




INDIAN MOUNTAIN INITIATIVE



INAUGURAL
SUSTAINABLE
MOUNTAIN
DEVELOPMENT
SUMMIT



21-22 May, 2011
Naini Tal, Uttarakhand

coming together for the cause of the Indian Himalayan region



INDIAN MOUNTAIN INITIATIVE

State	Area (km ²)	Population
Arunachal Pradesh	83743	1382611
Assam	78550	31169272
Hill District of West Bengal	3149	1842034
Himachal Pradesh	55673	6856509
Jammu and Kashmir	222236	12548926
Manipur	22347	2721756
Meghalaya	22720	2964007
Mizoram	21081	1091014
Nagaland	16579	1980602
Sikkim	7096	607688
Tripura	10492	3671032
Uttarakhand	53566	10116752

Source: Census 2011



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GENESIS

The seed of the idea of Sustainable Mountain Development Summit can be traced back to 1983. In that year, Central Himalayan Environment Association (**CHEA**) organized a seminar in Naini Tal with the following objectives: (i) to quantify the status and to identify the causes of degradation in the Himalayan environment, (ii) to contribute to strategies for regenerating the impaired environment, and (iii) to suggest the value system that would underpin mountain development. More than 150 people from India and abroad, including scientists, administrators, social workers, and practitioners of environmental regeneration programmes, participated in this seminar, the seminar proceedings leading to a book, *Environmental Regeneration in Himalaya, Concepts and Strategies*. While a landmark in itself, the seminar remained a one-off event.

The most recent Indian Planning Commission Task Force on hill states and hill areas recognised that the Indian Himalayan Region (IHR) states "*must agree to a common essential platform for regular interaction and from therein, decide on a common essential plan for the region.*" Whilst the Task Force recommended establishment of a Himalayan Development Forum for all IHR states, in view of the fact that similar Working Group and Taskforce recommendations had not led to any concrete action at the national level, CHEA in Uttarakhand decided to follow-up this timely and relevant recommendation of the Task Force by forming the Indian Mountain Initiative (**IMI**). The purpose of IMI is to provide a platform where IHR states can come together to discuss issues of importance to them, with a view to influence policy. Given the magnitude of the responsibility, CHEA sought the cooperation of ICIMOD, GIZ-India and others.

¹ Report of the Task Force, "To look into problems of hill states and hill areas and to suggest ways to ensure that these states and areas do not suffer in any way because of their peculiarities", Planning Commission, Government of India, 2010

MODUS OPERANDI

The Indian Mountain Initiative (**IMI**) proposes to reinforce, with some significant modifications, what the first Seminar held by CHEA in October 1983 attempted to do a quarter century ago, namely pioneering a move to catalyze and galvanize scientists, administrators, social workers and development practitioners to collectively reflect on, not only, de-generation of the environment but also on its intrinsic relationship with development.

The Sustainable Mountain Development Agenda, the legacy of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992 ("**Earth Summit**"), must now be discussed more horizontally and vertically, and much more frequently than a few stand-alone seminars and workshops allow for. Accordingly, IMI has chosen to undertake open and continuous dialogue on mountain concerns through Annual Thematic Summits and by encouraging the establishment of thematic networks on various mountain themes and concerns. In this spirit, the First Sustainable Mountain Development Summit of IMI was organized in Naini Tal on the 21st and the 22nd of May, 2011.





Photo - Abhijit Bhattacharyya

INAUGURAL THEMES

The organisers of the Inaugural Sustainable Mountain Development (SMD) Summit selected as its focus four themes-:

1 HYDRO-POWER PROJECTS
IN MOUNTAIN REGIONS

2 ADAPTATION MEASURES UNDER
CLIMATE CHANGE SCENARIO IN
MOUNTAIN REGIONS

3 RURAL TOURISM
IN MOUNTAIN REGIONS

4 COMMUNITY FORESTRY
IN MOUNTAIN REGIONS

These themes were selected after a detailed debate within the Steering Committee that was set up to oversee the organisation of the Summit. All four themes are current and have a direct bearing on the mountain regions and various communities living therein. Not only this, the themes are also of direct relevance to millions of people living in the plains adjacent to the mountain regions and dependent on them for various goods and services, including ecosystem services.



HYDRO-POWER PROJECTS IN MOUNTAIN REGIONS

Hydro-Power development in the mountain regions has long been a contentious area. It evokes strong reactions from people engaged in the issue and has a tendency to polarise opinions. While it is agreed that energy from hydro power is needed to maintain the pace of economic growth that India has witnessed in the last decade and that bulk of hydro-power potential is in the mountain states, there is a vocal group that opposes the harnessing of this potential unless concerns about the natural environment and social equity are addressed. Those who support the development of hydro-power potential argue various virtues of such power including its low cost of and clean electricity generation.

There is merit to both sides of argument. However often this debate is guided more by passion than by facts. Recently it culminated in the suspension of a number of under construction hydro-power projects in Uttarakhand. What are the facts? How much hydro-power potential can be safely tapped? What are the downsides of harnessing the potential for hydro-power? Can some of these be managed? If so how? These are some of the many questions that come to mind but to which there are no clear answers.





Photo - *Somanath Ghosh*

ADAPTATION MEASURES UNDER CLIMATE CHANGE SCENARIO IN MOUNTAIN REGIONS

Climate change has emerged as a major area of concern. It has the potential to disrupt long established practices and institutions. It is likely to impact the poor disproportionately by affecting the resource base on which the poor depend for their livelihoods. This in turn has the potential to trigger mass migration to urban areas and creating a large population of 'ecological refugees'. In mountain areas where agriculture, one of the sectors most vulnerable to climate change, employs the bulk of the population, climate change could make the problem of out-migration worse by setting off a cascading feedback process wherein deteriorating agricultural conditions set off migration of able bodies men which in turn affects agriculture further.

There is enough evidence, both scientific and anecdotal, to suggest that climate change is well under way; average temperatures have risen, glaciers have receded, new lands in alpine pastures have opened to agriculture, and crops have shifted to higher altitudes. Having said this, there is not as yet a systematic body of research on the impact of climate change in mountain regions, the adaptation strategies of mountain communities, and an understanding of how

they can be involved in climate change mitigation.

Some good work does exist, such as the *Kyoto: Think Global, Act Local* project of CHEA in Uttarakhand, which clearly demonstrates that local communities can be involved in carbon stock measurement and sequestration with little outside support. This can be an effective climate change mitigation strategy, especially where carbon sequestration is linked to rural livelihoods. Unfortunately, such projects are few and far between. What is worse is that their findings are not known and, therefore, not replicated.

Climate change and its accompanying impacts will be one of the greatest challenges of the 21st century. The impact on the mountain regions and communities would be enormous but it will not be confined to them alone. To the extent that the Himalayas are the makers of the climate of the South Asian region and are a source of various ecological goods and services—water, soil, carbon sinks, etc.—changes in the Himalayan region are bound to affect people living in the adjacent plains, a substantial proportion of humanity.

