamboo shoot garnished with local herbs), Nou Moo phan (steamed pork blended with local herbs, ginger/ garlic), Paa pho (fish marinated with local herbs, green chillies, ginger/ garlic and wrapped in tong/ekkam leaves and steamed), Noo phan (boiled fresh tender bamboo shoot flavoured with green chillies, and fresh tender ginger leaves), Phak Kho (seasonal green leafy vegetables), Phak Nou Moo (pork curry with bamboo shoot) and Pi Koi tome (thick soup made with banana flowers, garnished with local herbs, ginger/ garlic and green chillies). Side dishes like Lukter (dry pork & bamboo shoot ground to a powder), Amin (gravy dish prepared with meat and broken rice), Baka/Kopi Boil (a very nutritious wild egg plant) and a Bamboo Shoot pickles.

3. Cultural Panorama

The Cultural Night on Day 1 of the Summit was inaugurated with a beautiful performance by the students of Rajiv Gandhi University titled “ Hamara Arunachal ” depicting the rich cultural diversity of the state. This was followed by mesmerising performances by professional dancers from the North East Zonal Cultural Centre (NEZCC) showcasing dances from Nagaland, Manipur, Assam and Mizoram.

On Day 2 the stage was set on fire by talented young artists of Arunachal Pradesh who enthralled the delegates with their melodious voices and beautifully choreographed dances.

Day 3 was set aside for showcasing musical talent from amongst the delegates in order to share the cultural mosaic of the mountain regions of India. However due to a heavy downpour the stage had to be abandoned. But nevertheless the bonhomie and the bonding among the delegates continued over dinner indoors.



4. Agriculture- Horticulture Exhibition

An Agriculture-Horticulture Exhibition was put up on the occasion of the Sustainable Mountain Development Summit-IV by the Department of Agriculture and Horticulture, Govt. of Arunachal Pradesh. The theme of the exhibition was “Showcasing Plant Bio-resource of Arunachal Pradesh”. Arunachal Pradesh being one of the biodiversity hotspots of the world, the purpose of the exhibition was to showcase the rich plant bio-resource of the State. The Horticulture exhibition included display of various species of bamboo, orchids, medicinal plants, local vegetables and wild fruits found in the State. On display were also various varieties of apples, kiwi, including wild kiwi.

The Agriculture Department displayed quinoa (grown in the North East for the first time by some progressive farmers) and different varieties of rice grown in the state as well as the practice of paddy cum fish cultivation of the Apatani tribe.

A pictorial guide book brought out by the Arunachal Pradesh Horticulture Research and Development Mission (APHRDM) team on the indigenous vegetables and medicinal plants of the State was also released by the Honourable Chief Minister on the opening day of the Summit.

Eco Tourism & Conservation Society of Sikkim (ECOSS) also participated in the exhibition with digital display of their products.



Closing Session

The closing session was kept open ended for participants in order to garner immediate reflections of the SMDS-IV. Participating delegates congratulated IMI and SDFA for successfully hosting SMDS-IV in Itanagar, Arunachal Pradesh. The multi-stakeholder gathering from all mountain states appreciated Itanagar for its spirit to be able to host such an event on such a grand scale.

Participating delegates were happy with the participatory approach adopted to arrive at the recommendation for selected themes of Disaster Risk Reduction, Forests, and Mountain Agriculture. Arriving at policy recommendations with indigenous stakeholders participating in it reflects the immediate needs, gaps and loopholes, which require attention. However, participants also highlighted the fact that the policy recommendations generated at the summit needs to get on floor in the form of action points. They also highlighted that same thematic sessions as in the previous SMDSs brought in similar recommendations.

LEAD India made the following suggestions to take forward the mandate of IMI and different SMDS:-

- Align/Influence sustainable development goals with State priorities- (a task for each State)
- State specific planning to address state priorities and heterogeneity
- Building consensus for common SD challenges in the IHR
- Handhold states in formulating goals, planning and achieving these

Sustainability Report cards for Mountain states with stakeholder involvement could be one way of goal setting

- Leadership around Empathy and Equity
- Skills around Natural Capitals
- Cross-sectorial understanding

Resolution made at the Valedictory of the SMDS -IV

Tourism and its associated economy constitute a very important part of Sustainable Development of the Mountains of India.

In appreciation of this fact and as a mark of Arunachal Pradesh having hosted the Sustainable Mountain Development Summit – IV at Itanagar from the 7th to the 9th of October 2015, the Summit resolves as follows :

“Arunachal Pradesh, where the 400 year old Monastery at Tawang is located, constitute one of the most important seats of Mahayana and Theravada Buddhism in India. It is a symbol of vibrant Buddhism and bears testimony to age old tradition in Arunachal Pradesh. This Monastery is the second largest Buddhist Monastery in the whole of Asia and highest seat of learning in South East Asia. Its history and tradition has great potential for attracting people from all over the world to travel and visit the location. It is urged that the Government of India should include Bhalukpong – Bomdila – Tawang – tourist circuit in PRASAD scheme”.



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