HIMALAYAN CHIEF MINISTERS' CONCLAVE

ON

INDIAN HIMALAYAS: GLACIERS, CLIMATE CHANGE AND LIVELIHOODS

29-30 OCTOBER , 2009

HOTEL PETERHOF, SHIMLA, H.P.

Organized by:

Department of Environment, Science & Technology
Government of Himachal Pradesh
And
Leadership for Environment And Development (LEAD) - India

Himalayan Chief Ministers' Conclave
Indian Himalayas: Glaciers, Climate Change and Livelihoods

29TH – 30TH October 2009, Shimla, H.P

Organised by

Department of Environment, Science & Technology
Government of Himachal Pradesh

and

LEAD India, New Delhi

Department of Env, Science & Technology,
H.P. State Pollution Control Board
Government of Himachal Pradesh
Shimla

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Himalayan Chief Ministers' Conclave Indian Himalayas: Glaciers, Climate Change and Livelihoods

Shimla Declaration on Sustainable Himalayan Development Shimla, October 30, 2009

The Chief Ministers of Himachal Pradesh and Uttarakhand, the Union Minister of State (Independent Charge) of Environment and Forests, Minister for Environment and Forests, Jammu & Kashmir and senior officials representing the states of Sikkim, Arunachal Pradesh and representatives of civil society, industry, media and academics met for the Himalayan Chief Ministers' Conclave in Shimla on October 30, 2009.

The Conclave reaffirmed its commitment to adhere to the basic principles enshrined in the National Action Plan for Climate Change 2008 and noted the recent finalization of the National Mission for Sustaining the Himalayan Ecosystem.

The Conclave recognized the seriousness of the threat posed by climate change to the country in general and to the Himalayan States in particular, being primarily agrarian economies and the repository of rich biological diversity.

The Conclave also recognized that the Himalayas shape the climate, hydrology and soil fertility of much of South Asia and therefore preserving the ecological and environmental sanctity of the mountains is not only of paramount importance to mountain inhabitants but also for the region as a whole.

The Chief Ministers noted with appreciation that over 300 participants from different specialisations -- scientists, academics, civil society, policy makers, international organisation and industrial associations – had come together to deliberate in the Workshop on Indian Himalayas: Glaciers, Climate Change and Livelihoods on October 29 & 30, 2009. The Chief Ministers noted the recommendations emanating from the four groups – (i) Knowledge Gaps and Research Needs; (ii) Social and Economic Implications of Climate Variability; (iii) Local Actions: Global Impacts; (iv) Role of Academia, Civil Society and Industry which are annexed to the document. They stressed that such deliberations are important for the region's future. They directed that these recommendations should be sent for incorporation in the action plan for National Mission for Sustaining the Himalayan Ecosystem.

Taking cognizance of recommendations from the four thematic groups, the Himalayan Chief Ministers' Conclave 2009 has resolved to jointly face the challenge of climate change and sustainable development. The Conclave agreed on the following actions:

Establishment of a Himalayan Sustainable Development Forum (HSDF)

1. The Conclave agreed to foster cooperation on sustainable development by establishing the Himalayan Sustainable Development Forum. The Chief Ministers agreed to meet annually so that this agenda can be furthered and actions implemented. They also suggested that the dialogue will continue at different levels and agreed that their officials will convene a bi-annual meeting, preferably at the Chief Secretary level to discuss the status of implementation of the actions proposed. They agreed that the Forum would be hosted by partner states on a rotational basis and that the G.B. Pant Institute of Himalayan Environment & Development, Uttarakhand will provide the technical secretariat for this forum.

Setting up State Councils for Climate Change

2. The Conclave noted that some states have formed State Level Councils for Climate Change and other states are in the process of instituting these councils. These Councils will function as the convenors for the Himalayan Sustainable Development Forum. The Council, situated, within the CM's office, will play an important role in furthering discussion and decisions on sustainable development in the mountain states. They noted that it would be important that these Councils include representatives from different segments of society – civil society, industry, farmer representatives and academia.

Catalysing research for policy action

3. The Councils will play a catalytic role in tracking research being conducted by different departments and institutions. The Council will work as an information and knowledge pool to foster exchange of data related to climate change, good practices and policy initiatives across the Himalayan states. The Councils will convene meetings to discuss the research findings and their policy implications and programmes for implementation. These findings will be presented at the annual CM Himalayan Sustainable Development Forum and also at the bi-annual official level meetings.

Payment for ecosystem services

4. The Conclave agreed to pursue the common agenda to protect, conserve and enhance forests and other natural resources of the state. They will work to ensure that financial incentives are provided for natural resources, which capture the cost of ecosystem services, carbon sequestration as well as land and livelihood opportunities. They prioritised the need for the 13th Finance Commission to enunciate the principle of payment to Himalayan states for the protection, preservation and enhancement of forests and other natural resources and desired that the Commission should provide adequate and ample resources for sustainable development.

Managing water resources for sustainable development

5. The Conclave noted that the Himalayas are the nation's watershed. They noted that hydroelectric power provides renewable sources of power. But equally this energy development is faced with new challenges, and noted the importance of maintaining ecological flows in rivers. They also voiced concern about the impact of climate change on glaciers, which could lead to changes in hydrology of the critical and life-giving rivers of the States and the need for evolving methods for comprehensive impacts of projects at a basin-level. They agreed to set up a joint working group to look into these urgent issues and to recommend actions.

Challenges of urbanisation

6. The Conclave noted that growing urbanisation is leading to new challenges of unplanned growth, solid waste, pollution and traffic congestion. They agreed that Himalayan states need for look for alternative models for urban growth, keeping in mind the specific conditions and constraints of the region. They decided that the Himalayan Sustainable Development Forum would play a key role in discussing these challenges and share best practices that are being tried in the different states. For instance, the ban on plastics, the move to make rainwater harvesting mandatory, the emphasis on solar passive design, energy efficiency, local technologies for green buildings and the need to look for alternative models for mobility so that cities do not first pollute and get congested before cleaning up.

Green transportation

7. The Conclave noted that construction of roads in the fragile region could have devastating impacts, if not planned and built with care. They agreed to support technologies, which would provide methods of building green roads and to discuss these with central and states agencies for urgent implementation. They agreed to explore alternative forms of mass transit, which is eco-friendly like railways and ropeways.

Dealing with impacts of climate change on livelihoods

8. The Conclave voiced concern of the possible impacts of climate change on agriculture and horticulture in the states, which is critical for livelihoods and economic security of people. They agreed to undertake research in these areas and to evolve best practices to adapt to these coming changes. They agreed that traditional knowledge, built on diversity and innovation of local communities, needs to be supported to build resilience and coping strategies.

Decentralised energy security

9. The Conclave agreed that energy security is a basic human need and also noted that new and renewable energy sources could provide important leapfrog solutions in the many remote and grid-unconnected villages of the states. They noted the need for the central government to provide adequate incentives for the promotion of these technologies, including household level solar water heaters to meet the need to scale up for transition.

Managing growth of eco-friendly tourism and pilgrimage

10. The Conclave noted that tourism and pilgrimage is an important economic and social activity for the region. However, the growth of unregulated tourism or unmanaged pilgrimage could destroy the very spiritual character and pristine ecology, which attracts visitors in the first place. It is therefore, imperative that the region explores alternative models for this sector, which are both eco-friendly and provide economic livelihoods for local communities. They noted also that different states have been endeavouring to find such options and these examples need to be learnt from and emulated. For instance, there have been successful efforts to introduce green taxes, which have provided financial resources to manage and neutralise the impacts of tourist activity. Similarly, homestead tourism has been promoted in many states, which has led to local community interest in conservation of the environment. The Himalayan Sustainable Development Forum will continue this dialogue and evolve best practices for the region.

Green industry

11. The Conclave agreed that encouraging green industry and clean technology is important for the region. They noted that industry must take up the challenge of building sustainable businesses, which reduce and minimise pollution and waste and ensure there is no damage to local ecology and people's livelihoods.

Green job creation

12. The Conclave noted that employment for young people is a development imperative for every state. They noted that green jobs in the emerging areas of adaptive agriculture, horticulture, green buildings, water conservation, green energy and others will provide a huge opportunity for the youth of the states. They agreed that the need is undertake programmes for skill development as well as retraining and retooling to enable people to take advantage of emerging opportunities. They agreed to propose to the Central government to incorporate these emerging areas in their ongoing skill development programmes and to provide resources to the states for new green job creation.

Next meeting

The Chief Minister of Uttarakhand announced that Uttarakhand would host the next meeting of the Himalayan Sustainable Development Forum at Dehradun, Uttarakhand.

ANNEX

Indian Himalayas: Glaciers, Climate Change and Livelihoods

The recommendations of the four Working Groups were as under:

Group-I: KNOWLEDGE GAPS AND RESEARCH NEEDS

Recommendations

1) Meteorological, hydrological, ecological, environmental, and socio-economic monitoring and observational systems.
2) Data base organization, dissemination and sharing for research and policy formulation.
3) Modeling for Climate Change scenarios including ecological and meteorological studies for Himalayan region.
4) Research and modeling for assessment of impact of climate change on natural resources, environment, human health and ecology.
5) Glaciological research including field based and remote sensing measurements.
6) Early warning systems for meteorological, hydrological and geological extreme events including forest fires.
7) Socio-economic livelihood scenarios and vulnerability assessment.
8) Participation and involvement of local communities in measurement, awareness and sharing of traditional knowledge.
9) Networking of existing and new institutions on different thematic areas.
10) Human and institutional capacity building including training and public awareness.
11) Data sharing and R&D cooperation with other Himalayan countries and international agencies.
12) Promotion of inter-disciplinary policy research and governance.

Group-II: SOCIAL & ECONOMIC IMPLICATIONS OF CLIMATE CHANGE

Recommendations

The group observes that in the mountain regions major anthropogenic factors leading to climate change are industrialization, road construction and transport, urban waste, unscientific mining, deforestation, forest fires, mass tourism and changing land use patterns. Therefore following recommendations are made.

1) Climatic Change has affected the natural resource base and it is recommended to accord proper emphasis on the management of natural resource including biodiversity documentation & its molecular characterization and providing technological backup for traditional resource use systems.
2) Traditionally mountain people are the custodians of biodiversity, therefore, it is

recommended that proper socio-cultural and religious linkages may be forged with bio-diversity conservation and utilization.

3) The mountain ecosystems are very rich in ITK (Indigenous Traditional Knowledge) which have either eroded or have become irrelevant with the changing scenario, therefore, their documentation and proper technological interventions with R&D backup is recommended.
4) Since a large number of micro and macro hydel projects are coming up in the mountain ecosystems, therefore, Catchment Area Treatment Plans, instead of only thrusting engineering solutions, bio-engineering solution based on traditional production systems should be considered.
5) Framework should be developed for valuing ecosystem services and green accounting. Further mechanism should be in place for payments for provisioning of ecosystem services such that participating communities could be suitably incentivized especially where upstream and downstream linkages have been demonstrated.
6) Social and livelihood activities in mountainous regions are largely women centric, therefore, role of women folk must be recognized in the Climate Change mitigation and adaptation negotiations and gender budgeting should be given due consideration in the planning process.
7) The mountainous ecosystems receive reasonably good amount of precipitation in the form of rain or snow. The group recommends community/individual harvesting of this resource for mutual sharing and for soil and water conservation.
8) Currently only the forest and agro-forestry plantations are eligible for claiming carbon credits under Clean Development Mechanism, however the mountain farming systems are broadly ecosystem based. Efforts should be made to enable all ecosystem based farming including soil to qualify for claiming carbon credits under CDM.
9) Some of the Himalayan States are protecting their forests in their pristine glory without any human interventions. Such forests act as cradle of evolution and speciation. Thus they may be declared as eco-sensitive zones and made eligible for special dispensation from the Finance Commission.
10) Use of the capabilities of educated persons in rural areas for collection of information relating to impacts caused by climate change which can be used for deciding future course of actions.
11) Capacity building and sensitization of the communities through R&D Institutions, NGOs and civil societies regarding impacts of climate change and immediate steps need to be taken to restore/support their livelihoods.

GROUP-III: LOCAL ACTION: GLOBAL IMPACTS

Recommendations

1) Institutions

- **State Climate Change Cells**
  - Chaired by CM and under Chief Secretary.
  - Housed in Department of Environment or Planning.
  - Development of Environment Master Plan.
  - Screening all departmental plans and actions for enhancing adaptation and mitigation potential.
  - Key departments mainstream sustainable & adaptation practices.
  - Revise guidelines, incentivize through contracting, third party monitoring with community participation.

- **District planning committees activated**
  - With various stakeholders, chaired by the DM.

Panchayat level adaptation processes.

1a) Best practices into policy

- Develop state level best practices.
  - Document sector wise.
  - Bring into policy frameworks.
  - Incentive and credible enforcement mechanisms.
- Key sectors.
  - Green roads.
  - Rejuvenation of spring catchments.
  - Energy efficient devices.
  - Controlled tourism, regulated entry to eco-sensitive sites.

2) Community led water and forest management committees

Autonomous local water and forest management committees.

Map drinking water schemes / village info systems.

Identify and protect sources for spring and stream catchments at basin level.

FD formalizes partnerships for local watershed and provisioning services.

2a) Incentivize local protection and restoration

- Build capacity of local communities / state governments for PES.
- Thru REDD / CDM / CAMPA.
- Use for protection of forests and local energy technologies, and agricultural practices.

3) NREGA – enhance adaptation potential

- Eco-sensitive options for NREGA with high adaptation potential.

- Develop shelf of projects for NREGA by departments, NGOs, community groups.
- Screen these options for enhancing their livelihood and adaptation potential.
- These can be taken up by panchayats, SHGs, mahila mandals, youth clubs, school eco-clubs and van panchayats.
- Joint community monitoring of randomly selected NREGA practices.

4) Safeguards for Hydro Power Project

- Protect state environmental services by restricting access to projects even if the hydro potential exists.

– Zone scenic and cultural river stretches as no go for hydro.

- e.g. no build above Uttarkashi on the Bhagirathi, Tirthan valley in HP

– Consider minimum aerial distance of 6 – 8 km (SEA).