RURAL TOURISM IN MOUNTAIN REGIONS

There is within tourism a category called rural tourism, which by nature is less resource intensive and presents fewer barriers to entry to the common people of the region. There are already examples of such tourist ventures across the IHR, which cater to a niche segment and are growing fast. Rural tourism is also being promoted by various state governments as well as organisations such as the National Bank for Agriculture and Rural Development (**NABARD**). In Uttarakhand, the Regional Economic Development (**RED**) Programme of **GIZ India** has played an



Tourism is one of the 'sunrise' sectors of the Indian economy. The Himalayan region is not untouched by the growth of the tourism sector. In fact states like Uttarakhand have witnessed an exponential growth in the number of tourists arriving in the state. There are various factors that have been responsible for this impressive growth in the tourism sector. The increased affluence of a large section of the population, expansion of automobile ownership, improved infrastructure, and aggressive marketing by private and state actors have all contributed to this growth story. State governments, especially in the IHR, have viewed tourism as a viable strategy to capitalise on the comparative advantage of these states as well as a strategy to create jobs and reduce dependence on the agricultural sector. However, the growth of the tourism sector has been a story of concentration of tourists in a few towns and circuits. Such tourism, capital intensive as it is, has left out a bulk of the population of the mountain regions. It could also, in the long run cause irrevocable damage to the general carrying capacity of the mountain regions for tourism.

important role in promoting this version of tourism. While the Himalayan region is replete with the examples of rural tourism. However, the question is how to build upon these examples and take rural tourism forward in a sustainable manner? This is an important question not only from the point of sustainability of the resource base of tourism but also from the point of social sustainability and the livelihoods of local communities. What are the good models to promote rural tourism? What are the skills needed? How much of rural tourism would be enough? What can rural tourism do to make itself attractive? How can different interest groups be reconciled? How can this form of tourism be marketed? What are the plans of the government for this sub-sector? While there is information available with individuals on this sub-sector, gathered in the course of their personal journeys, how can the same be collated and disseminated so that people could make informed choices ?

COMMUNITY FORESTRY IN MOUNTAIN REGIONS



Photo - *Satish Kalra*

Mountain communities are dependent on forest resources for their existence. One could go so far as to say that forest resources are the cornerstone of the well being of these communities. The mountain agriculture is unique in that it relies on converting forest produce into manure, via livestock, to maintain soil structure, moisture content, soil fertility and, ultimately, agricultural productivity. In many parts of the mountain region the story of forest management is the story of continuous negotiations between state and communities on control over forests. The early 20th Century anti-colonial movement of Uttarakhand was against the assertion of control by a colonial government over the forests of Uttarakhand. The movement led to concessions being made to local communities leading to the formation of the unique institution of Van Panchayats or Forest Councils. Similarly there are the examples of Chipko movement and Joint Forest Management to name a few.

The Himalayan forests are vital not only to the well being of mountain communities but also to the well

being of the Indo-Gangetic Plains and the population therein. As noted earlier the Himalayan forest provide various ecosystem services to the plains. One could even go so far as to say that without a healthy forest cover in the Himalayas, the very nature of agriculture in the Indo-Gangetic Plains would undergo a dramatic change.

Their enormous importance notwithstanding, the forests of the Himalayan region are under threat. The instinctive image that comes to mind when talking of forest under threat is of deforestation; however, in the context of most developing countries including India, it is not deforestation but degradation from unsustainable extraction of forest produce that poses the more serious challenge.

How can the problem of degradation be best addressed? Can local communities be engaged? If so how? The idea that States should be compensated for ecosystem services that they provide is gaining ground. How can this compensation be transferred to communities so that they have an incentive to maintain their forests? Will modernisation of institutions be required? If yes, what shape should this modernisation take? These and various other questions will determine the long term well being of the forests of the Indian Himalayas as also the wellbeing of the local and extended communities.





SUMMIT SUMMARY

The Summit was a two day event. It was inaugurated by Her Excellency Mrs. Margaret Alva, Governor of Uttarakhand. The Inaugural Session of the Summit was followed by two breakout sessions on Day I and two on Day II. Each breakout session was presided over by a chair and facilitated by a moderator and a discussant(s). A final Session saw the conclusion of the Summit at the end of day II. The Summit also featured two side events - the First Himalayan Photography Competition on the themes of life and traditions of hill states and fairs, festival, and dances of the Indian hill state and an exhibition on the progress made by the state of Uttarakhand in the area of herbs and medicinal plant promotion, cultivation, packaging, and distribution, organized by the Herbal Research Development Institute (HRDI) Gopeshwar, Uttarakhand.

INAUGURAL SESSION



What happens in these mountains affects nearly 1.2 billion people – one fifth of the world's population -- living in the downstream river basins, and up to three billion indirectly in terms of food and energy production

The agenda and tone for the Summit were set in the Inaugural Session addressed by the Chief Guest and the other distinguished guests. Inaugurating the Sustainable Mountain Development Summit Mrs. Margaret Alva said that in coming years human kind will increasingly depend on mountain resources such as water, bio-diversity and recreation. She noted that with the growth of population these very resources would become scarce and their sustainable management and use would pose a veritable challenge. She said that the Sustainable Mountain Development Summit was a timely intervention. Mrs. Alva also referred to how the issue of Sustainable Mountain Development had been a preoccupying concern of Indian leadership especially Mrs. Indira Gandhi and Shri Rajiv Gandhi former Prime Ministers of India. While acknowledging that hydro-power was a contested area, Ms. Alva expressed the hope that an amicable solution to this deadlock would be found, and that this solution would be grounded in the principal of scientific enquiry and guided by the interest and well being of the common people. She stressed the importance of rural tourism and community forestry in helping rural women be

productively engaged. While expressing her satisfaction with the design and setting up of over 12,000 Van Panchayats in Uttarakhand, which for the first time have adequate resources to function effectively, the Governor emphasized the need for a clear focus on promoting active involvement of rural women in Van Panchayats.

Dr. Andreas Schild, Director General, International Centre for Integrated Mountain Development (**ICIMOD**), outlined the potential operating space for initiatives like IMI when he noted that 'in the Rio Summit the mountain agenda was brought to the forefront by the European delegation; it is now the turn of developing countries of the Himalayan region to take the agenda forward'. Dr. Schild observed that an initiative from the region had a high degree of relevance and legitimacy as 'the Hindu Kush-Himalayan mountain system is not only important for the 200 million mountain people but also essential for the reduction of vulnerabilities downstream. What happens in these mountains affects nearly 1.2 billion people – one fifth of the world's population -- living in the downstream river basins, and up to three billion



A participatory model of adaptation involving local communities is critical in order to achieve the desired results.

The Indian Mountains States need to have new ideas, new initiative and, above everything else, a concept of Sustainable Mountain Development mainstreamed into the planning of Indian mountain states

indirectly in terms of food and energy production'

Describing the work of GIZ in India, Mr. Manfred Haebig, the Principal Advisor GIZ-RED Programme, India noted the similarities between the priorities of GIZ-India and the agenda of IMI. Mr. Haebig noted that given their importance and relevance, the issues of sustainable development like natural resources management, responsible tourism, agribusiness, capacity building, and skill development were particularly important to GIZ also. He hoped that this initiative would be a long term sustainable effort towards bringing about relevant policy measures in regional and international cooperation in climate change and adaptation.

