

**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 13<sup>th</sup> 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 to 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.

## **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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