– Environmental water flows – minimum mandatory release of 15% (of winter months) may not be enough following precautionary principles.

– Set up altitude limit (3000 m), to protect higher altitude environmental services for large projects.

- Notify requirement for strategic impact assessment at basin level.
- Cumulative impact assessment at basin level.
- Incentivize pico / micro-hydro.
- Extend CAT plan to life cycle of project, not just build phase.

  – Monitor CAT plan and compensatory afforestation activities.
- Declare some eco-sensitive zones, with no micro hydro projects.

  – These can add as bench marks for valleys with projects.

5) Land use governance

- Zoning for urban and rural areas to protect high value ecological areas -
  - Set up under the Environmental Master Plans.
  - Building codes for energy efficient and safe buildings.
- Mainstreaming environmental screening and planning in development planning and governance.

6) Transport sector

- Assess carrying capacity.

– e.g. Rohtang, Shimla.

Incentivize green and smooth roads.

- Clean diesel vehicles and fuel.

– Modernize diesel vehicles.

– Enforce fuel quality standards and improved filters.

- Assess benefits, multi-modal options and where useful, incentivize alternate fuels and modes of transport, e.g. rope-ways, CNG, electric vehicles.
- Trekking rather than SUV based tourism especially in eco-sensitive zones.

7) Energy

- Incentivize.
  - Waste heat recovery.
  - Large scale provisioning of LPG, Biogas, solar, hamams etc.
  - Combined heat and power programs.
- Monitor, Report, Verify all programs.
- Shift from fuel wood use by subsidizing fuels will save forests and local environmental services.

8) Solid Waste Management

- Adopt policy for zero waste.
  - Minimize waste generation.
  - Incentivize waste to wealth management enterprises.
  - Make good quality water available off the tap; restrict use of throwaway bottled water.

9) Mainstream Environmental Education

- Do this through schools and other institutions to encourage sustainable practices and lifestyles.
- Help identify local problems and solutions.

Group-IV: ROLE OF STATE, ACADEMIA, CIVIL SOCIETY AND INDUSTRY Recommendations

Role of State

1) To evolve an institutional mechanism addressing cross-sectoral issues and concerns as also evolve and implement a strategy to contain and mitigate climate change emphasizing Himalayas as important white spots from climate impact perspective.
2) Dovetailing environmental concerns in development planning process including convergence of developmental schemes and development of environment information management system.
3) To ensure balanced and climate sensitive growth within the Himalayan States; emphasis at the State and Central Governmental level needs to be laid on evolving climate friendly and effective alternate public transport means other than just roads, (such as rail, rope ways etc.), development of hydro power generation, (such as wind & solar energy generation etc.).
4) State should disseminate its policy decisions on a regular basis amongst all stakeholders, ensure feed back fine tune and initiate remedial actions on a regular basis.

Academia

1) Academia has to accept greater responsibility in generating verifiable data,

sharing this data, as also share knowledge and information about all dimensions of climate change impacts and solutions.

2) Ensure creation of an omnibus institutional mechanism to facilitate coordinated informed policy making and convergence of data so as to overcome general lack of contribution of academia in policy making.

Civil Society

1) Civil society needs to be more proactively involved in the policy formulation, advocacy and awareness aspects addressing climate change and related issues.
2) Civil society needs to be actively encouraged and supported so as to reach local communities and actively involve them in adopting climate change mitigation and adaptation practices.
3) Encouraging community led environment protection initiatives.
4) The environmental management sensitization political leadership, policy makers and government officers.
5) Effective use of media for climate impacts issues sensitization.

Industry

1) Industry has to accept its contribution and role towards climate change issues and consciously progress towards greener technology.
2) Industry also needs to share its knowledge, share best practices; support R&D activities towards evolving greener technologies as also adopt them and introduce green supply chain management.
3) Industry should actively participate in low carbon actions.
4) Industry should enhance efforts on corporate social responsibilities.

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Deliberations at the Himalayan Chief Ministers' Conclave

Clearly underscoring political will at the highest level, ***Prof Prem Kumar Dhumal, Chief Minister of Himachal Pradesh,*** presided over the Conclave which sent out a clear signal of a firm resolve to act in a concerted manner to address Climate Change related matters in the Himalyan States.

The Conclave was attended by ***Shri Jairam Ramesh, Minister of State for Environment and Forests (Independent Charge), Government of India*** besides ***Shri Ramesh Pokhriyal 'Nishank', Chief Minister of Uttrakhand; Shri Mian Altaf Ahmad, Forest Minister, Jammu and Kashmir; Shri J.P. Nadda, Minister of Science and Technology, Himachal Pradesh; Smt. Sarween Chaudhary , Minister of Social and Women Empowerment, Himachal Pradesh; Ms Sunita Narain, Director, Center for Science and Environment; and Mr Gajanand Pathmanathan, Senior Manager, South Asia Region Sustainable Development Operations, World Bank.***

The discussion on recommendations was followed by Himalayan the Chief Ministers' Conclave.

Highlights:

- Prof Prem Kumar Dhumal, Chief Minister of Himachal Pradesh while welcoming the guests said that it is the Himalayas or the Himalayan States who are the custodians of maintaining economic balance and this change in climate is a developmental challenge and is not easy as it may look like. The government of India has undertaken the work to see how Environment Parameters can be checked and hence to meet the adaptive measures and challenges of climate change it is important for the Central government to allocate funds. He mentioned several steps taken by the government of H.P. for maintaining the ecological cover and sustaining Himalayan eco-system. He stressed on the fact that it is the Himalayas or the Himalayan States who are the custodians of maintaining ecological Balance. The climate change has emerged as a developmental challenge. Hence to meet the mitigation and adaptive challenges posed by climate change the Center must allocate funds.

- Prof Dhumal, called for constituting Himalayan Development Forum to meet the challenges of climate change where all states work in tandem. Under this forum he stressed that Himalayan states need to come together and join articles and pool efforts to work for sustainable development.
- Mian Altaf Ahmad, Forest Minister, Jammu and Kashmir said that the glaciers are conservatories for the ecology and economy. Power and tourism, on which most

Himalayan states depend, might be hit because of climate change. He called for attention by the Central government on the five Himalayan states.

- Ms Sunita Narain, Director, Centre for Science and Environment, New Delhi said that climate change is real and extraordinary measures should be adopted for GHG emission cuts. However, developing countries could achieve precious little unless western economies take drastic steps to address climate change issues. She shared a vision to turn the climate change challenges into opportunities by integrating environment-friendly technologies in our pursuit of development. Forests he said are valuable as watersheds of the country. Also, the current concept of growth oriented GDP had to be redefined so that development could be made more sustainable.
- Mr Gajanand Pathmanathan, Senior Manager, South Asia Region Sustainable Development Operations, World Bank, Washington DC said that climate change adds to the challenge of development for countries like India. National and regional cooperation is essential to deal with the challenge. He said that better preparedness is of paramount importance in the face of climate change impacts.
- Ms Sarojini Ganju Thakur, Additional Chief Secretary, Environment, Science & Technology, Himachal Pradesh presented the recommendations of the four working groups.
- Shri Ramesh Pokhriyal, Chief Minister of Uttrakhand asked for setting up of a Ministry with a special focus on development in Himalayas. He asked for alternative policies on protection of forests as the current laws present many hurdles in the daily living of forest dependent communities.
- Shri Jairam Ramesh, Minister of State for Environment and Forests (Independent Charge), Government of India said that there are many challenges of India in dealing with climate change. One of them is inadequate scientific data. He announced the setting up of National Institute of Himalayan Glaciology at Dehradun along with steps to create a national network to monitor ground data on climate change.
- Shri Jairam Ramesh announced the central government's plans to release green dividends and a green bonus to the Himalayan states from the next financial year as a dividend for protecting the Himalayan ecology. He said that the Finance Commission and the Planning Commission have been approached in this regard.
- Shri Jairam Ramesh also said that the central government was also considering taking the snow-covered areas above 4,000 metres altitude out of the definition of forest land, which would benefit all the 12 Himalayan states in manner that would show increased proportion of their geographical area under forest cover.
- He also announced Green Bonus to 12 Himalayan states in the country. He also expressed desire for scientific collaboration between Pakistan, China, Nepal, Bhutan and India to study climate change in the region.
- Prof Dhumal, Chief Minister of Himachal Pradesh while releasing the Shimla Declaration on Climate Change expressed hope of setting up a Trans-Himalayan Development Forum in partnership with other Himalayan states.

- Shri Jairam Ramesh supported this move and offered the services of the G.B. Pant Institute of Himalayan Environment and Development to act as its secretariat. This was readily accepted by Prof Dhumal.
- Shri J.P. Nadda, Minister of Forests, Science & Technology, Government of Himachal Pradesh presented the vote of thanks to all.

Agenda

Himalayan Chief Ministers' Conclave

Indian Himalayas: Glaciers, Climate Change and Livelihoods

Organized by:
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Government of Himachal Pradesh
And
LEAD India, New Delhi,
on 29-30 October, 2009 at The Peterhof, Shimla, Himachal Pradesh.

Agenda

Day 1, 29th October, 2009.

08:30 – 09.30 Registration

09:30 – 09.45 **Opening Remarks & Introduction to Workshop by**
Mrs. Asha Swarup, IAS Chief Secretary, Govt. of H.P.

Session I

09.45 – 11.45 Changing Landscape of Indian Himalayas

Chair: Dr. R.S. Tolia, CIC & Ex. Chief Secretary, Uttrakhand.

Co-Chair:

1. *Mr. Andreas Schild, DG, ICI MOD.*
2. *Dr. P.S. Ahuja, Director, IHBT (CSIR), Palampur, Kangra, H.P.*

Current Status of Research & Knowledge of Indian Himalayas: A Synthesis

- *Presentation by Prof. S.I. Hasnain, TERI, New Delhi.*

(20 Min.)

Comments from:

- *National Mission on Sustaining Himalayan Eco-Systems-*

Dr. Akhilesh Gupta, Advisor, Deptt. of Science & Technology, GoI.

- *Assessment of Snow and Glacial Monitoring- Dr. Anil V. Kulkarni, Space Application Centre, Ahmedabad.*

- *Snow and Glacial Hydrology- Dr. Manohar Arora, National Institute of Hydrology, Roorkee.*
- *High Altitude Meteorology- Prof. S.K. Dass, IIT Delhi.*

(10 Min. each)

Institutional Perspective:

- *Dr. Ashwagosha Ganju, Director, Snow and Avalanche Study Establishments, Manali.*
- *Dr. M.P. Shah, Sr. Scientist, Wadia Institute of Himalayan Geology, Dehradun,*
- *Dr. Neeraj Dashwal, Director, Central Water Commission (CWC) Chandigarh.*
- *Dr. G. Sangawar, Director, Glaciology Division, Geological Survey of India, Lucknow.*
- *Dr. B. Mukhopadhyaya, Dy. Director General, Indian Meteorological Department (IMD), New Delhi.*

(5 Min. each)

Discussion: 30 minutes.

11.45 – 12.00 Refreshment Break

Session II

12.00 – 13.45 Implications of Climate Change on Ecosystems and Livelihoods

Chair: Mrs. Asha Swarup, IAS Chief Secretary, Govt. of H.P.

Co-Chair:

1. *Dr. K.R. Dhiman, Vice-Chancellor, Dr. YS Parmar, Univ. of Horticulture & Forestry, Nauni, Solan, H.P.*
2. *Dr. Akhilesh Gupta, Advisor, Deptt. of Science & Technology, GoI.*

Comments from:

- *Regional Perspective: Himalayan Eco-systems- Mr. Andreas Schild, DG, ICI MOD.*
- *Agriculture & Horticulture- Dr. Himanshu Pathak, Indian Agriculture Research Institute (IARI, New Delhi.*
- *Forests- Sh. Vinay Tandon, Pr. Chief Conservator of Forests, H.P.*
- *Bio-diversity- Dr. Upendra Dhar, Hamdard Univ; New Delhi.*
- *Water & Irrigation- Dr. J. Bandypadhya, IIM Calcutta.*
- *Tourism- Prof. Kapil Kumar, IGNOU.*

(10 Min. each)

Institutional Perspective:

- *Dr. S.S. Negi, IFS, Director, Forest Research Institute (FRI), Dehradun.*
- *Dr. L.M.S.Palni, Director, G.B. Pant Institute of Himalayan Environment & Development.*
- *Dr. M. Bhutiyani- Managing Climate Change in NW Himalaya and its Implications for the Indian Sub continent, CME Pune.*
- *Dr. Venketaraman, Ex-Member Secretary National Biodiversity Authority, Chennai.*

(5 Min. each)

Discussion: 30 Minutes.

13.45 – 14.30 Lunch Break

Session III

14.30 – 16.45 Institutional Mechanisms: National & State

This session would focus *on policies, strategies, roles, decision making and actions.*

Chair: Sh. Avay Shukla, IAS Additional Chief Secretary, Forests, GoHP.

Co-chair:

1. *Dr. L.M.S.Palni, Director, G.B. Pant Institute of Himalayan Environment & Development.*
2. *Dr. Tej Pratap, Vice-Chancellor, C.S.K. H.P. Krishi Vishvavidyalaya, Palampur, Distt. Kangra, H.P.*

Comments from:

- *Existing Policies & Strategies- Sh. Hem Pande, IAS Joint Secretary (IC), MoEF, GoI.*

(10 Min.)

- *Addressing Climate Change Risks*
  - *Role of Government: Presentation by representative State Secretaries.*
    - *Himachal Pradesh.*
    - *Uttrakhand.*
    - *Arunachal Pradesh.*
    - *Jammu & Kashmir.*
    - *Sikkim.* **(5 Min. each)**
  - *Role of Civil Society & Donors:*
    - *Dr. Sanjay Tomar, TERI.*
    - *Dr. Virender Sharma,DFID, New Delhi.*
    - *Development Alternative, New Delhi.*
  - *Role of Industries: Ms. Seema Arora, CII, New Delhi.*
  - *Climate Change: Education and Sustainable Practices- Dr. Sharad Gaur, CEE, New Delhi.*
  - *Role of Research Institutions: Dr. P.S. Ahuja, Director, IHBT (CSIR), Palampur, Kangra, H.P.*

- *Valuation of Environmental Services- Dr. Madhu Verma, IIFM, Bhopal, M.P.*

- *Green Accounting and the Economics of Ecosystems & Bio-diversity: Sh. Sanjeev Sanyal, Director, Green India State Trust (GIST) & President, Sustainable Planet Initiative, New Delhi.*

(5-7 Min. each)

Discussion: 30 Minutes.