Dr R K Pachauri, Director General, The Energy and Resources Institute (**TERI**) lauded the civil society involvement along with other stakeholders in the IMI initiative. While praising the Indian government's commitment to address the issues of climate change with focus on Himalayan region as evident in *National Action Plan on Climate Change*, Dr. Pachauri emphasized the need for collaborative research to address the

challenges of climate change. He stated that 'a participatory model of adaptation involving local communities is critical in order to achieve the desired results'.

Dr. R S Tolia, Chairman of Central Himalayan Environment Association (**CHEA**), the principal organiser of the Indian Mountain Initiative, brought into focus the immediate priority and the roadmap for IMI when while pointing out that the preparations for India's 12th Five Year plan had already commenced he observed that 'the Indian Mountains States need to have new ideas, new initiatives and, above everything else, a concept of Sustainable Mountain Development mainstreamed into the planning of Indian mountain states'. Dr. Tolia expressed the hope that the Summit would throw up new ideas, new initiatives and a renewed orientation for the sustainable development of mountains in the context of the well known "Himalayan Dilemma". Dr. Tolia also stressed the need for the Indian Mountain States to organise national and regional summits before the United Nations Conference on Sustainable Development to be held in Brazil on 4-6 June 2012 ("**Rio +20**")

DAY I

BREAKOUT GROUPS



HYDRO-POWER PROJECTS IN MOUNTAIN REGION

Hydro-power is one of the cleanest and one of the least expensive sources of energy. It is vital to the energy security of the nation. Yet only a fraction of the identified hydro-power potential of the country has been tapped². While there are various national and state level policies for developing hydro power and its transmission and distribution, there are also various deterrents to hydro power development. These include land acquisition, resettlement and rehabilitation of affected people, accessibility, geological features/risks, and environmental and forest clearances under different acts³. Of the deterrents listed above, the geological challenges to the development of hydro-power in the Himalayan region are often the most talked about, especially as most of the region falls in *Zone V* of seismic activity. However, appropriate technological, engineering, and social interventions can go a long way in addressing the challenges posed by geology⁴.

Technology offers choices. Smaller projects have a smaller footprint on environment, can improve infrastructure and help develop remote areas. The larger projects pose many more challenges and have complexities unique to them⁵. In spite of the difference

in size though, both large and small projects can reduce their impact on the surroundings and downstream by adopting and implementing Catchment Area Treatment Plan (**CAT Plan**). However, as things stand, CAT Plans leave a lot to be desired. For instance Forest Department has only a regulatory function and local communities are hardly involved. There is a need for a paradigm shift in conceptualization and implementation of CAT Plans and for their robust monitoring and evaluation, especially as they are vital for conservation and enrichment of natural resources and also provides for livelihoods and biodiversity conservation⁶. Perhaps Myndtu Leshka Hydro-Power Project (Meghalaya) and its CAT Plan, which involves several government departments and active participation of local tribes in afforestation, improving soil water infiltration and erosion control, could be a model worth studying and replicating⁷.

Socially, the issue of development of hydro-power has the potential to polarize the society. On the one hand, these projects affect the continuous flow (*aviral dhara*) of the rivers that is valued by the society from social and cultural viewpoint, and on the other, the

community benefits from the projects through improvement in infrastructure, jobs and secondary employment/livelihoods. Often this polarization leads to the age old debate on who are the local resources for. Those opposing projects and, therefore, 'development' are seen to be 'outsiders' attempting to preserve the 'pristine environment' at the expense of the 'local people'⁸. While such perceptions need to be given due importance for what they are, there is also a need to take seriously the other set of perceptions namely that in the long term the environmental and social costs of hydro-power projects far exceed the economic benefits they bring. Consequently there is a need for comprehensive cost-benefit analysis of hydro-power projects before they are commissioned. Such an analysis should take into consideration all the ecosystem services provided by the river in question⁹.

Addressing the above concerns requires a more nuanced understanding of the likely impact of the hydro-power projects on various facets of physical and social environment. This would require access to better information. Unfortunately, there are various gaps in information available today. For instance one contested area in the development of hydro-power projects is the issue of environmental flows. River flows are vital to the physical features of the river, water quality, biota and the general ecological integrity of the river. As per



the declaration of the *International River Symposium and International Environmental Flows Conference*, held in Brisbane, Australia, on 3-6 September 2007 (**Brisbane Declaration**) the quantity, timing and quality are the main components of environmental flow. However, there is a lack of time series data on flows, river cross sections, aquatic life, etc. Therefore, there is a need to involve all stakeholders to build a consensus on environmentally and socially acceptable environmental flow targets and standards¹⁰. Further, there is hardly any understanding, based in empirical research, of how many hydro-power projects can be built on a river without affecting its ecology. The riverine biota has specific characteristics and faces threats from hydro-power projects. But there is little data to assess the

likely impact of successive hydro-power projects on this biota. The identification of information gaps and defining a research agenda to bridge the gaps becomes vital in this context¹¹.

In conclusion, the group on Hydro-Power Projects in Mountain Regions noted the need for a detailed discussion on the energy requirements of the mountain states on the one hand and the need to generate revenue from hydro-power projects on the other. The geological, climatic, biophysical, socio-cultural, economic and political impacts- both upstream and downstream of the hydro-power projects, have not been properly and adequately assessed and evaluated for long-term costs and benefits; the economic gains become apparent in the short-term but environmental degradation and its cost appear only in the long-term. The group further noted that Environment Impact Assessments (**EIAs**) do not include detailed long-term cost-benefit analysis based on ecosystem services and are carried out for individual projects ignoring the impact of other projects on the same river system. There is a need for assessing the cumulative impact of hydro power projects on the same river system (including all tributaries).

Stressing the importance of upstream-downstream linkages, the group called for a river basin approach where the impact of upstream activities on downstream systems and communities must be borne in mind irrespective of the river systems, states or the countries involved in the projects. The consensus on hydro-power was that while there is no denying that energy is vital for the growth of the country it should not come at the cost of common people and environmental degradation. Towards this end it was concluded that small and micro projects could be the answer to the conflict surrounding hydro-power projects in mountain regions.

- ² Hydropower, Arun Kumar, Head, Alternate Hydro Energy Centre, Indian Institute of Technology, Roorkee and P. K. Pande, Former Professor of Civil Engineering University of Roorkee (now IIT Roorkee)
- ³ Development of Hydro Power in Uttarakhand - Present Scenario - G. P. Patel, Managing Director, and C. C. K. Mishra, Director (Operations) UJVNL Ltd.
- ⁴ Seismo-tectonic Aspects of Hydropower in the Himalayan Tectonic Zone, Amita Sinval, , Department of Earthquake Engineering, Indian Institute of Technology, Roorkee
- ⁵ Water & Hydropower Resources of Himalayas: A Regional Perspective - A. K. Pant, BIAS Bhimtal
- ⁶ Assessing Catchment Area Treatment Plan Implementation Policies in Hydro-Electric Projects under Payment for Ecological Services in the Context of Himalayan Region - Jyotsna Sitling, Uttarakhand Forest Department
- ⁷ Environmental Protection Works undertaken by Myntdu Leshka H.E. Project, Daniel Ingty and A.K. Jain
- ⁸ Social, Economic, Cultural and Religious Impact of HEPs, B. K. Joshi, Doon Library and Research Centre
- ⁹ Comprehensive Assessment of Environmental and Economic Costs of Electricity Generation is Necessary - Bharat Jhunjhunwala
- ¹⁰ Environmental Flow Requirements and Water Resources Development - Sharad K Jain, Indian Institute of Technology, Roorkee
- ¹¹ Hydropower Projects in Mountain regions; Risks to Aquatic Biodiversity, Prakash Nautiyal, HNB Gharwal University



ADAPTATION MEASURES UNDER CLIMATE CHANGE SCENARIO IN MOUNTAIN REGIONS

The mountains play an important role, not only for the region itself, but also for the wellbeing of the much larger downstream regions. The region also acts as an indicator of climate change. Therefore, it is important that climate change in the region, its impact, and coping strategies adopted by the local communities are studied and documented in detail to formulate fresh strategies to redress the situation via adaptation and mitigation¹². The Himalayan region is warming much faster than any other region; the black carbon is being recognized as one of the causative agents in addition to other anthropogenic activities. As things stand now there is a lack of data on these issues for the region; whatever data is available is not being utilized to inform policy and action. There is an urgent need to scrutinize and compile the available information, identify knowledge gaps and initiate a systematic programme of work with clearly defined short, medium and long term goals¹³.

It is known that climate change has affected the cultivation of various crops. There is enough anecdotal evidence of crops moving to higher altitudes and latitudes. Climate change is not only about rising temperature and erratic rainfall but also about changes in gaseous composition of the atmosphere. For instance CO₂ levels have been rising. All these changes have a bearing on crop cultivation¹⁴. Various tools and techniques have been developed to mitigate the impact of climate change on crop cultivation¹⁵, but an enormous amount of work needs to be done. It is very

important to raise the awareness level of people beyond the current level of understanding. This would require research and making research findings widely accessible not only by placing them in public domain but also by making them available in a language that is intelligible to lay population. One way to do this could be to prioritize research agenda in relation to climate change with SMART¹⁶ objectives and short, medium, and long term time frame¹⁷. The research questions could range from individual species to communities and from landscape to ecosystem level approaches. Some segregation of the perceived impact of climate change into manageable and non-manageable categories could also be undertaken. The work of Aryabhatta Research Institute of Observational Sciences (**ARIES**) on monitoring of aerosols, ozone, carbon dioxide, other trace and GHGs (GREEN HOUSE GASES) at ground level in Nainital, Pantnagar, and Dehradun is a significant step in this direction¹⁸.

Easily accessible research would inform, and be informed by, people's perception of climate change. ICIMOD has already done significant work in using participatory rural appraisal tools to capture people's perceptions of climate change and responses to it across the Himalayan region. The coping mechanisms can best be described as reactive and there is an urgent need to enhance the capacity of communities to meet the challenges of climate change, an additional stress over and above the many other stresses being faced by them¹⁹.



Case studies are a sound way of presenting field experiences and to showcase knowledge, technology, or institutions in action. Govind Ballabh Pant Institute of Himalayan Environment and Development (**GBPIHED**), brought to the attention of participants their relevant case studies from the Western, Central and Eastern Himalayas²⁰ agro-ecosystems based on farmers' traditional knowledge and coping strategies, community based biodiversity conservation as an approach to climate change adaptation, and biodiversity status and conservation issues. Another case study noted the pivotal role of honeybees in hill agriculture and ecosystem functioning, and the

alarming situation in the wake of the decline of their population attributed to the use of chemicals and the gradual spread of monoculture²¹. Other case studies presented examples of success, such as those of integrated, multi-location and multi-institution based work in the North West Himalayas on climate resilient and viable hill agriculture, which has resulted in increased agricultural productivity and farm based income²².

Returning to research agenda, gaps, priorities, and the dissemination and use of research findings, the case of high altitude wetlands is an illustrative example. Whilst critical to water balance in the mountain regions, high altitude wetlands have not been studied beyond the obvious and the mundane. This is in sharp contrast to a wide body of literature on high altitude wetlands that has emerged from the Tibetan Plateau region. Given the importance of these water bodies to the Indian Himalayan Region (**IHR**) as well as the Indo-Gangetic Plains there is a need to make a concerted effort to study and understand high altitude wetlands²³.

Evan as high altitude wetlands might pose serious challenges of research gaps, there are other aspects of IHR on which a good amount of vital information has been gathered through various individual and institutional initiatives. However, such information is often unknown to others for want of functional information sharing arrangements. It is vital to focus on information sharing, to prepare an inventory of what exists, and to identify research gaps²⁴. Some steps in the right direction have been taken to set up systems for information sharing. The knowledge sharing and solution exchange programme of United Nations Development Program (UNDP) initiated in 2005 is one such example. Knowledge exchange on cross cutting issues by development practitioners and stakeholders, forms the basis for knowledge building with potential impact at the policy level²⁵. Such knowledge feeds into action oriented policy documents such as the *Uttarakhand State Action Plan on Climate Change*, which is

¹² Assessment of Impact of Climate Change and Adaptive Strategies in Northeastern Region of India- S.K. Barik, Department of Botany, North-Eastern Hill University, Shillong

¹³ Climate Change in Himalayas: A note on what is being said- S.P. Singh, Planning Commission, Uttarakhand

¹⁴ Crop responses to the rising atmospheric CO₂ Technology & Research: A South Asian effort- D. C. Uprety, IARI, New Delhi

¹⁵ Climate Change Adaptation for Sustainable Hill Agriculture- H.S. Gupta and H. Pathak, Indian Agricultural Research Institute, New Delhi

¹⁶ Specific, Measurable, Attainable, Relevant and Timebound

¹⁷ Climate Change Adaptations: Research Priorities for Western Himalaya- G.S. Rawat & S.P. Singh

¹⁸ Observations of Aerosols, Ozone and Other Trace Gases over the Central Himalayas: Regional contribution to the Climate Change- Aryabhatta Research Institute of Observational Sciences (ARIES), Nainital

¹⁹ Assessing Adaptive Capacities: Community perceptions and responses to climate change in Uttarakhand and NE-India- Anju Pandit and Dhruvad Choudhury, ICIMOD, Kathmandu

²⁰ Various presentations by the scientists of GBPIHED

²¹ Climate Change Adaptation and Honeybees in Mountain Regions- Harish Kumar Sharma, Department of Entomology and Apiculture, Dr. Y S Parmar University of Horticulture and Forestry, Nauni, Solan (HP)

²² Climate Resilient and Viable Hill Agriculture- Anil Kumar Srivastava, Emeritus Scientist and Ex Director, VPKAS, (ICAR), Almora

²³ Climate Variability and High altitude wetlands- Archana Chatterjee, WWF, New Delhi

²⁴ Sharing knowledge on Mountain Ecosystem and Climate Change: Adaptation concerns and Measures in Himalayas-K.N. Vajpai, Climate Himalaya Initiative, Rudrapur

²⁵ The Importance of Knowledge Sharing for Sustainable Mountain Development- Ramesh Kumar Jalan, Resource Person & Moderator, Climate Change Community, UNDP

the group agreed that climate change was taking place and was affecting the existence of communities who have a greater dependence on nature

based on sectoral approaches covering as many as 11 sectors considered most important for Uttarakhand in the context of climate change²⁶.