Session IV

16.45 – 18.15 Charting A Way Forward

Break for Group Discussions on the Assigned Themes

Chair: Mrs. Sarojini Ganju Thakur, IAS Additional Chief Secretary, Environment, Science & Technology, GoHP.

Group 1: Knowledge Gaps and Research Needs

Chair: Prof. S.I. Hasnain, TERI, New Delhi.

Facilitator: *Dr. Akhilesh Gupta, Advisor, DST, GoI.*

Rapporteurs:

1. *Dr. Sanjay Kumar, IHBT, Palampur.*
2. *Dr. A.K. Bhatt, PSO, DEST, H.P.*

This group *will focus on the current scientific initiatives and available and emerging technologies for monitoring and forecasting the impact of climate change in the Himalayas both at local and regional level. The discussion will also focus on the present research gaps in Climate Change studies.*

Group 2: Social & Economic Implications of Climate Variability

Chair: Dr. K.R. Dhiman, Vice-Chancellor, Dr. YS Parmar, Univ. of Horticulture & Forestry, Nauni, Solan, H.P.

Facilitator: *Dr. Madhu Verma, IIFM, Bhopal, M.P.*

Rapporteurs:

1. *Prof. K.S. Verma, Head Environment Sciences, UHF Univ. Nauni, Solan, HP.*
2. *Dr. J.C. Rana, Scientist, NGBPR, Phagli, Shimla.*
3. *Sh. D.K. Sharma, SEE, HPPCB, Shimla.*

This group will focus on anthropogenic factors leading to Climate change and their implication on region's natural resources. This session also address ways to assess the impacts of climate change on local livelihoods. The group will also explore the role that NGOs and civil society could play in addressing these challenges. Further, this session will also focus on fiscal devises, green accounting and Payment for Environment Services as economic tools for environment protection and enhancement.

Group 3: **Local Actions: Global Impacts**

Chair: Dr. L.M.S.Palni, Director, G.B. Pant Institute of Himalayan Environment & Development.

Facilitators: *1. Ms. Sonia Chand Sandhu, Sr. Environment Specialist, World Bank, New Delhi.*

2. Sh. Chetan Agarwal, Senior Program Officer, Natural Resource Management Division, Winrock International India.

Rapporteurs:

1. *Dr. K.S. Kapoor, Sr. Scientist & Division Head, HFRI, Shimla.*
2. *Dr. S.S. Samant, In-charge G.B. Pant Research Station, Kullu.*

The discussion in this group will focus on region specific opportunities for developing effective Climate Change policies to minimize and adapt to climate variability. The group will discuss ways to respond to areas of concerns and what kinds of decisions should be made that include climate change factors. This would include issues pertaining to Transport, Solid Waste Management, Wastewater Management, Tourism/ Pilgrimage Regulations, Afforestation / Forest etc.

Group 4: Role of State, Academia, Civil Society & Industry

Chair: Sh. Hem Pande, IAS Joint Secretary (IC), MoEF, GoI.

Facilitator: *Sh. Piyush Dogra, Environment Specialist, World Bank, New Delhi.*

Rapporteurs:

1. *Dr. S.K.Sinha, PSO, NRTC Parwanoo.*
2. *Sh. Basu Sood, Dy. Director, Planning Deptt. H.P.*
3. *Representatives of Civil Society & Industry (CII).*

This group will focus on the role the State Governments, Government of India, industry, research institutions and civil society is expected to play to address the challenge.

20.00 **Dinner**

**** Note on the Group Discussion***

Participants will be assigned their group on the basis of their expertise etc. A Chair and Facilitator for each breakout group will ensure that all the members participate and contribute to the discussion. The Chair will summarize the group's discussion and report to the Session 1 on Day II. The Rapporteurs and Facilitators assigned to each group will support the Chair in taking notes and summarizing them and assist in preparation for the presentation.

Day 2, 30th October, 2009.

Session I

10.00 – 11.15 Strategy & Action

Session would focus *on policies, strategies and actions to be adopted by government, industry and civil society to address climate change risks and challenges.*

Reports from the Groups (Reports on Breakaway Groups Outcomes)

This session will include presentations by the facilitators all the four breakaway groups on issues and responses to climate change in the Indian Himalayan Region.

Chair: Ms. Sunita Narain, Director, Centre for Science & Environment, New Delhi.

Co-chair:

1. *Mrs. Sarojini Ganju Thakur, IAS Additional Chief Secretary, Environment, Science & Technology, GoHP.*
2. *Sh. Hem Pande, IAS Joint Secretary (IC), MoEF, GoI.*

11.15 – 11.30 Refreshment Break

11.30 – 13.00 Discussion and Synthesis of the Group Outcomes

(The discussion will lead to Workshop Recommendation which would be presented in the Ministerial session).

13.00 – 14.00 Lunch Break

Himalayan Chief Ministers' Conclave

30th October, 2009.

14.30 – 14.45	**Welcome & Address by Prof. Prem Kumar Dhumal, Hon'ble Chief Minister, Himachal Pradesh.**
14.45 – 15.45	**Address by** • **Sh. Shyam Saran, Special Envoy on Climate Change, to the Hon'ble Prime Minister of India on National Perspective.** • **Dr. Ashok Khosla, President IUCN & Chairman Development Alternatives Group on Global Perspective.** • **Ms. Sunita Narain, Director, Centre for Science & Environment, New Delhi on Civil Society's Perspective.** • **Mr. Gajanand Pathmanathan, Senior Manager, South Asia Region Sustainable Development Operations, World Bank, Washington DC**
15.45 – 16.00	**Presentation on the Workshop Recommendations by Mrs. Sarojini Ganju Thakur, IAS Additional Chief Secretary, Environment, Science & Technology, GoHP.**
16.00 – 17.00	**Address by State Chief Ministers.**
17.00 – 17.15	**Address by Sh. Jairam Ramesh, Hon'ble Minister of State for Environment & Forests (Independent Charge), Government of India.**
17.15 – 17.30	**Release of 'Shimla Declaration on Climate Change' by Prof. Prem Kumar Dhumal, Hon'ble Chief Minister of Himachal Pradesh.**
17.30 – 17.45	**Interaction with Media.**
17.45 – 17.50	**Vote of Thanks by Sh. J.P. Nadda, Hon'ble Minister of Forests, Science & Technology, Government of Himachal Pradesh.**
17. 50 – 18.15	**Tea.**

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Session I: Changing Landscape of Indian Himalayas

Chair: ***Dr. R.S. Tolia, CIC and Ex-Chief Secretary, Uttrakhand***
Co-Chair: ***Mr. Andreas Schild, DG, ICI MOD, Nepal; and Dr. P.S. Ahuja, Director, IHBT (CSIR), Palampur, H.P.***

In this session eminent resource persons shared research studies presenting empirical scientific data underscoring the glacial retreat and fragmentation in the Himalayas – an important constituent of an area now being referred to as the Third Pole (besides the Arctic and the Antarctica) comprising Pamir, Karakoram, Himalaya ranges and the Tibetan plateau. The session also sought to explore the drivers of change resulting in the melt of the snow cover.

Highlights:

- ***Prof. H.S. Hasnain, TERI, New Delhi*** set the tone for this session through his presentation *Synthesis of Recent Research on Himalayan Glaciers*. His presentation summarized the significant research work on Climate Change in the Indian Himalayas and its impact on glaciers in the Himalayas. His paper cited studies based on remote sensing and ground trouping, concluding that glaciers though Bhutan Himalaya Ridge to the Lahaul Spiti in Western Himalays, though have varying patterns, show significant signs of retreat.
- ***Dr. Anil V. Kulkarni, Indian Space Research Organisation, Ahmedabad*** in his presentation *Monitoring of Himalayan Snow and Glacial Cover.* Kulkarni presented data to support his claim that 2001-2004 aerial extents of 1317 glaciers had decreased by at least 16% since 1962. His analyses also underlined that smaller glaciers were receding slower that the bigger ones, which were also witnessing fragmentation.
- ***Dr. Manohar Arora, National Institute of Hydrology, Roorkee*** presented his paper *Climate Change and its Impact on Water Resources* stated that climate change is due to have its impact on hydrological values of certain regions thus affecting water availability and quality. This affect will have to be understood on a more local scale such as a catchment area, which means scientific tools will have to be appropriately downscaled. His research showed that in a short run, a two-degree rise in temperature could mean a 28% increase in summer runoff in short run and extreme climate events.
- ***S K Dash, Centre for Atmospheric Sciences, Indian Institute of Technology Delhi*** argued that As per his inference due to with a rise in temperatures heavy rain events increase and moderate & low events decrease, snow and glaciers will thin out, vegetation patterns will change and diseases like malaria will shifting to higher altitudes. The attention has to be focused on the mountain ecosystems as

the diversity of mountain resources is important not only to ensure the sustainable livelihoods of mountain communities and supply to water to almost half of the world population, but also for the food security and socio-economic welfare of the people in the plains.

- ***Dr Akhilesh Gupta, Coordinator, Climate Change Programme, Department of Science and Technology, Government of India*** informed the gathering about the government's policy under *National Mission for Sustaining the Himalayan Ecosystem*. He said that the center already had a defined policy on climate change. It was now the state governments' responsibility to participate more actively on the implementation of these policies. He called for a more active data and resource sharing, and human and institutional capacity building. He also called for community-based organizational observational network using traditional knowledge.
- These presentations were followed by discussion and questions from the audience.
- Representatives of various institutes and research organisations engaged with research on climate change and related areas in the country presented perspectives of work and research done by their respective organisations. Those who made brief presentations include ***Dr. Ashwagosha Ganju, Director, Snow and Avalanche Study Establishments, Manali; Dr. M.P. Shah, Sr. Scientist, Wadia Institute of Himalayan Geology, Dehradun; Dr. Neeraj Dashwal, Director, Central Water Commission (CWC) Chandigarh; Dr. G. Sangawar, Director, Glaciology Division, Geological Survey of India, Lucknow; and Dr. B. Mukhopadhyaya, Dy. Director General, Indian Meteorological Department (IMD), New Delhi.***
- Co-Chair, Andreas Schild, DG, ICI MOD, Nepal observed that observations from studies done on Himalayan glaciers are consistent with the global trends. Saying that there still was insufficient data on Indian Himalayas, he stressed the need for long term studies for data modeling and planning in the absence of which the local communities will suffer.
- Co-chair, Dr. Dr. P.S. Ahuja, Director, IHBT (CSIR), Palampur, H.P. stressed the need for evolving climate models for location specific forecasting to deal with the specter of extreme and sporadic weather events. Dr. Ahuja also stressed the need for better network of meteorological stations, and sharing of satellite and ground trouping data.

Recommendations:

The recommendations that emerged after the first session mostly centered around the methods of data collection and syntheses, and the need for capacity building and co-operation.

- Water availability and quality emerged as an important concern. The conference agreed that development of indicators of climate change impacts on freshwater, and operational systems to monitor them, are required.
- Most of the impact studies of climate change on water stress assess demand and supply on an annual basis. Analysis at the monthly or higher temporal resolution scale is desirable, since changes in seasonal patterns and extreme climate events may affect water resources.
- Similarly, there remains a scale mismatch between the large-scale climatic models and the catchment scale – the most important scale for water management. Methods need to be improved that allow the assessment of the impacts of changing climate variability on freshwater resources with focus on local scale data sets and simple climate-linked computerized watershed models. Here, higher-resolution climate models, with better land-surface properties and interactions, are therefore required to obtain information of more relevance to water management. Statistical and physical downscaling can contribute.
- Climate change impacts on water quality are poorly understood for both developing and developed countries, particularly with respect to the impact of extreme events. Also, the impact of climate change on groundwater has received little attention as compared to surface water resources**.**
- There is an absence of reliable projections of future changes in hydrological variables. Therefore, better observational data and data access are necessary to improve understanding of ongoing changes and to improve model projections. Progress in knowledge depends on improved data availability.
- It was unanimously felt that there exist huge knowledge gaps in our understanding of the climate change, its impacts and assessment of mitigation and adaptation options. Thus. It was felt that there is a need for creation of a data repository on climate change and better coordination and sharing of information between institutions.
- Many experts also underscored that although issues like water quality and availability are relatively local, climate change is a more general event and has to be studied holistically, with Himalayas as one eco-system. Thus there is also a case of for not only inter-institutional, but also inter-national cooperation and collaboration. Experts also expressed a need for denser network of observations and greater use of more satellite data in models.

- It was also recommended that there should be a greater stress for creating mathematical models for generation of climate scenarios and impact outlook. This could help in improving assessment of mitigation options and adaptation strategies.
- Experts observed that traditional knowledge of the mountain communities has to be given greater importance in the assessment and mitigation policies for climate change impacts. It was also recommended that community-based organizational observation networks be augmented.
- The state governments its was felt should actively cooperate and bring out annual reports on the climate change, extreme events, policy framing and monitoring, socio-economic impacts, and adaptation strategies and experiences.