Research, dissemination of research findings, policy formulation, and action emanating from these, all require access to resources. There is, therefore, a need to incorporate the financial implications of such initiatives and processes into any climate change debate on mitigation and adaptation strategies²⁷. Such funds are available from Government of India, from multilateral and/or bilateral development agencies and also from market based sources²⁸. Clean Development Mechanism (CDM), a Kyoto Protocol mechanism, is one way to raise funds from market²⁹.

In conclusion, the group agreed that climate change was taking place and was affecting the existence of communities dependent on natural resources for their livelihoods. These include mountain communities. The case of the Himalayan region is especially important as the Hindu-Kush-Himalaya region supports 200 million people living within it and close to three billion people directly or indirectly dependent on the services being provided by the region. Moreover, the Hindu-Kush Himalaya region is a maker of regional climate and to that extent any climate related development here would have far reaching regional and global consequences.

In spite of the importance of the region, the understanding of climate change happening here and the adaptation measures adopted by the local communities is rather limited and anecdotal. This must change. There is a pressing need for clearly defined research goals addressing clearly defined research gaps. Furthermore, the research findings will have to be disseminated in a manner that is clearly accessible to



Photo - Somanath Ghosh

lay people. Scientists cannot afford to be talking only to one another any longer. There is an urgent need to raise the levels of general awareness about climate change.

Steps have been initiated in this direction. There are examples of both purely scientific work as well as work that attempts to learn from the responses of people to climate change. While most of the findings emerging from these research initiatives are negative, there are also positives where careful planning and science have led to a turnaround in the face of climate change. There is a need to learn from these positive experiences and attempt to replicate them. Replication however requires strong community and governmental institutional response. The current indicators are that the institutional response to climate change is 'knee jerk'. There is, therefore, a need to build community institutions and where they exist, to build their resilience.

Finally, all such initiatives would need money; sources of raising money to address adaptation and mitigation should be clearly identified, the procedure to access these should be simplified and a clear mechanism laid down to enable local communities to be compensated for their efforts in the direction of climate change adaptation and mitigation

²⁶ Gearing up for Climate Change: Action Plan for Climate Change, Uttarakhand- Jai Raj, Additional PCCF/Director Environment, Uttarakhand

²⁷ Climate Change Mitigation and Adaptation in Mountain Areas: Financing Issues-Bharti Ramola, PWC, Gurgaon

²⁸ Climate Change in Mountain Ecosystems and NABARD's role- Natural Resource management Centre, NABARD, Kolkata

²⁹ Carbon Credits on Renewable Energy Projects in Uttarakhand-A.K. Tyagi, Chief Project Officer, Uttarakhand Renewable Energy Development Agency (URED)

DAY II

INAUGURAL



Addressing the second day's Inaugural Session, Mr. P.D. Rai, Member of Parliament, Sikkim, lauded the efforts of IMI to launch this critical and pertinent initiative. Calling it a timely measure, Mr. Rai offered to host the next Sustainable Mountain Development Summit in Sikkim in 2012. Mr. Rai emphasized the need for setting up a think tank to deliberate on the unique needs of mountain regions, the best way of addressing them, and communicating the same to the formulation process of the 12th Five Year Plan. Mr. Rai expressed the hope that such efforts would culminate in the setting up of a Ministry for Mountain Development.

The Session was chaired by Mr. Alemtemshi Jamir, Additional Chief Secretary and Development Commissioner Nagaland and Mr. K.S. Kropha, Principal Secretary Planning, Government of Meghalaya.

While noting the rapid progress made by Nagaland in promoting tourism through such measures as the Hornbill Festival, Mr. Jamir emphasized the need for external specialists for promoting the tourism sector. He specially noted the need for organization like CHEA in Nagaland to foster civil society. In his address Mr. Jamir said that while there were many positives that

had emerged out of Nagaland in the recent years, there were also areas of concern. These he noted as conflict especially over resources, the need to accommodate the educated – 80% of Nagaland's population is literate – and climate induced migration. His address noted what he saw as priority areas for IMI in the Northeast region in general and Nagaland in particular. These included institutional and capacity building and informing policy formulation to address emerging challenges..

Mr. K.S. Kropha, Principal Secretary Planning, Government of Meghalaya, congratulated the Indian Mountain Initiative for organizing the sustainable Mountain Development Summit, 2011. He noted that Meghalaya lagged behind the national averages on various socio-economic indicators. He observed that there was scant recognition of the fact that partition of India had adversely affected the economy of North east in general and Meghalaya in particular. He informed the gathering that while 78% of Meghalaya's area was under forest and acted as a carbon sink, the state was not being compensated for this vital ecosystem service.



RURAL TOURISM IN MOUNTAIN REGION

Tourism has been identified as an important thrust area to create employment and other income generating activities in mountain areas. Within the tourism sector, rural tourism is one of the fastest growing segments. Apart from its economic importance tourism is also viewed as a potential tool to economically engage a wider proportion of the population and to reduce inequities emerging from disproportionate access to opportunities. It is no surprise then that the Government of India takes rural tourism in mountain regions very seriously.

In 2003, the Ministry of Tourism started the Rural Tourism scheme. 26 States started rural tourism projects during the 10th Five Year Plan. Of these, only 14 States took up new projects during 11th Five Year Plan. There are 84 rural tourism sites in mountain states; Jammu & Kashmir has 25 sites while Manipur has only 3³⁰. Rural Tourism Projects are being implemented in Uttarakhand to build suitable capacity and provide infrastructure in rural areas. The focus of

this scheme is to empower local communities, especially women, and develop home stays in rural areas³¹. Taking a cue from the Government the private sector institutions have also engaged with the rural tourism sector in a mutually beneficial relationship.

Yes Bank focuses on developing the bankability of tourism sector by incentivising sustainable tourism across states through a "green tourism grading". Yes Bank mandates priority sector lending for sustainable tourism projects, segregating sustainable tourism projects from 'real estate projects', and provides incentives for existing tourism projects to progress from standard mass tourism practices to sustainable tourism practices. Such incentives are in the form of subsidy on interest rates on bank loans. Yes Bank also facilitates the Scottish Government Award for Co-operative Tourism Development in Uttarakhand and West Bengal. The award will work on skill enhancement, develop community based tourism products, and develop markets by enhancing access to destinations³².

³⁰ Rural Tourism Projects: An Overview & Status-D.Venkatesan, Ministry of Tourism, Government of India, New Delhi

³¹ Sustainable Tourism Initiative for Inclusive Growth-Rakesh Sharma, Principal Secretary, Tourism, Government of Uttarakhand

³² Sustainable Tourism Development in Mountain Regions-Bhupesh Rathore, Strategic Initiatives and Government Advisory (SIGA), Yes Bank Limited, New Delhi

the group on Rural Tourism in Mountain Regions deliberated on various facets related to the theme starting from the macro environment and policy initiatives for rural tourism, the various approaches to this form of tourism, international experience, possible benefits, likely fallouts, and experiences from across the IHR



In promoting rural tourism there is enormous wealth of international experience that Indian practitioners could use to chart the trajectory for this segment in the country. The GIZ experience from its various tourism related interventions has been that each type of tourism offers opportunities and brings risks. Sustainable Community-Based Tourism requires an appropriate balance of the positive aspects of cultural

encounters with enough income generated, and a consensus about the use and distribution of the income to the people involved in and affected by tourism³³.

Heritage tourism is one of the ways to promote community based tourism in rural areas. Heritage Tourism is "Traveling to experience the places and activities that authentically represent the stories and people of the past and present. It includes historic, cultural and natural resources". The Himalayan Heritage Route Programme of ICIMOD is a regional programme which aims at conservation and poverty reduction through the promotion of regionally significant heritage routes in the Hindu-Kush-Himalayan region³⁴. Community based home stays are yet another way of promoting rural tourism. This mode of tourism has the potential to become an important source of livelihood for Himalayan communities. But how does one ensure observance of basic rules and guidelines and maintenance of certain minimal standards in such a dispersed activity? Certification could help raise standards of community based tourism, ensure that ecological impact from tourism is monitored in ecologically fragile areas, bring credibility to local community-based tourism initiatives, and help tourists make informed choices. The Global Sustainable Tourism Criteria (GSTC) is the result of collaboration of over 30 organisations that have attempted to articulate a minimum level of standards for sustainable tourism. 37 criteria are organized under four main themes³⁵.

Rural tourism has a number of positive spin-offs. Visiting villages and spending time with village residents can be extremely rewarding for tourists brought up in an urban environment - exposing them to different physical and social environment, lifestyle and values. This helps to sensitize people to the growing disparities between the rich and the poor, and to learn that many people in rural areas are managing with much less than what a middle class urban dweller takes for granted³⁶. For the local communities eco-tourism has the potential to be an important source of livelihood in mountain areas. It helps generate direct and indirect employment in rural areas. However, it needs careful planning and preparation. For example sustainable community based tourism would require studies on carrying capacity and clearly laid down code of conduct including environmental guidelines. It would also require training and capacity building of service providers, monitoring, and certification³⁷.

³³ Sustainable Tourism in Mountain Areas: The European and the GIZ Experience-Klaus Lengefeld, GIZ German International Cooperation

³⁴ Heritage Tourism in the HKH-Ester Kruk, ICIMOD, Kathmandu

³⁵ Community-based Homestays: Towards Innovative Ecotourism in the Himalayan Region-Seema Bhatt, New Delhi

³⁶ Eco- Tourism as an Experiential Education Experience: Thoughts on the Woodstock School Grade 9 Activity Week- Darab J. Nagarwalla, Woodstock School, Mussoorie

³⁷ Eco tourism as a tool for livelihood Improvement-R.G.Lyngdoh, LIFCOM, Shillong

Corbett National Park has experimented with involving local communities in ecotourism. The benefits included conservation of natural and cultural resources, environmental protection, awareness and pride, jobs and income, improvement in infrastructure, and attitudinal change. The experience of Corbett Ecotourism suggests that scaling up of rural tourism would require promotion/branding, capacity building, financing community initiatives, built environment, and connectivity³⁸. A somewhat similar project in the Northeast of India started with the belief that if the Protected Areas are to coexist with an increasing human population, a way has to be found to accommodate protected areas with people. Help Tourism has established a number of jungle camps in the fringe villages adjoining important Protected Areas. They act as an extension of Protected Areas and facilitate easy passage of wildlife by acting as biological corridors. The camps also act as hub for livelihood and social and cultural activities of the local people. These camps have helped enhance the basic facilities like medical, education, waste management and livelihood training with the help of volunteer visitors³⁹.

In conclusion, the group on Rural Tourism in Mountain Regions deliberated on various facets related to the theme starting from the macro environment and policy initiatives for rural tourism, the various approaches to this form of tourism, international experience, possible benefits, likely fallouts, and experiences from across the IHR. The group observed the need to focus on connectivity and infrastructure. It noted that while soft skills were an equally vital area to work on, given the nature and structuring of government schemes the uptake of the hardware component was far more

frequent than the uptake of the software component. To redress this problem a basic certification system would go a long way. This would not only give equal weight to various aspects related to tourism, thereby fostering an all round development of skill base, but would also allow customers to make informed choices.

Tourism also generates negative externalities such as environmental degradation, waste accumulation, and pollution; sustainable tourism demands containing the negatives while building on the positives. This would require careful documentation of such aspects as carrying capacity, systems interrelations, flow and distribution of benefits and so on. This, in turn would require extensive research for which resources could be raised from private and public sources.

Rural tourism has the potential to be an important source of livelihood and of equitable growth provided thought and careful planning go into it. The first stage involves making the communities understand the importance of eco-tourism. The next step should be preparing a community endorsed eco-tourism plan in consultation with all stakeholders. Cleanliness, community based water management, initiatives to conserve local biodiversity, and a focus on improving the landscape, cleanliness, soil and water management, energy management could make for sustainable eco-tourism. In eco-tourism, resource mobilization and management continue to pose major challenges. These need to be addressed to initiate any successful eco-tourism venture. One way forward could be to develop a unique selling point for the village circuit and promote it to the target market.

³⁸ Corbett Ecotourism Experience - Involving Communities in Conservation-Rajiv Bhartari, CCF Eco-tourism, Forest Department, Government of Uttarakhand

³⁹ Initiatives to address conservation challenges & empowerment through Village Tourism in East Himalaya-Raj Basu, Help Tourism

COMMUNITY FORESTRY IN MOUNTAIN REGIONS

Forests play a vital role in the life of mountain communities. The majority of forests in the Western Himalayas were owned by the State. This is in contrast to the Eastern Himalayas where majority of forest are community controlled or privately owned⁴⁰. This difference influences the nature of community forest in these two regions. Even though there are instances of successful community forestry initiatives in both regions, on the whole, official programmes promoting community forestry often run into trouble. This happens on account of problems that include the duration of the programme, the scope of the programme and the top down approach adopted by such initiatives. Carrying this argument forward, as is clear from the success stories of community forestry, it can be located within the conceptual framework of Common Property Resources (CPR). If this is indeed true, the success of community forestry like the rest of the institution of CPR would depend upon the homogeneity of the group enjoying access to CPR and the remoteness of the region⁴¹. Both these conditions are fulfilled in the case of Northeast region and are probably, at least partial explanations for the success of community forestry there.