Session II: Implications of Climate Change on Ecosystems and Livelihoods

Chair: ***Mrs. Asha Swarup, IAS, Chief Secretary, Govt. of H.P.***
Co-Chair: ***Dr K Vijaya Lakshmi, Associate Vice President, Development Alternatives; and Dr. K.R. Dhiman, Vice-Chancellor, Dr. YS Parmar University of Horticulture and Forestry, Solan, H.P.***

Highlights:

- ***Mr. Andreas Schild, DG, ICIMOD*** in his presentation *Impact of Climate Change on Himalayan Livelihoods - A Regional Perspective* shared that climate change will increase the vulnerability of the mountain communities and those who depend on water from the Hindu Kush Himalayas. Receding glaciers will have serious consequences and changing precipitation patterns will affect livelihoods most dramatically as the HKH and its plains have high concentration of population and are the most irrigated areas of the world.
- ***Dr. Himanshu Pathak, Indian Agriculture Research Institute, New Delhi*** presented his findings on *Impact, Mitigation and Adaptation of Indian Agriculture to Climate Change.* He suggested that climate change will make crop production more unreliable and less predictable, reducing yields of most crops in long-term. A one degree increase in temperature may reduce yields of wheat, soybean, mustard, groundnut, and potato by 3-7%. The losses may be compounded at higher temperatures. Crop yields may be down by 10-40% by 2100 severely affecting livelihoods and food security.
- ***Mr. Vinay Tandon, Pr. Chief Conservator of Forests, H.P.*** in his presentation titled *Implications of Climate Change on Ecosystems and Livelihoods – Forests and Livelihoods* argued that climate change will result in horizontal and vertical shifts in 68 % to 77 % of forest areas and associated floral & faunal species by end century, thus resultant changes in water runoff, forest produce and in livelihoods.
- ***Dr. Jayanta Bandyopadhyay, Centre for Development and Environment Policy, Indian Institute of Management Calcutta*** talked about *Impacts of Global Warming and Climate Change on Himalayan Waters and Livelihoods.* He stressed that Himalayas have to be viewed primarily water tower for about 1.5 billion people. Not only is the scientific knowledge on Himalayas very inadequate, but open/detailed hydrological data are also absent. He cautioned against over dependence on remote sensing data as this mismatches with ground data when surmounted. He also stressed the need for baseline data to assess climate change in future.
- ***Prof. Kapil Kumar, Programme Coordinator, Tourism Research, Indira Gandhi National Open University, New Delhi*** talked about *Strategic Interventions for Nature-Based Tourism in Himalayas.* He stressed upon guarding the fragile

Himalayan eco-systems from over exploitation and tourism activity and suggested steps for more eco-friendly tourism.

- In the discussion that ensued it was suggested that eco-services payments have to be implemented as mountain communities have to forego development opportunities in the larger environmental interests. All present agreed that there is a need for urgent action.
- Co-chair, Dr Vijaya Lakshmi in her remarks pointed that land-use patterns and health paradigms are a result of climate change are bound to be affected and have to be addressed amongst other variables.
- Co-chair, Dr. K.R. Dhiman, Vice-Chancellor, Dr. YS Parmar University of Horticulture and Forestry suggested that conservation of water resources has to be made into a mass movement and capacity building of people to deal with the affects of climate Also, important is a district wise mapping of water resources and fixing of responsibility of managing these resources.
- Representatives of various institutes and research organisations engaged with research on climate change and related areas in the country presented perspectives of work and research done by their respective organisations on implications of climate change on ecosystems and sustainable livelihoods. Those who made brief presentations include: ***Dr. S.S. Negi, Director, Forest Research Institute (FRI), Dehradun; Dr. L.M.S.Palni, Director, G.B. Pant Institute of Himalayan Environment and Development; Dr. M. Bhutiyani, College of Military Engineering, Pune; and Dr. K. Venkataraman, National Biodiversity Authority, Chennai***.

- Dr. L.M.S.Palni, Director, G.B. Pant Institute of Himalayan Environment and Development informed the gathering that the institute has already established six reference observation stations along with one met-tower. The institute has plans to set up 14 such met-towers throughout the Himalayas. He also called for adoption of 28 best-practices compiled and recommended in the G-SHE report published by the institute.

Recommendations:

Recommendations were made for adaptation to the impact of climate change at three levels: development of strategic tools, policy planning and livelihood strategies.

Adaptation strategies - strategic tools

- Work on making predictions on climate change at watershed levels need to be taken up on an emergency basis. In the event of extreme climatic events early warning systems for local area forecast have to be evolved.

- **Comprehensive model-based analyses and improved databases on soils, land-use and greenhouse gas fluxes are required.**
- Ecological economics would help in taking more scientific decisions on design of water projects in the Himalayas.
- Higher density of hydrological observation points for reasonable assessment was also advocated

Adaptation strategies – policy planning

- Adaptation practices take time to become effective. Also, costs of adaptation are less understood but are likely to be high; costs of inaction could be even higher. Thus governments should act on adaptation policies on urgent basis. Despite the insufficiency of data, a plausible strategy to project and deal with the impacts of climate change on livelihoods has to be evolved.
- Schild - As earlier pointed out - an immediate need for an action plan for water management was proposed to be developed for long term development and management of watershed areas, storage tanks and wetlands. Himalayas have to be primarily looked upon as water tower for approximately one-third of the world's population. Early steps may be taken to redesign Himalayan land use with water as the first product.
- Forests will continue to function as repositories of water. People who forego urgent development needs should be compensated for eco-services
- To actively manage water resources there is a need for integrated watershed development, augmentation of water storage and wetland conservation.

Adaptation strategies – Livelihoods

- New livelihood options, especially for mountain communities have to be planned in advance. It is be a shared responsibility for investment in Nature capital.
- For research institutions on Himalayan policy, it is crucial task to study and document how the people's livelihoods are being impacted and visible changes in precipitation pattern as well as mountain farming and forest systems.
- Adaptation strategies for hill agriculture should include Crop Diversification, new production options like water harvesting and conservation, new drought/heat resistant varieties, new farm management practices, change in land-use, and agri-insurance.

Session III: Institutional Mechanisms: National & State

Chair: ***Sh. Avay Shukla, IAS Additional Chief Secretary, Forests, GoHP.***
Co-chair: ***Dr. L.M.S.Palni, Director, G.B. Pant Institute of Himalayan Environment and Development, and Dr. Tej Pratap, Vice-Chancellor, C.S.K. H.P. Krishi Vishvavidyalaya, Palampur, H.P.***

This session focused on policies, strategies, roles, decision making and actions.

Highlights:

- Dr. L.M.S.Palni read out the presentation *Existing Policies and Strategies* of Sh. Hem Pande, IAS, Joint Secretary (IC), Ministry of Environment and Forests, Government of India, who could not attend the conference. Pande's presentation underscored that 41 developed economies that undertook GHG reduction targets as per Kyoto Protocol – excluding EIT (Economies in Transition) countries – have increased GHG emissions by 10% over 1990-2004, as compared to return to 1990 level by 2000 and a reduction of 5.2% promised by 2012. Therefore developed countries must take ambitious targets post-2012 and deliver on them. The presentation also stated India's position viz. z viz. the Copenhegan Summit, which are as follows: Per capita emission levels will never exceed that of the per capita emission levels of developed countries; India cannot and will not take on emission reduction targets; continue to be a low-carbon economy; primary focus is on "adaptation", with specific niches for "mitigation"; follow National Action Plan on Climate Change; Only those Nationally Appropriate Mitigation Actions (NAMAs) can be subject to international monitoring, reporting and verification that are enabled and supported by international finance and technology transfer; demand for a comprehensive approach to Reducing Emissions from Deforestation & Forest Degradation (REDD) and advocates REDD+ that includes conservation, afforestation and sustainable management of forests; advocate collaborative research in future low-carbon technology and access to intellectual property rights (IPRs) as global public goods.
- This was followed by presentation by representative State Secretaries on *Addressing Climate Change Risks: Role of Government*
- ***Mrs. Sarojini Ganju Thakur, Additional Chief Secretary, Environment, Science & Technology, Government of Himachal Pradesh*** in her presentation on policies/programmes initiated by Himachal Pradesh for mitigation and adaptation of climate change. She declared following steps for strengthening state's efforts to deal with the mitigation and adaptation of climate change impacts by the state which include inventory the GHG emissions for assessing carbon foot prints for Mitigation & Adaptation Strategies; mechanisms for green accounting in the state's planning processes; sectoral guidelines for the line

departments for environment protection; efficient disaster response system; and assessment of carbon foot print at industry sector for climate change mitigation and adaptation. She argued that all this was possible with more resource allocation considering the huge forest areas, and difficult terrain, besides huge costs involved in adapting lifestyle changes.

- ***Shri G.N. Sinha, Director, State Forest Research Institute and Managing Director, Arunachal Pradesh Forest Corporation Limited*** suggested that National Action Plan on Climate Change should, along with glaciers, also stress on role of forests in capturing water from the monsoons and its onward transfer to natural springs and rivers. He stated that Arunachal is the national leader among Indian states with 81.46% of the geographical area under forest cover out of which 21.26% is virgin forests. Thus cumulative impact of carbon sequestration by forests in Arunachal is most significant in India. He called for carbon credits for protecting natural/virgin forests, as otherwise Arunachal would not benefit under the CDM regime despite safeguarding huge forest cover in the country.
- ***Shri Shantmanu, Additional Secretary Forests, Government of Jammu and Kashmir*** presented the state's initiatives for mitigation and adaptation of climate change. He also stated the state's commitment to the Srinagar Recommendations of International Workshop on Climate Change held from 12-14 October 2009. The state's action plan include enhanced environmental analysis and monitoring through development of locally appropriate models, downscaling of Global Circulation Models, ground-truthing, and validating the remote sensing studies with in situ data and detailed local realities; develop a program for community education, participation and capacity building; policy and adaptive response to take account of vulnerabilities to environmental change; following a low-carbon path and adopt appropriate energy technologies; evaluating the performance of existing hydropower projects; and establish a dedicated institution in the State should to address adaptation to and mitigation of climate change.
- ***Shri M.L. Arrawatia, Secretary Science and Technology and Climate Change, Government of Sikkim*** said that Climate Change has started to manifest itself in Sikkim Mountain Ecosystems in the form of un-seasonal and decrease in rainfall, rising temperatures, increased flooding and landslides and rock avalanches. The policy decisions by the state government include State Policy on forest, environment and land use; and compulsory environmental education for all schools. Other measures include Spring-shed Development across the villages, and creation of a climate change wing. The state also proposed to pursue with the Union Government that Himalayan States be offered incentives for retaining high forest cover, rich biodiversity, protection of water resources and providing environmental security to the country.
- In the next section of this session *Role of Civil Society and Donors* was deliberated. ***Dr. Sanjay Tomar, Fellow, Climate Change Division, TERI***. He stressed upon a need for planning policies, based on good understanding of cause and effects and of system dynamics and complexities, having the ability to

adapt to anticipated and unanticipated conditions. These policies should focus on civil society for participatory information sharing and planning along.

- ***Dr. Ramesh Jalan, Solution Exchange, UNDP*** stressed the need to remove the confusion between climate change and climate variability. He also suggested community-based practices to deal with the threat of climate change and said that the National Action Plan on Climate Change should have a more participatory approach and take into account adaptation strategies based on traditional knowledge. He was of the opinion that agro forestry and silvi-agri-pastoral practices should be initiated.
- The industry perspective to the debate was presented by ***Ms. Seema Arora, CII, New Delhi***. She insisted that countries like India have certain compelling developmental needs as well as a challenge to balance developmental activities with sustainability. India could develop a Comprehensive Climate Change Policy by balancing global policies and practices with that of the Indian states.
- ***Dr. Sharad Gaur, Center for Environment Education, New Delhi*** spoke on *Climate Change: Education and Sustainable Practices.* He said that anthropogenic factors are the most prominent factors for climate change. He suggested that formal and informal education could go a long way in minimizing the impacts of climate change on living and sensitizing for sustainable lifestyle options.
- ***Dr. P.S. Ahuja, Director, IHBT (CSIR), Palampur, H.P*** presented his views on the *Role of Research Institutions in the face of Climate Change.* As per the five-pronged action plan he suggested, the first priority is development of common infrastructure and networking of research institutions for better data gathering and access. Other steps include capacity building of trained manpower, standardised result-output formats, development of models for region-specific forecasts along with vulnerability assessment, development of a common action plan for various agencies and stakeholders.
- ***Dr. Madhu Verma, Indian Institute of Forest Management, Bhopal*** made a presentation on *Economic Valuation, Green Accounting and Payment for Environmental Services – Components of Toolkit for Sustainable Management of Himalayan Forests.* Undervaluation of forest resources in India is causing immense losses to the sector and to the economic system. Traditionally, most of the natural resources are taken as "free gifts of nature". Though people are aware of their uses but not their value, resources have not only been used but overused, misused and finally abused. She called for setting-up the compensation, reward, payment, market or incentive based mechanism such that the interest of stakeholders remains sustained and investment becomes attractive in the natural capital i.e. forests and the country can get benefit at the international platform for its REDD and carbon management efforts via expected REDD fund and carbon credits. She stressed the need for capacity building of all concerned in the scientific understanding of natural capital, as well as in the design and implementation of finance mechanisms and supporting policies and institutions to effect valuation, accounting and payment process for improving livelihoods and increased budgetary support. Citing Himachal Pradesh as an

example, she said that valuation of eco-service of forests in Himachal could add upto 92% to its GDP.

- ***Sh. Sanjeev Sanyal, Director, Green India State Trust (GIST); and Trustee, Sustainable Planet Institute*** while speaking on *Green Accounting and the Economics of Ecosystems and Bio-diversity* insisted that although climate change is unavoidable, it is essential recognise that there have to be trade-offs. Policy has to take into account environmental issues. If GDP continues to be the central measure for growth, the same concept has to be applied for calculating the negatives by-products of growth, thus making the valuation of state's natural resources essential.
- The discussion in the session primarily focused on policy planning imperatives and the roles of research institutions, industry and civil society in mitigation of and adaptation to the impacts of climate change. This also set the stage for session IV.

Recommendations:

- One of the primary recommendations of the session for policy planning was a need for 'Green Accounting' and payment for eco-services, not only to the governments, but also to the community as incentive to make preservation of natural resources sustainable.
- State is also expected to act as a facilitator for building capacities, inter- and intra-stakeholder sharing and evolve institutional mechanisms for better understanding and preparing for the impacts of climate change.
- Research institutions also have a responsibility for generating and sharing data, and suggest strategies for climate change issues with stakeholders, while representing needs and aspirations of local communities. The scientific knowledge and policy inputs have to be tempered with traditional knowledge.
- The researchers should be able to resolve on mutually compatible data gathering and reporting procedures so that the generated knowledge may be put to better and efficient use.
- Instead of restricting to macro studies, research institutions have a responsibility to develop area-specific modelling and forecasting capabilities, and adaptation strategies based on pan-Himalayan outlook.
- The aspirations for growth in developing countries like ours are bound to have some compelling
- Developmental needs. The industry could be encouraged to follow a low-carbon path to growth by investing revenues generated through climate-compensation taxes in ensuring greener industrial practices, thus leading to sustainable development.
- Civil society has a big role in educating and promoting ecologically sustainable livelihoods and inducing life-style adaptations.