While Western Himalayas do not have such wide prevalence of community forestry as in the case of the Eastern Himalayas, the state of Uttarakhand does have a unique institution called the Van Panchayat or the village forest councils. These were formed in the 1920s in response to the widespread agitation against the British colonial regime's appropriation of the customary forest rights enjoyed by the local communities. Van Panchayats forests were carved out of Reserved Forest and managed by elected Van Panchayat to enable local communities to meet their forest based needs. This institution has evolved legally since its inception⁴². As opposed to the Van Panchayats of Uttarakhand, other parts of the Western Himalaya could not maintain their rich tradition of community forestry. The Lahaul Spiti region of Himachal Pradesh had traditional systems of forestry, which were sustainable. Introduction of modern systems and institutions led to degradation of forests, which in turn led to a 'project mode of functioning'. This allowed the Forest Department to make further inroads into the institutions and practices of community forestry thereby weakening them further⁴³. In sharp contrast to the example of Lahaul Spiti, almost all forests in Meghalaya are community owned or private. A typology would include village





Photo - *Debashis Tarafder*

forests, sacred forests, private forest on community land, private forest on private land, etc. The objectives of community forest are equity and social justice and fulfilment of spiritual, social, and ecological needs of the community⁴⁴.

Community forestry assumes special significance today as it has the potential to address the forest based needs of communities, generate income for them⁴⁵, and also help with the provision of ecosystem services and mitigation of climate change. 40 percent of the rural population in Nepal is engaged in community forestry, of which 40 percent is engaged in forest based enterprises. There are various examples of such enterprises, including paper making. Community forests have the potential to become a major source of livelihood and employment, which could contribute to increased income, social development, local area development, and equity.⁴⁶

40 percent of the rural population of Nepal is engaged in community forestry of which 40 percent is engaged in forest based enterprises.



Photo - *Raja Sah*

In order to take such enterprises forward, a number of approaches are being tried. Value chain approach to community forestry is one such approach. It aims to promote sustainable non-timber forest product (NTFP) management as a tool for combating climate change impact in the Himalayan Region, and a value chain framework for income generation and poverty reduction. In doing so it advocates novel ideas such as floating mandis and local rotational system for NTFP harvest⁴⁷. There is another school of thought that suggests that local communities conserving their forests, and in the process providing various ecosystem services, should be compensated for maintaining their forests. While this idea has gained ground and is worth exploring further, various services such as water are dependent on forests which are under increased anthropogenic pressure. To reduce this pressure a link between service such as water and energy security of the local communities will have to be recognised and acted upon. This would require provision of alternative sources of energy to local communities.



In conclusion, the group recognised some actionable points that could translate into an agenda for action. These include commissioning a study of a few homogeneous and heterogeneous Van Panchayats, homogeneity being defined in terms of caste composition, to see the impact of homogeneity on effective collective action. Another actionable point suggested was preparing estimates of carbon sequestered by Van Panchayats so that the State Finance Commission, Uttarakhand could consider it while making recommendations on devolution to Gram Panchayats. This would also require clarifying relationship between Gram Panchayats and Van Panchayats, and clarifying the purpose of community forests- are they there to conserve and protect forests or are they there to meet the needs of the local communities?

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⁴⁰ Community forestry in the Indian Himalayan Region-R.L. Semwal, Rajendra Singh Bisht, and Pushkin Phartiyal

⁴¹ Why Institutions of Community Forestry Emerge? Demand-Supply Examination; Shiv Sidh, Government College Gairsain

⁴² Van Panchayats: A Unique Himalayan Initiative of Community Forest Management in Uttarakhand- I.D. Pande and Sameer Pande

⁴³ Climate Change and Mountain Land use Pattern for Enhanced Ecological Services-Rajan Bawa, Dr YS Parmar University of Horticulture and Forestry, Solan

⁴⁴ Community Forestry Practices in Meghalaya-Reddy, Forest Department, Meghalaya

⁴⁵ Community Forestry & livelihoods-STs Lepcha, Uttarakhand Bamboo & Fiber Development Board

⁴⁶ Community forestry and enterprises: experiences & lessons learned from Nepal and the other Himalayan Regions-Bhishma P. Subedi, ANSAB, Nepal

⁴⁷ Sustainable NTFP Management: A tool for Combating Climate Change Impacts in the Himalayan Region-Giridhar Kinhal, ICIMOD, Kathmandu

⁴⁸ Carbon accumulation by community managed forests in Kumaun Himalaya: Facilities for payment and conservation-Ashish Tewari, Jeet Ram and Vardan Singh Rawat Department of Forestry & Environmental Science Kumaun University, Nainital

⁴⁹ Community Forestry in Mountain Regions: Present Status, Issues of Concern & Way Ahead-Anita & Kalyan Paul, Grassroots, Ranikhet

VALEDICTORY SESSION AND WAY FORWARD



The Valedictory Session summed up the events of the Summit. Discussants from each of the four seminars presented the summary of seminar proceedings. This was followed by address from Professor Girijesh Pant, Vice Chancellor Doon University, Dehradun and Dr. B.S. Burfal, Chairman, Uttarakhand State Biodiversity Board. The distinguished guests noted the need for a nuanced approach to sustainable mountain development. One of the key concerns raised by them was the need to recognise that the mountain regions are different from other regions of the country and, of necessity, their growth trajectory has to be different. The key questions are 'what kind of development, how much of it, for whom, and how to go about such development?' Consensus building via research and informed debate among like minded institutions and individuals was identified as the key to finding answers to these questions

At the level of approach, it is important to note that

the Sustainable Mountain Development Summit is not a one-off event, but rather the first link in a long chain of summits. IMI hopes that though the annual summits a number of autonomous networks would come into existence, each dealing with one or more mountain specific themes. These, in turn, would give rise to more networks and information sharing.

There are signs that this may already be happening. In the Inaugural Summit itself, there was expression of interest from Sikkim, Meghalaya, and Nagaland to hold the next Sustainable Mountain Development Summit in their respective states. It was proposed that the opportunity to do so should go to Sikkim. Participants from Sikkim, under the guidance of Mr. P. D. Rai, are already in touch with CHEA to start the process for organizing the next summit. A meeting to look into the organization of the next Sustainable Mountain Development Summit was held at the residence of Mr. P.D. Rai, MP at Delhi in mid July 2011. There are also



encouraging signs that networks of like minded organisations and individuals working on mountain agenda are beginning to take shape. There are ongoing discussions between CHEA, ICIMOD and TERI to arrive at an arrangement whereby they could collaborate on issues of mutual interest.

While these are early days, IMI may consider setting up a secretariat based, for the time being, in CHEA and acting as a focal point for IMI activities including the Sustainable Mountain Development Summits. This Secretariat would be guided by a core committee comprising representatives from all eleven mountain states and the hill district of West Bengal. This committee would meet twice a year.

The immediate outcomes of the Summit suggest providing momentum to the research agenda, the need for information sharing, and the need to link consensus to policy formulation, especially with regard to the 12th

Five Year Plan. In this regard, an important step was taken recently when, in a letter to Mr. Montek Singh Ahluwalia, Deputy Chairman, Planning Commission, Government of India, fourteen Member of Parliament from hill states recommended the setting up of a Working Group on mountain states under the aegis of Planning Commission. This Group would look into mountain specific issues in relation to the formulation of the 12th Five Year Plan for the mountain states.