- The challenge of dealing with the impact of climate change on Indian agriculture and rural livelihoods ought not to be ignored. Climate change would reduce major crop yield by 4.5 per cent to 9 per cent between 2010 and 2039 if the current trends continue. There is a need for regular consultation and sharing of best practices among the Himalayan States on adapting agricultural practices to climate change.
- Climate change threatens several biodiversity hotspots. The loss of every species and gene limits our options for the future. Therefore, the protection of biodiversity through community conservation and systematic efforts are needed. The initiative for building genetic resources for a warming India should be taken timely and priority basis and long-term basis.
- There is a need of automated weather stations to be located to record data and Doppler Radar System for Glacier and Snow Melt Studies across the Himalayas. Such observatory networks should be strengthened on a mission mode.

Session IV: Charting a Way Forward

Conference participants and resource persons formed four groups to discuss and recommend initiatives in four major areas to deal with issues arising out of climate change. The recommendations of these groups were presented in the first session on Day 2.

Group 1, chaired by ***Dr. Akhilesh Gupta*** presented recommendations on *Knowledge Gaps and Research Needs*. This group was mandated to discuss and recommend on the current scientific initiatives and available and emerging technologies for monitoring and forecasting the impact of climate change in the Himalayas both at local and regional level. The discussion will also focus on the present research gaps in Climate Change studies.

Recommendations:

- Meteorological, Hydrological, Ecological, Environmental, and socio-economic monitoring and observational systems;
- Data base organization, data dissemination and sharing for research and policy formulation;
- Modeling for Climate Change scenarios including ecological and meteorological studies for Himalayan region;
- Research and modeling for assessment of impact of climate change on natural resources, environment and ecology;
- Glaciological Research including field based and remote sensing measurements;
- Early Warning systems for meteorological, Hydrological and geological extreme events including forest fires;
- Socio-Economic livelihood Scenarios and Vulnerability Assessment;
- Networking of Existing and New Institutions on different thematic areas;
- Human and institutional capacity Building including training and public awareness;
- Data sharing and R&D cooperation with other Himalayan Countries and international agencies;
- Integrated approach in developmental activities in Himalayan States; and
- Promotion of inter-disciplinary policy research and governance.

Group 2, chaired by ***Dr. K.R. Dhiman*** focused on *Social and Economic Implications of Climate Variability*. This group discussed anthropogenic factors leading to Climate change and their implication on region's natural resources and recommended ways to assess the impacts of climate change on local livelihoods. The group will also explored the role that NGOs and civil society could play in addressing these challenges, fiscal devices, green accounting and Payment for Environment Services as economic tools for environment protection and enhancement.

Recommendations:

- Accord proper emphasis on the management of natural resource including biodiversity documentation and providing technological backup for traditional resource use systems;
- Proper socio-cultural and religious linkages may be forged with bio-diversity conservation and utilization;
- documentation and proper technological interventions with R&D backup for rich ITK (Indigenous Traditional knowledge) of the mountain communities are very which have either eroded or have become irrelevant with the changing scenario;
- Catchment Area Treatment Plans, instead of only thrusting engineering solutions, bio-engineering solution based on traditional production systems should be considered, since a large number of micro and macro hydel-projects are coming up in the mountain ecosystems;
- Framework should be developed for valuing ecosystem services and green accounting. Further mechanism should be in place for payments for provisioning of ecosystem services such that participating communities could be suitably incentivized especially where upstream and downstream linkages have been demonstrated;
- Role of women folk must be recognised in the Climate Change mitigation and adaptation negotiations and gender budgeting should be given due consideration in the planning process since social and livelihood activities in mountainous regions are largely women centric;
- Community/individual harvesting of reasonably good amount of precipitation in the form of rain or snow received in mountainous ecosystems for mutual sharing and for soil and water conservation;
- Currently only the forest and agro-forestry plantations are eligible for claiming carbon credits under Clean Development Mechanism, however the mountain farming systems are broadly ecosystem based. Efforts should be made to enable all ecosystem based farming including soil to qualify for claiming carbon credits under CDM;
- Some of the Himalayan States are protecting their forests in their pristine glory without any human interventions. Such forests act as cradle of evolution and speciation. Thus they may be declared as eco-sensitive zones and made eligible for special dispensation from the Finance Commission;
- Use of the capabilities of educated persons in rural areas for collection of information relating to impacts caused by climate change which can be used for deciding future course of actions; and
- Capacity building and sensitisation of the communities through R&D Institutions, NGOs and civil societies regarding impacts of climate change and immediate steps need to be taken to restore/support their livelihoods.

Group 3, chaired by ***Dr. L.M.S.Palni*** focused on *Local Actions, Global Impacts*. The discussion in this group focused on region specific opportunities for developing effective Climate Change policies to minimize and adapt to climate variability. The group recommended ways to respond to areas of concerns and what kinds of decisions should be made that include climate change factors.

Recommendations:

- Set-up State Climate change cells, chaired by the state Chief Ministers. These cells should screen all departmental plans and actions for enhancing adaptation and mitigation potential. Third party monitoring with community participation should be adopted.
- District planning committees should be activated with various stakeholders as members. Adaptation processes should be encouraged at the Panchayat level;
- State-level best practices policy should be put in place with sector-wise documentation. Key sectors such as green roads and spring-shed catchments should be identified;
- Community-led water and forest management committees should be formed. These committees would work autonomously to map drinking water schemes, Identify and protect sources for spring and stream catchments at basin level;
- Protection and restoration of natural resources at local level should be incentivised. For this capacity of local communities will have to be built. Programmes like REDD, CDM or CAMPA can drive these actions;
- NREGA can be used for promoting and implementing eco-sensitive options for development and have high adaptation potential;
- There is a need to protect state environmental services by restricting hydel-power projects even if potential exists. It should be made mandatory to notify requirement for strategic Impact Assessment at basin level and CAT plans should be extended to life cycle of a project rather than just the build-phase;
- Under the Environmental Master Plans Zoning for urban and rural areas to protect high value ecological areas should be introduced;
- Clean diesel vehicles and fuel efficient transport options should be a focus area along with enforcement of fuel quality standards and improved filters. Electric vehicles may be provided incentives;
- Energy use has to be made more efficient and alternative energy sources should be explored more seriously. Steps like waste heat recovery, large scale provisioning of LPG, biogas, solar, *hamams* may be explored; and
- Solid Waste Mangement should feature as an essential urban function. Zero-waste living is a dream we should work towards.

Group 4, chaired by ***Dr. Tej Pratap*** discussed *Role of State, Academia, Civil Society and Industry*. This group submitted recommendations on the role the State Governments,

Government of India, industry, research institutions and civil society is expected to play to address the challenge of climate change.

Recommendations for the State:

- To evolve an institutional mechanism addressing cross-sectoral issues and concerns as also evolve and implement a strategy to contain and mitigate climate change.
- To ensure balanced and climate sensitive growth within the Himalayan States emphasis at the State and Central Governmental level needs to be laid on evolving climate friendly and an effective alternate public transport means other than just roads such as rail, rope ways etc., development of Hydro Power generation, wisely use natural resource such as wind energy generation etc
- Disseminate its policy decisions on a regular basis amongst all stakeholders, ensure feed back and fine tune and initiate remedial actions on a regular basis.
-

Recommendations for the Academia:

- Academia has to accept greater responsibility in generating verifiable data, sharing this data, as also share knowledge and information about all dimensions of climate change impacts and solutions.
- Ensure creation of an omnibus institutional mechanism to facilitate coordinated informed policy making and convergence of data so as to overcome general lack of contribution of academia in policy making.

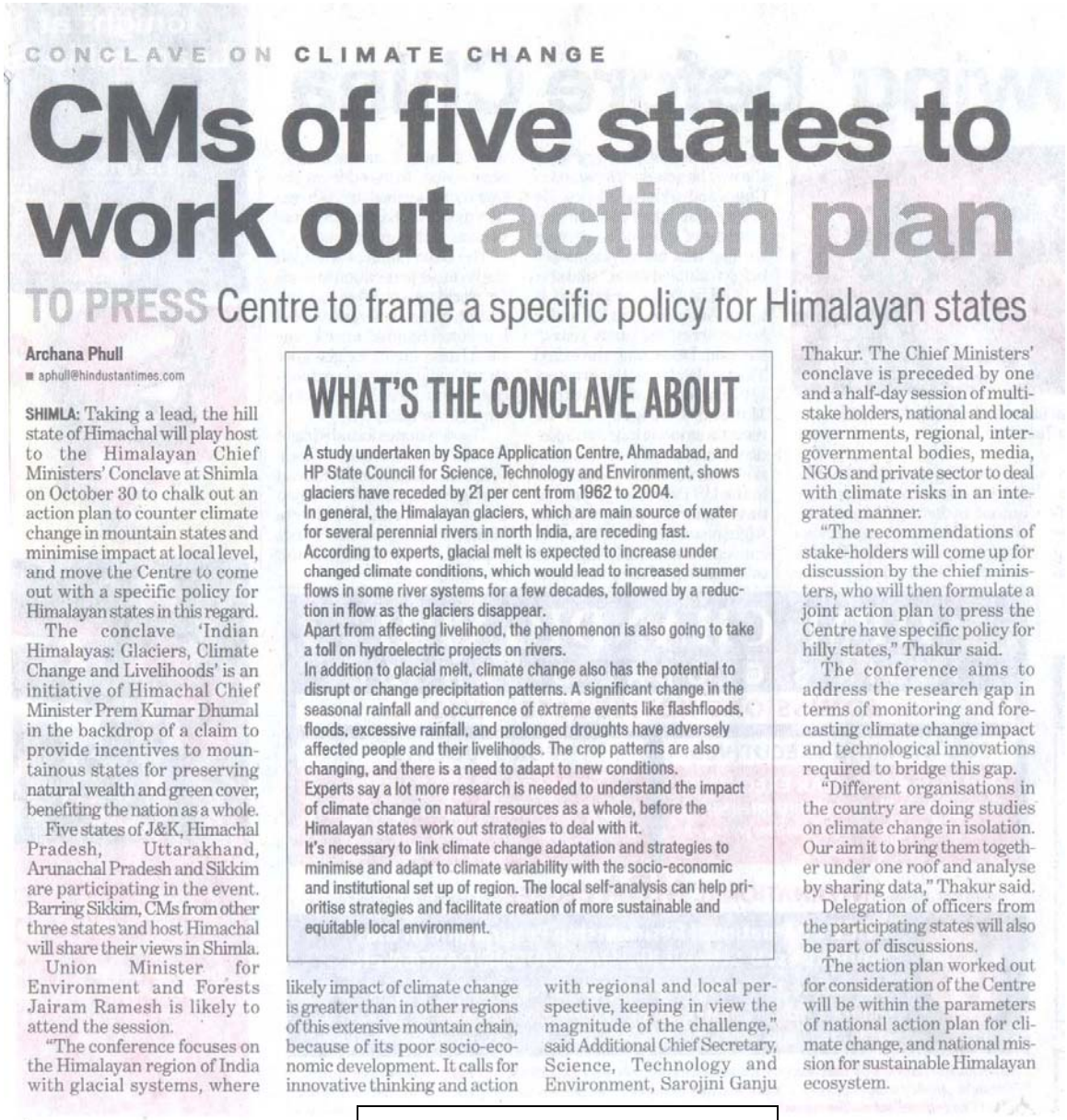
Recommendations for the Civil Society:

- Civil society needs to be more proactively involved in the policy formulation, advocacy and awareness aspects addressing climate change and related issues.
- Civil society needs to be actively encouraged and supported so as to reach local communities and actively involve them in adopting climate change mitigation and adaptation practises.

Recommendations for the Industry:

- Industry has to accept its contribution and role towards climate change issues and consciously progress towards greener technology.
- Industry also needs to share its knowledge, share best practices; support R&D activities towards evolving greener technologies as also adopt them.
- Industry should actively participate in low carbon actions.

Press Coverage:



CONCLAVE ON CLIMATE CHANGE

CMs of five states to work out action plan

TO PRESS Centre to frame a specific policy for Himalayan states

Archana Phull
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SHIMLA: Taking a lead, the hill state of Himachal will play host to the Himalayan Chief Ministers' Conclave at Shimla on October 30 to chalk out an action plan to counter climate change in mountain states and minimise impact at local level, and move the Centre to come out with a specific policy for Himalayan states in this regard.

The conclave 'Indian Himalayas: Glaciers, Climate Change and Livelihoods' is an initiative of Himachal Chief Minister Prem Kumar Dhumal in the backdrop of a claim to provide incentives to mountainous states for preserving natural wealth and green cover, benefiting the nation as a whole.

Five states of J&K, Himachal Pradesh, Uttarakhand, Arunachal Pradesh and Sikkim are participating in the event. Barring Sikkim, CMs from other three states and host Himachal will share their views in Shimla.

Union Minister for Environment and Forests Jairam Ramesh is likely to attend the session.

"The conference focuses on the Himalayan region of India with glacial systems, where likely impact of climate change is greater than in other regions of this extensive mountain chain, because of its poor socio-economic development. It calls for innovative thinking and action with regional and local perspective, keeping in view the magnitude of the challenge," said Additional Chief Secretary, Science, Technology and Environment, Sarojini Ganju Thakur. The Chief Ministers' conclave is preceded by one and a half-day session of multi-stake holders, national and local governments, regional, inter-governmental bodies, media, NGOs and private sector to deal with climate risks in an integrated manner.

"The recommendations of stake-holders will come up for discussion by the chief ministers, who will then formulate a joint action plan to press the Centre have specific policy for hilly states," Thakur said.

The conference aims to address the research gap in terms of monitoring and forecasting climate change impact and technological innovations required to bridge this gap.

"Different organisations in the country are doing studies on climate change in isolation. Our aim it to bring them together under one roof and analyse by sharing data," Thakur said.

Delegation of officers from the participating states will also be part of discussions.

The action plan worked out for consideration of the Centre will be within the parameters of national action plan for climate change, and national mission for sustainable Himalayan ecosystem.

WHAT'S THE CONCLAVE ABOUT

A study undertaken by Space Application Centre, Ahmadabad, and HP State Council for Science, Technology and Environment, shows glaciers have receded by 21 per cent from 1962 to 2004.

In general, the Himalayan glaciers, which are main source of water for several perennial rivers in north India, are receding fast.

According to experts, glacial melt is expected to increase under changed climate conditions, which would lead to increased summer flows in some river systems for a few decades, followed by a reduction in flow as the glaciers disappear.

Apart from affecting livelihood, the phenomenon is also going to take a toll on hydroelectric projects on rivers.

In addition to glacial melt, climate change also has the potential to disrupt or change precipitation patterns. A significant change in the seasonal rainfall and occurrence of extreme events like flashfloods, floods, excessive rainfall, and prolonged droughts have adversely affected people and their livelihoods. The crop patterns are also changing, and there is a need to adapt to new conditions.

Experts say a lot more research is needed to understand the impact of climate change on natural resources as a whole, before the Himalayan states work out strategies to deal with it.

It's necessary to link climate change adaptation and strategies to minimise and adapt to climate variability with the socio-economic and institutional set up of region. The local self-analysis can help prioritise strategies and facilitate creation of more sustainable and equitable local environment.

The Hindustan Times, Chandigarh
Friday, October 28, 2009

CONCLAVE OF CMs OF

Climate change conclave begins

Environmental experts discuss the changing state of the Indian Himalayas and suggest ways to protect its ecosystem

HT Correspondent
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SHIMLA: Chief Secretary Asha Swaroop inaugurated a two-day Himalayan Chief Ministers' Conclave on Indian Himalayas: Glaciers, Climate and Livelihoods here on Thursday.

First of its kind, the conclave is being organised by Department of Environment, Science and Technology, Himachal Pradesh, in collaboration with Lead India Leader in Environment and Development, New Delhi.

In her inaugural address, Swaroop said tha in order to mitigate the impact of climatic change, there was a need to respond to the challenges facing the Himalayas and the country as a whole. The two-day workshop will dwell on various issues pertaining to the present state of Indian Himalayas and find out ways and means to save its eco-system.

The conclusions of this conclave were likely to become part of national process and the dialogue initiated here was expected to be institutionalised in the future as well, said Swaroop. She added that preparation of an Environment Master Plan was underway to identify the nature of vulnerabilities in different locations of the state.

In the opening session, chaired by former Chief Secretary, Uttrakhand, Dr R.S. Tolia, the participants discussed the changing landscape of Indian Himalayas.

Asha Swaroop, Chief Secetary, Himachal Pradesh, inaugurating a two-day conclave on 'Indian Himalayas: Glaciers, Climate Change and Livelihood' in Shimla on Thursday. HT PHOTO

Participating in the discussion, Prof Kapil Kumar from IGNOU said it was high time the real meaning of climate change should be taken to the public. He said the misuse of money in the name of environmental issues should also be checked.

Prof S.I. Hasnain from Energy and Resource Institute (TERI), New Delhi, said the emissions of black carbon from industries and transportation means had left a black carbon layer upon the glaciers and has resulted in their receding.

"This aspect needs to be studied seriously. TERI is also planning to conduct a study to check the effect of carbon emissions upon a particular glacier," he stated.

Andreas Schild, an international expert, said that observed that the common people needed to involved in carrying out further studies in climate change.

The session also witnessed the comments from Dr Manohar Arora from National Institute of Hydrology, Roorkee, Prof S.K. Dass from IIT Delhi and Dr Anil V. Kulkari from Space Application Centre Ahmedabad.

On its first day, the conference also discussed implications of climate change on ecosystems and livelihoods, institutional mechanisms: national and state and how to chart a way from the present conditions by making a strategic action plan for the future.

On its last and second day, besides comments from Chief Ministers of the Himalayan states, the conference would also be attended by Union Minister of State for Environment and Forests (Independent Charge) Jairam Ramesh.

Document, 'Shimla Declaration of Climate Change, would also be released.

The Hindustan Times, Chandigarh
Friday, October 30, 2009

E S

'MORE GLACIERS HAVE SWELLED THAN RECEDED'

Ravinder Vasudeva
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SHIMLA: Terming the global outcry over receding glaciers blown out of proportion, Dr Akhilesh Gupta, adviser in the Indian Department of Science and Technology, argues the chaos is not as serious as the Western would want India to believe.

Gupta, who was in Shimla on Thursday to take part in the Himalayan Chief Minister's Conclave on Himalayas, told the media that recent studies in the Himalayan region prove that only a few glaciers had receded, while many others had swelled in size, especially in Jammu and Kashmir. Gupta said the hue and cry over receding glaciers was not based on facts. "Western countries accuse India of making not much effort to check global warming, while the global criteria of determining climate change puts Indian carbon dioxide emission per capita at about a tenth of the US and much lower than the emission figures in many other countries," he said.

Accepting that there was dearth of appropriate and conclusive data on glaciers, Akhilesh said the Prime Minister in his recent speech on climate change has agreed to set up an institute to study glaciers in Himachal Pradesh, Uttrakhand, Sikkim, Jammu and Kashmir and Arunachal Pradesh.

"Research on glaciers should involved integrated effort of the NGOs, mountaineers and other agencies to reach any conclusion. It's clear we don't have any data and our studies are based on traditional knowledge alone."

On the rapid industrialisation and flood of hydroelectric projects in Himachal, Akhilesh said hill states should re-think their industrial policy and go with a balance between development and environment.

'Cost may escalate, but in the long run, this balance will protect our environment," he said.

Professor Milap Chand Sharma from Jawaharlal Nehru University, said the data on glaciers, so far, was not authentic.

"The current studies on glaciers are misleading. We are comparing the studies carried out through satellite in 2004 with the glaciers specified in 1962 on topo sheets which, I think, are incorrect," he said.

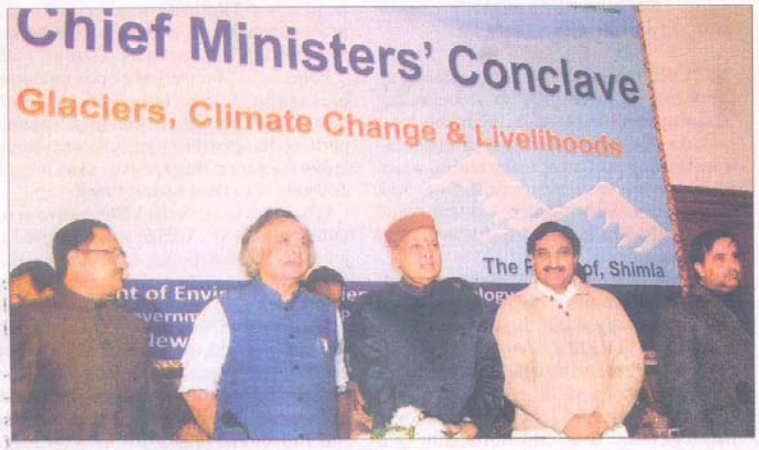
He said the situation of receding glaciers was not very serious. "The issue needs to be studied indeed, but the chaos synchronised by the western countries is baseless," said Sharma.

The Hindustan Times, Chandigarh
Friday, October 30, 2009

The Indian EXPRESS
www.indianexpress.com

Shimla Declaration t

CLIMATE CHANGE CONCLAVE ▮ Union Minister rejects demand for separate mountain development ministry



Chief Minister Prem Kumar Dhumal and Union Minister for Forest and Environment Jairam Ramesh at the Chief Ministers' Conclave on Climate Change in Shimla on Friday. LALIT KUMAR

EXPRESS NEWS SERVICE
SHIMLA, OCTOBER 30

IN A bid to strike regional cooperation among Himalayan states on environment and climate change issues, the two-day chief ministers' conclave, which concluded here on Friday, adopted a 12-point agenda for action—Shimla Declaration—and announced the setting up of a Himlayan Sustainable Development Forum.

Union Minister for Environment Jairam Ramesh, who spoke at the conclave, endorsed the move and nominated Uttarakhand-based G B Pant Institute of Himalayan Environment and Development as the nodal agency for extending all technical support to the Forum.

Among those present at the time of the Shimla Declaration were Uttarakhand Chief Minister Ramesh Pokhriyal Nishank, Himachal Chief Minister Prem Kumar Dhumal, Jammu and Kashmir Forest Minister Altaf Ahmed and noted environmentalist Sunita Narain, beside over 200 experts, academicians and other participants.

The declaration was finalised after two days of working sessions and deliberations on issues of climate change, livelihood and global warming, affecting the local economy. Chief Minister Prem Kumar Dhumal, who read out the declaration, drew the attention of the Centre towards the financial support needed by the states.

Among some of the key recommendations adopted at the conclave was payment for ecosystem services to compensate states that were protecting forests and ecosystems. The conclave expressed concern over the impact of climate change on agriculture and horticulture and said traditional knowledge of local communities need to be supported. The issue of rise in the number of tourists in eco-sensitive areas was also raised and steps were suggested to decrease interference in the environment. Setting up of state councils for climate change to ensure implementation of steps proposed in the declaration was also recommended.

Noting that climatic changes and receding Himalayan glaciers threatened the flow of rivers, states were asked to evolve methods to manage resources for sustainable development. The conclave recommended the building of green roads and exploring eco-friendly modes of transport like ropeways and railways. It also suggested that the Centre provide incentives for the promotion of green technologies in households. Promotion of green industry and creation of green jobs for the youth were other recommendations.

The Union environment minister, in his concluding remarks, assured that some of the recommendations, where intervention of the Centre was required, would be implemented immediately.

The Indian Express, Chandigarh
Saturday, October 31, 2009

to promote regional cooperation

Ramesh favours 'green bonus' for Himalayan states

ASHWANI SHARMA
SHIMLA, OCTOBER 30

ACKNOWLEDGING Himalayan states' demand for special incentives to preserve their forest cover and ecology, Union Minister for Environment and Forests Jairam Ramesh strongly favoured grant of "green bonus" to such states.

The states will start reaping the benefits of such a step from next year when the XIII Finance Commission submits its report. "I have discussed the issue with the chairman of Finance Commission for giving these benefits to the states having preserved their green cover," he declared at the CMs' Conclave on Climate Change in Shimla on Friday.

The minister rejected the demand for a separate ministry for Himalayan states or mountain development. "This will create more problems than solving the existing ones," he said.

The minister, however, accepted a major demand raised by Himachal Pradesh to declare all forests 4,000 metres above the snowline as non-forest areas. "The new forest report coming up in the next few weeks will not include those areas, where no trees can be planted, as forest cover," said Ramesh.

About the 'green bonus', he said: "I have already spoken to Prime Minister Manmohan Singh and taken up the issue with the Planning Commission to give some incentive to the states. We may start with a small amount and can expand it later."

Speaking to the media later, the minister said: "Green bonus is similar to the demand raised by the chief ministers to reimburse the cost incurred on environmental services. My concept is that the states conserving ecology by protecting their green wealth should be compensated." It would be, however, up to the states to pass on this incentive to the stakeholders involved in the preservation of the green cover and ecology at local levels, he added.

The minister also spoke on the issue of cement industry posing threat to the ecology and admitted the need for an environment assessment of the areas where such plants are located or proposed. He said an independent National Environment Protection Authority is proposed at the national level, which will monitor implementation of the guidelines given to the promoters of hydel projects to protect the environment. "In the last 20 years, the guidelines have been violated as there was no one to monitor them," said the minister.

Speaking on forestry issues, the minister said the Indian forestry needed to change its mindset of considering people as enemies of forests, adding that the ministry would shortly take measures to set this right.

The minister said there should be a limit to hydroelectric projects on rivers. "The projects can not be allotted based on the environment impact assessment of one project. It will wreak havoc with the ecology. It has to be a comprehensive assessment of the entire river basin," he said.

Ramesh said he had already issued directions to have an assessment of the entire river basin of Tiesta, adding that the exercise would be carried out on other rivers too.

He said the Centre proposed to declare 130-kilometre stretch of the Ganga from Gaumukh to Rishikesh as eco-sensitive zone, but the matter had to be sorted out in consultation with the Uttarakhand government.

The Indian Express, Chandigarh
Saturday, October 31, 2009

'Govts responsible for climate change'

NGO Drafts Open Letter For Chief Ministers Of Hill States To Show Them The Real Picture

TIMES NEWS NETWORK

Shimla: Even as chief ministers of Himalayan states met here to discuss ways to combat climate change, the Himalayan Peoples Enclave, organized by Him Niti Abhiyan, an NGO, a couple of kms away, was of the view that the chief ministers would only demand increased financial allocation for their states for preserving the green cover, though their own policies on the ground were critically contributing to undermining the green cover.

The Simla Declaration, as the open letter drafted by the NGO has been called, which a delegation hopes to give to the chief ministers of hill states present, claimed that the large scale exploitation of hydro power was contributing to climate change through deforestation and methane emission and raising ambient temperatures due to drying up of river beds for long stretches.

The effects of climate change, in the shape of reduced availability of stream and river flow will drastically reduce essential water for irrigation, when mini hydel plants on these very rivers and streams come up, which may lead to violent conflicts in the coming years, it warned.

The letter states that in Himachal, three cement industries were already operational and another would start production soon, which would adversely impact local water supply and agriculture, a fact admitted by government's own reports. A cement mine and processing plant at Shikridhar, is proposed to be situated between the Dhauladhar and Pir Panjal, two high Himalayan mountain ranges, it said.

The letter mentioned that the purely commercial approach to forestry at the cost of peoples livelihood concerns had resulted in increased incidence of forest fires and crop damage. This year alone, the Himalayan states had witnessed thousands of forest fires affecting 50,000 hectares of forests, which not only caused loss of livelihoods but also increased temperatures.