PROCESS DOCUMENTATION

The idea of holding the First Sustainable Mountain Development Summit was conceived towards the end of 2010. After a series of wide ranging discussions with stakeholders both within and outside CHEA, it was decided to take the idea forward by holding the Summit. A steering committee comprising Dr. R.S. Tolia, Professor S.P. Singh, Mr. Sushil Ramola, Mr. Subroto Roy, Mr. Mukul Prakash, and Dr. Pushkin Phartiyal was formed to plan and execute the preparations leading to the Summit.

The first question facing the steering committee was what was expected from the Summit. As mentioned in the introduction, the Summit, the first in a series of summits, was to serve as a platform where various stakeholders working on issues pertinent to mountains could come together to engage in an informed debate on identified themes with the objective to inform and influence policy formulation with regard to the mountain region. This at once threw two questions - what themes to deliberate on, and whom to invite for deliberations?

Four themes were selected for the Inaugural Summit; the reasons for their selection and their importance were explained in the introductory chapter. Since the Indian Mountain Initiative is a pan-Himalayan initiative, the participants would have to be invited from across all eleven mountain states and from the hill district of West Bengal. Accordingly a database of potential invitees was prepared before sending out invitations.

The next stage of planning focused on the structure of the Summit. Four identified themes would require at least two days for deliberation. Therefore, it was decided that after the Inaugural Session there would be two concurrent breakout groups on Day I of the Summit and the same number on Day II. The Summit would conclude in a valedictory session at the end of Day II. Inaugural and Valedictory Sessions would be attended by all participants whereas breakout groups would have participants by invitation. The breakout groups were structured in a manner where they were guided by chairs and moderators and summed up by discussants. Each breakout group was to have a 'lead paper' presented at the outset and summing up the status of the theme under discussion. This was followed by presentations of papers by various speakers. As all presentations were to be by invitation, identifying speakers and sending them invitations well ahead of the event became vital.

Chairs, Moderators, Discussants, and Speakers were identified by the Steering Committee. The structuring of individual breakout groups was delegated to sub-committees of the Steering Committee - Dr. R.S. Tolia for Hydro-Power; Professor S.P. Singh for Climate Change; Mr. Sushil Ramola, Mr. Subroto Roy, and Mr. Mukul Prakash for Rural Tourism and ; Dr. Pushkin Phartiyal for Community Forestry. The decision on identifying participants for breakout groups was also left to individual sub-committees

The scope and nature of the event including the duration, number of invitees, proposed arrangements for their stay and travel, and honorarium to lead paper writers the venue for the Summit as well as the funding requirements, were all considered. Given that the summit was on 'sustainable mountain development', it was only natural that it should be held in a mountainous location. Naini Tal was recommended and

agreed upon for a number of reasons-it is an old and important mountain town, it is the headquarters of CHEA, the organiser of the event, and it has the necessary infrastructure to allow for an event of the proposed size. With a rough idea of the funding requirements, the Steering Committee approached various potential donors. The response was overwhelming. GIZ, HRDI, ICIMOD, SRTT, Uttarakhand Bio-Diversity Board, and UCoST were generous in offering support to the Summit. It is imperative to make a note here of the support received from the GIZ team in Dehradun. The GIZ team was involved with the event from its conception to its conclusion offering not only a very generous financial support but also helping with its vast experience of organizing and conducting such events.

Financial resources having been secured, the groundwork of organizing the event commenced. This included designing and housing a webpage on the website of CHEA, designing the Summit brochure, finalizing the letter of invitation, and sending out the same. All invitees were requested to confirm their participation at the earliest while the speakers were requested to provide their papers by the 1st of May, 2011. The Steering Committee played a proactive role in following up on invitations and persuading various participants to attend the Summit at a very short notice. This was especially true for the distinguished guests who attended in various capacities including Her Excellency Mrs. Margaret Alva, the Governor of Uttarakhand (Chief Guest), Dr. Andreas Schild, Director General ICIMOD, Dr. R.K. Pachauri, Director General, TERI and Mr. Manfred Haebig, Principal Advisor GIZ-India. To ensure the participation of Northeast States, Dr. R.S. Tolia and Professor S.P. Singh made a visit to the Northeast to discuss the event and ensure participation. It is a testimony to the effectiveness of the Steering Committee that close to 250 participants attended the two day event.

The organizers prepared a database of invitations sent, conformations received, arrival dates, stay arrangements, any special needs of the delegates, departure dates, and travel support needed. While this note will not delve into such details as catering, bags, Summit literature etc., it would highlight the exceptional role of CHEA team in taking care of the logistical arrangements. The CHEA team executed the logistics quite efficiently, a mammoth achievement considering the number of participants and the fact the tourist season was at its peak in Naini Tal. The event was organized at Uttarakhand Academy of Administration (also known as ATI) in Naini Tal. Most of the participants stayed at the venue of the Summit but other arrangements were also made. This note acknowledges the support rendered by ARIES, Naini Tal by making their guesthouse available to the participants.



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FIRST INDIAN HIMALAYAN PHOTOGRAPHY COMPETITION

FAIRS, FESTIVAL, AND DANCES OF THE INDIAN HILL STATES



1st place
Holi | *Sudip Bhar* | West Bengal



CM | The Holi | *Brij Mohan Joshi* | Uttarakhand



CM | Nanda Devi Mela | *A.N. Singh* | Uttarakhand



CM | Mask Dance By Lama-3 | *Abhijit Bhattacharyya* | West Bengal



CM | Naga Warrior | *Utpal Das* | West Bengal

IInd placeInauguration | *Debashish Tarafder* | West BengalIIIrd placeColours All The Way | *Pradeep Pande* | Uttarakhand

ABOUT CHEA

The Central Himalayan Environment Association, CHEA in short, was founded on October 2, 1981, on a day which has special significance for India. CHEA is one of the earliest societies founded in Northern India with mountain environment as the focus of its concern. The leaf of the Oak tree is the emblem of CHEA. This species is found between 1000-3000 meters above sea level and occupies nearly 20,000 sq km area in Uttarakhand. The oak forests are associated with water, humidity, biodiversity, in short with life, in the mountains of the state. It is the tree of masses and is the lifeline of village communities. In more ways than one, the emblem of CHEA embodies what the organization stands for, 'environment and livelihoods of people in the Himalayas'. Fulfillment of basic human needs, active participation of women, provision of and access to infrastructure services, human rights, democratic institutions, and good governance, focus on youth, and participatory decision making on resource use are some of the areas that concern CHEA.

FIRST INDIAN HIMALAYAN PHOTOGRAPHY COMPETITION

LIFE AND TRADITIONS OF HILL STATES



Ist place

Old And Young | [Sudip Bhar](#) | West Bengal



IInd place

Inauguration | [Debashish Tarafder](#) | West Bengal



CM | Storing Mutton for Winters | [Brij Mohan Joshi](#) | Uttarakhand



CM | Monk Playing | [Pravin Rawat](#) | Madhya Pradesh



IIIrd place
A Village Game -2 | *Utpal Das* | West Bengal



CM | Choliya Dance | *A.N.Singh* | Uttarakhand



CM | High Jump | *Chandan Dutta Gupta* | West Bengal



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GIZ, India
ICIMOD, Nepal
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