Industrial development, be it hydro projects, roads or cement industries, has resulted in massive diversion of precious forest wealth in the Himalayan states. Himachal has already diverted 8,173 hectares of forest land and got approval for diverting another 1,278 hectares, which will affect over six lakh standing trees. The proposed Renuka dam would destroy more than 14 lakh trees over 1,000 hectares of dense forest, it pointed out.

The letter mentions that chief ministers of Himalayan states cannot escape responsibility for promoting the very factors that contribute to aggravating climate change and demanded an urgent study of its cumulative impact on local ecosystems, traditional livelihoods, health and climate conditions.

Besides, it felt that till such studies are completed and future strategy finalized, there should be a complete moratorium on new industrial projects known to cause adverse impacts. Alternative sources of power like small geothermal, solar and wind should studied for finalizing a future strategy and efforts should be made to promote community control and management of natural and new forests through user group level institutions that are based on democratic principles and socio-economic equity, the letter demanded.

Himachal Pradesh chief minister Prem Kumar Dhumal along with his Uttarakhand counterpart Ramesh Pokhriyal and Union minister for forest and environment Jairam Ramesh participating in the Himalayan chief ministers' conclave in Shimla on Friday

Adverse effect

Kulbhushan Upmanyu, president of Him Niti Abhiyan, an NGO, was the only person allowed into the venue where the Himalayan chief minister's conclave was being held. He was among the about 300 persons who had participated in the Himalayan Peoples Conclave and walked in a procession to Peterhoff to hand over an open letter listing their demands to Union minister of state for environment and forests, Jairam Ramesh and chief ministers of Himachal Pradesh and Uttarakhand later in the evening. The occasion was also utilized by three NGOs of Kinnaur district to give documentary evidence in the form of photographs and affidavits by people of the region to Jairam Ramesh to appraise him of the environmental degradation caused in the tribal district by hydel projects. The debris of excavation and other works were being dumped into Sutlej river, while natural water sources in the immediate vicinity of the projects were drying up, they said.

The Times of India, New Delhi, Chandigarh
Saturday, October 31, 2009

ऐलान | चीफ मीनिस्टर्स कनक्लेव में जयराम रमेश की घोषणा

हिमालयन राज्यों को मिलेगा ग्रीन बोनस

■ अगले वित्त वर्ष से देने पर केंद्र कर रहा विचार
■ वित्त आयोग, योजना आयोग से की सिफारिश

कनक्लेव के बाद जारी घोषणापत्र पर गहन मंथन कर इसके अनुसार कदम उठाए जाएंगे। -जयराम रमेश, केंद्रीय पर्यावरण एवं वन मंत्री

शिमला। केंद्रीय पर्यावरण एवं वन राज्य मंत्री जयराम रमेश ने कहा है कि हिमालयन राज्यों को पर्यावरण संरक्षण की एवज में ग्रीन डिविडेंड या बोनस दिया जाएगा। केंद्र सरकार अगले वित्तीय वर्ष से ग्रीन बोनस देने पर विचार कर रही है। इसकी स्वीकृति के लिए वित्त आयोग और योजना आयोग से सिफारिश की गई है।

4000 मीटर से अधिक ऊंचाई वाले बर्फ से ढके क्षेत्र को वन दायरे से बाहर रखा गया है। शुक्रवार को शिमला में हिमनद, जलवायु परिवर्तन, जीविकोपार्जन पर हिमालयन चीफ मीनिस्टर्स कनक्लेव में जयराम रमेश ने कहा कि पन बिजली परियोजनाओं को लेकर पर्यावरण आकलन एक प्रोजेक्ट नहीं, पूरे बेसिन पर पड़ने वाले प्रभाव के आधार पर किया जाएगा। पर्यावरण एवं फारेस्ट क्लीयरेंस की शर्तों के उल्लंघन पर नजर रखने के लिए राष्ट्रीय स्तर पर इनवायरमेंट मानीटरिंग अथारिटी का गठन किया जाएगा। हिमालयन इकोलॉजी को बचाने के लिए अन्य देशों का भी सहयोग लिया जाएगा। प्रधानमंत्री ने भी इस संदर्भ में क्षेत्रीय सहयोग बढ़ाने पर जोर दिया है। सुरक्षा के पहलु के मद्देनजर पूरे हिमालयन क्षेत्र के देश एकजुट होकर काम करेंगे। उन्होंने कहा कि हिमालय के ग्लेशियरों की वास्तविक स्थिति को जानने के लिए देहरादून में विश्व स्तर का इंस्टीट्यूट आफ ग्लेशियोलॉजी स्थापित किया जाएगा। नेशनल नेटवर्क बनाकर भी तीन साल के भीतर जमीनी स्तर पर आंकड़े जुटाए जाएंगे। शोध के लिए नए लोगों को जोड़ा जाएगा। ग्लेशियरों की रिपोर्ट को लेकर अन्य देशों पर भरोसा नहीं किया जा सकता। जयराम रमेश ने कहा कि पर्यावरण संरक्षण को लेकर पश्चिमी मध्य एवं पूर्वी हिमालय के राज्यों को भी एकजुट होकर प्रयास करने चाहिए। उन्होंने कहा कि पूरे बेसिन का पर्यावरण आकलन होने तक उत्तरी तीसा में और बिजली प्रोजेक्टों पर रोक लगा दी गई है। अन्य क्षेत्रों में भी ऐसे निर्णय लिए जा सकते हैं। हिमालयी राज्यों के लिए अलग मंत्रालय के लिए वह फिलहाल सहमत नहीं हैं। उन्होंने कहा कि शिमला प्रस्ताव पर गहन विचार-विमर्श कर इसके अनुसार जल्द कदम उठाए जाएंगे। पर्यावरण को बचाने के लिए राजनीति से ऊपर उठकर कठोर कदम उठाने की आवश्यकता है। उन्होंने फोरम में उत्तर-पूर्वी राज्यों को भी इसमें शामिल करने की सलाह है।

...संबंधित खबरें पेज 16 पर

पहाड़ी राज्यों का विशेष फंड हो : धूमल

शिमला। मुख्यमंत्री प्रो प्रेम कुमार धूमल ने कहा है कि हिमालयी राज्यों के विकास के लिए एक विशेष फंड की आवश्यकता है। राज्यों को मिलने वाली सहायता पर्यावरणीय मापदंडों के साथ जोड़ी जाए। उन्होंने कहा कि पर्यावरण पर रीजनल सहयोग से सतलुज जैसी बाढ़ की स्थिति में समय पर ऐहतियाती कदम उठाए जा सकेंगे। हिमालयन चीफ मिनिस्टर्स कनक्लेव में धूमल ने कहा कि हिमालयी राज्यों के मुख्यमंत्री हिमालय विकास फोरम के गठन के लिए आगे आएं। वैश्विक और क्षेत्रीय मौसम को नियंत्रित करने में हिमालयी क्षेत्रों में विशेष भूमिका है। धूमल ने कहा कि राज्य में पर्यावरण मास्टर योजना पर कार्य चल रहा है। इसमें पर्यावरण संरक्षण को लेकर विशेष दिशा निर्देश समाहित किए जाएंगे। प्रदेश के हरे पेड़ों को काटने, पालीथिन के इस्तेमाल पर रोक है। इसके अलावा पर्यावरण संरक्षण के लिए समय-समय पर जन सहयोग से कई योजनाएं शुरू की गई हैं। उपभोक्ताओं को बिजली बचत के लिए मुफ्त सीएफएल भी बांटे हैं। इस अवसर पर हिमालय क्षेत्र के जीवों और वनस्पति संरक्षण के लिए सुझाव भी दिए गए।

The Amar Ojala, Chandigarh
Saturday, October 31, 2009

अमर उजाला चंडीगढ़, शनिवार, 31 अक्तूबर, 2009

हर साल होगा चीफ मिनिस्टर्स कनक्लेव

● अमर उजाला ब्यूरो

शिमला। हिमालयी राज्य पर्यावरण संरक्षण पर अब हर साल सम्मेलन करेंगे। अगला चीफ मिनिस्टर कनक्लेव उत्तराखंड के देहरादून में होगा। हर राज्य में मुख्यमंत्री कार्यालय के अधीन एक हिमालयन सतत विकास फोरम बनेगा।

राज्य स्तर पर पर्यावरण परिवर्तन पर एक काउंसिल बनेगी, जो फोरम के सहयोग समन्वय से फैसलों को लागू करवाएगी। शिमला में दो दिन तक चले सम्मेलन के बाद जारी संयुक्त घोषणा पत्र में यह सहमति बनी है। केंद्रीय पर्यावरण मंत्री जयराम रमेश ने बताया कि इन सिफारिशों के आधार पर राष्ट्रीय स्तर पर सुधार के कदम उठाए जाएंगे। घोषणा पत्र में यह भी कहा गया कि राज्य वन विस्तार और पर्यावरण संरक्षण के लिए 13वें वित्तायोग से और धन की मांग करेंगे।

कनक्लेव में कहा गया कि चूंकि हिमालयी राज्य देश का वाटरशेड है, इसलिए रेलवे और रोपवे जैसे परिवहन साधनों और पर्यावरण मित्र उद्योगों को बढ़ावा दिया जाए। कनक्लेव में हिमाचल के मुख्यमंत्री प्रेम कुमार धूमल ने इस दिशा में राज्य सरकार द्वारा उठाए गए कदमों की जानकारी दी। उन्होंने अटल बिजली बचत योजना और प्लास्टिक पर बैन का खासतौर पर जिक्र किया।

आयोजन

सतत विकास फोरम बनेगा, अगली बैठक देहरादून में

तन विस्तार के लिए 13वें वित्तायोग से और धन मांगेंगे

कनक्लेव में मुख्यमंत्री प्रे. प्रेम कुमार धूमल, केंद्रीय पर्यावरण मंत्री जयराम रमेश के अलावा उत्तराखंड के मुख्यमंत्री डा. रमेश पोखरियाल, जम्मू-कश्मीर के पर्यावरण मंत्री अलताफ अहमद, हिमाचल के वन मंत्री जय प्रकाश नड्डा, केंद्रीय विज्ञान एवं पर्यावरण परिषद की निदेशक डा. सुनीता नारायणन, विश्व बैंक प्रतिनिधि गजानन पदमनाधन आदि ने अपने विचार रखे।

हिमालय बचाने को खाका बनाएं : अहमद

शिमला। पर्यावरण एवं वन मंत्री जम्मू-कश्मीर मियां अलताफ अहमद ने कहा कि हिमालय को बचाने के लिए सभी पहाड़ी राज्य एकजुट होकर खाका तैयार करें। इसमें केंद्र को पहाड़ी राज्यों की विशेष मदद करनी चाहिए। जिम्मेदारी तय कर एक एक्शन प्लान और रोड मैप बनना चाहिए। अहमद ने कहा कि पर्वतीय प्रदेशों के लिए पर्यटन, पन बिजली, कृषि और बागवानी प्रमुख है।

कनक्लेव में सियासत के तीर!

शिमला। पर्यावरण पर हिमालयन चीफ मिनिस्टर्स कनक्लेव में सियासत के भी खूब 'तीर' चले। केंद्रीय मंत्री जयराम रमेश जहां भाजपा शासित प्रदेशों के मुख्यमंत्रियों पर निशाना साधने से नहीं चूके, वहीं धूमल और निशंक ने भी दिया हर तंज का जवाब। हिमनद, जलवायु परिवर्तन और जीविकोपार्जन पर हुए इस सम्मेलन में पहाड़ का दर्द भी छलका और अप्रत्यक्ष तौर पर केंद्र पर लगे डिस्क्राइड एंड रूल के आरोप। गौ रक्षा की बात भी किसी बहाने से उठी, तो मजहबी यात्राओं पर उठे सवाल। बातों ही बातों में एक दूसरे को नसीहत देने का भी कोई मौका भी नहीं चूके नेता। बीच में सौहार्द का गुलाल उड़ा, उहाकों में बदला पर्यावरण पर यह गंभीर चिंतन।

पर्यावरण पर नेशनल एक्शन प्लान की 'जीमेदी' का जिक्र करते हुए केंद्रीय पर्यावरण एवं वन राज्य मंत्री जयराम रमेश बोले पर्वतीय क्षेत्रों में सी (महिलाएं) लोग ही काम करते हैं, 'ही' यानी तो राजनीति करते हैं या कविता लिख हर बात की जिम्मेदारी केंद्र पर छोड़ देते हैं। निशाने पर उत्तराखंड के मुख्यमंत्री डा निशंक थे। मुख्यमंत्री धूमल जब घोषणा पत्र जारी करने उठे तो इसके जवाब में उन्होंने कहा, जयराम रमेश जी, ऐसा कहीं दिल्ली में मत कहना। सोनिया गांधी की ओर इशारा करते हुए उन्होंने कहा कि दिल्ली में 'सी' सब करती हैं। पहाड़ी राज्य में बेलाशोध निर्माण पर उंगली उठाते हुए जयराम रमेश बोले, केंद्र से मिले धन पर केवल मास्टर प्लान ही न बनें। इस पर धूमल बोले, पहाड़ का आदमी मेहनती और ईमानदार है, आप जितना पैसा देंगे, उससे कहीं ज्यादा काम कर दिखाएंगे।

डा. निशंक ने पर्वतीय राज्यों के लिए अलग मंत्रालय की बात की तो केंद्रीय मंत्री बोले आपको ही सरकार के समय तय हुई मंत्रियों की लिमिट। उन्होंने इसे प्रदूषण से जोड़ा। नार्थ ईस्ट और नार्थ वेस्ट राज्यों को एकजुट करने की बात पर मुख्यमंत्री धूमल ने कहा कि इसमें केंद्र की ओर से कई बार डिस्क्राइड एंड रूल का आभास होता है। विशेष श्रेणी राज्य होने के बावजूद हमारे साथ पैकेज के मामले में भेदभाव होता है।

प्लास्टिक मुक्त किया जाए हिमालय : निशंक

शिमला। उत्तराखंड के मुख्यमंत्री रमेश पोखरियाल 'निशंक' ने कहा है कि हिमालय को प्लास्टिक मुक्त किया जाए। इसके लिए राष्ट्रीय स्तर पर अभियान शुरू होना चाहिए। हिमालय भारत का माथा है, यदि यह ही सूखक पड़ गया, तो पूरा देश मुरझा जाएगा। शिमला में हिमनद, जलवायु परिवर्तन, जीविकोपार्जन पर हिमालय चीफ मीनिस्टर्स कनक्लेव को संबोधित करते हुए उन्होंने कहा कि हिमालय में हल्की सी आहट से दुनिया में हलचल होती है। पर्यावरण के संरक्षकों को पर्याप्त सुविधाएं नहीं मिल रही हैं। पहाड़ी राज्यों के लिए अन्य प्रांतों से अलग वन और कृषि नीति होनी चाहिए। उन्होंने कहा कि हिमालय न केवल पर्यावरण, जल-जंगल के कारण देश में महत्वपूर्ण है, बल्कि राष्ट्रीय अंतरराष्ट्रीय संस्कृति का बड़ा केंद्र रहा है।

NURSING

The Amar Ojala, Chandigarh
Saturday, October 31, 2009

THE TRIBUNE, CHANDIGARH, SATURDAY, OCTOBER 31, 2009

Himachal Pradesh

CMs' conclave forms Himalayan sustainable forum

TRIBUNE NEWS SERVICE

SHIMLA, OCTOBER 30

Recognising the seriousness of the threat posed by climate change to the country in general and Himalayan states in particular, the Chief Ministers' conclave agreed to foster cooperation on sustainable development by establishing the Himalayan Sustainable Development Forum.

The Chief Ministers agreed to meet annually to monitor the implementation of the action plan and hold biannual meetings of officials, preferably at the chief secretary-level for the purpose. The forum will be hosted by partner states on a rotational basis and GB Pant Institute of Himalayan Environment and Development, Uttarakhand, will provide technical and secretarial support.

The conclave noted that some states had formed state-level councils for climate change and other states were in the process of doing so. These councils were located in the Chief Minister's office and function as conveners for the forum. They play a catalytic role in tracking research being conducted by different departments and institutions and work as an information and knowledge pool to foster exchange of data related to climate change, good practices and policy initiatives across the Himalayan states.

Prem Kumar Dhumal, Chief Minister, Himachal and Jairam Ramesh, Union Minister for Forest and Environment participating in the Himalayan Chief Ministers' Conclave at Shimla on Friday.
Tribune photo: Amit Bhardwaj

It agreed to ensure that financial incentives were provided for natural resources, which captured the cost of ecosystem services, carbon sequestration as well as land and livelihood opportunities. They prioritised the need for the 13th Finance Commission and desired that it should provide adequate and ample resources for sustainable development.

It voiced concern about the impact of climate change on glaciers, which could lead to changes in hydrology of the critical and life-giving rivers and the need for evolving methods for comprehensive impacts of projects at a basin-level. The states agreed to set up a joint working group to look into these urgent issues and to recommend actions.

Regarding growing urbanisation, they agreed that the Himalayan states need for look for alternative models for urban growth, keeping in mind the specific conditions and constraints of the region and decided to share best practices that are being tried in the different states.

They agreed to explore alternative forms of mass transit, which were eco-friendly like railways and ropeways in view of destruction caused by roads. The need for regulating tourism was underlined as unbridled tourism or pilgrimage could destroy the pristine ecology, which attracted visitors.

The Chief Ministers of Himachal Pradesh and Uttarakhand, the Union Minister of State (Independent Charge) for Environment and Forests, the Minister for Environment and Forests, Jammu and Kashmir, and senior officials representing the states of Sikkim and Arunachal Pradesh attended the conclave.

The Tribune, Chandigarh
Saturday, October 31, 2009

SATURDAY, OCTOBER 31, 2009

hindustantin

CMs' CONCLAVE ON CLIMATE C

States set up forum for sustainable development

SHIMLA DECLARATION Compensation for states which have protected forest cover and fragile ecosystems

Archana Phull
aphull@hindustantimes.com

SHIMLA: The two-day Himalayan conclave of Chief Ministers on climate change ended on Friday in Shimla with a 12-point joint action plan called "Shimla declaration", under which a Himalyan Sustainable Development Forum was set up.

Union minister of State for Environment Jairam Ramesh endorsed the move and said Uttarakhand-based G.B. Pant Institute of Himalayan Environment and Development would extend secretariat support to the forum.

Ramesh said the efforts should be extended to trans-Himalayan region for preservation of ecology.

The Shimla declaration comes after two days of brainstorming by experts on climate change and its effects on livelihood.

Chief minister of Uttarakhand Dr Ramesh Pokharyal "Nishank", Himachal Pradesh CM Prem Kumar Dhumal, Jammu and Kashmir Minister of Forest Altaf Ahmed, environment activist Sunita Narain and 200 experts ,academicians and stakeholders attended the conference.

Dhumal read out the Shimla declaration and highlighted the states' need for support and financial backing from the Centre.

Himachal Pradesh Chief Minister Prem Kumar Dhumal (second from right), Union Minister of State for Forest and Environment Jairam Ramesh and Uttarakhand Chief Minister Dr Ramesh Pokhriyal during the conclave of Himalayan Chief Ministers on climate change in Shimla on Friday. SANDEEP SAHDEV

Some of the key recommendations adopted at the conclave related to payment for ecosystem services. Sunita Narain has already submitted a plea to the Planning Commission to seek compensation for the states which have protected the forest cover and ecosystems.

The delegates were concerned over the impact of the climate change on agriculture and horticulture crops and called for supporting traditional knowledge built on diversity and innovation.

They called for curtailing tourist influx to the eco-sensitive areas and adopting polices not in conflict with environment.

The delegates called for setting up state councils on climate change and catalysing research for policy action. They claimed the Himalayas were the nation's watersheds and environment management was vital where hydroelectric projects were located.

Climate change and receding glaciers are threatening the flow of water in the rivers. The states are seeking solutions for sustainable development. The transport sector has also led to pollution and climate change, so the delegates recommended laying of green roads and exploring alternative and eco-friendly means of transport, like ropeways and railways.

The CMs urged the Centre to come out with incentives for promoting green technologies in the household and industrial sectors and creating green jobs for the young people.

The Union minister, in his concluding remarks, suggested that the recommendations would be implemented soon.

FOREST COVER UP: CM

Himachal Pradesh has prepared an Environment Master Plan to issue sector-specific guidelines for environment protection, Chief Minister Prem Kumar Dhumal said at the climate-change conclave on Friday

He said the ban on felling green trees has increased the forest cover and the Mid Himalayan Watershed Project had been instrumental in harnessing revenues through carbon credits for the Panchayats and local communities.

He said the state government had involved people at all levels to safeguard the environment in every development process.

Chief Minister of Uttarakhand Ramesh Pokharyal "Nishank" said: "Uttarakhand promotes eco-tourism, Ayurveda and health tourism. The Centre should apply different parameters to determine development requirements of different states.

"Of the 9,000 glaciers in the Himalayas, 1,439 are in Uttarakhand and releasing about 500 cubic km of fresh water. Global warming was melting down the Himalayan glaciers and there's no let up in emission of greenhouse gases.

He said Uttarakhand had 65 per cent of its area under forest cover being affected by global warming and many of its rare herbs were getting extinct.

Mian Altaf Ahmed, Minister for Environment and Forests, Jammu and Kashmir, expressed concern over a similar situation affecting horticulture in Jammu and Kashmir. Minister for Forest, Science and Technology J.P. Nadda was present.

PARAMETERS BEING CHANGED

Union Minister of State for Environment and Forests Jairam Ramesh said at the climate-change conclave on Friday that the Union Government planned to exclude snow-covered areas above 4,000 m from the definition of forestland.

He said this would benefit all 12 Himalayan states and a population of 6 crore in 15 per cent of India's geographical area. Director, Centre for Science and Environment, New Delhi, Sunita Narain, said environment was new global science which every individual should learn.

The Hindustan Times, Chandigarh
Saturday, October 31, 2009

'Situation about climate change not as alarming'

PRATIBHA CHAUHAN
TRIBUNE NEWS SERVICE

SHIMLA, OCTOBER 29

While asserting that the situation with respect to glacier melt and climate change was not as alarming as being projected by the western world, Dr Akhilesh Gupta, Adviser, Department of Science and Technology, today said India would not be bullied by dictates of the western world in achieving high development index without exceeding the global emission levels.

"There is no way that India will succumb to pressure as out per capita emissions are almost one 10th of the USA and we will ensure that we achieve better human index levels and at the same time keep our emissions less," he said. He is here to attend the two-day Himalayan Chief Minister's Conclave on "Indian Himalayas: Glaciers, Climate Change and Livelihoods."

Gupta who is also the coordinator of climate change programmes said there was need for coordinated response both from the Centre as well as the Himalayan states so that there was periodical dialogue between stakeholders and annual reports on eco-system could be prepared. He said the Centre was considering setting up of an institute for studying glaciers in the five states of Jammu and Kashmir, Himachal Pradesh, Uttrakhand, Sikkim and Arunachal Pradesh.

Reiterating the need for integrated research and studies on climate change and related issues like snow and glacial hydrology, he said concerted action needed to be taken to achieve sustainable and inclusive development. "It is high time that we strike a balance between development and conservation as there is no scope for further delay," he maintained.

He said post-Bali declaration India had proved beyond that it had knowledge at par with the western world. "The panic button pressed by developed world has to be taken very seriously by countries like the Maldives and Bangladesh, as almost 17 per cent of the country would be under water if the present trends continue," he said.

Earlier inaugurating the conclave, Himachal Chief Secretary Asha Swaroop said there was need to focus attention on the critical issue of sustainable development of the Indian Himalayas.

The two-day workshop will dwell on various issues pertaining to the present state of Indian Himalayas and find out ways and means to preserve and save its eco-system.

The Tribune, Chandigarh
Friday, October 30, 2009

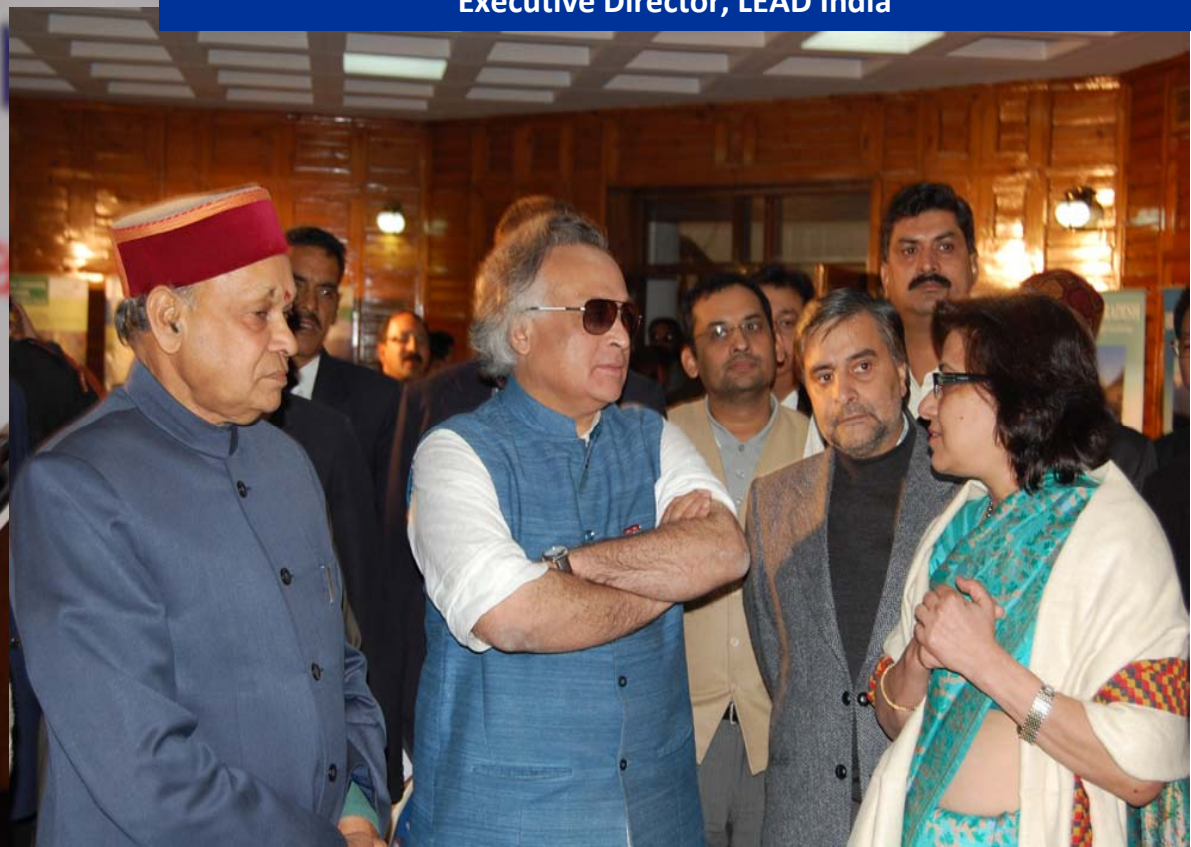
Chief Secretary and Additional Chief Secretary
Government of Himachal Pradesh


malayas: Glaciers, Climate Change
2009


lead
PERCEPTIONS OF APPLE GROWERS IN KULLU
Kullu valley is famous for its apples, but its apple production has declined after the peak production year of 1988-1989. It is a serious problem because the rise in apple cultivation from about 600 ha in 1960-61 to about 1100 000 ha in 1995-96 was considered as one of the success stories in Mountain development. Apple cultivation is the main source of income of about 35,000 families.
Apple cultivators perceive that over the years (i) the amount of snowfall has decreased, and (ii) snowfall occurs late. They relate this primarily to climate change and hold it responsible for decrease in apple production.
Experience shows that adaptation to climate change in the case of poor people can be very difficult because of the costs and efforts involved. The apple cultivation requires a massive start up investment.


VIP LH A-B CONFERENCE HALL

Chief Minister, Government of Himachal Pradesh,
Minister of Environment and Forests, Government of India and
Executive Director, LEAD India



Minister of State for Environment and Forests, Government of India, Chief Ministers of Government of Himachal Pradesh and Uttarakhand