

## 1ST TERI-KAS ENVIRONMENTAL GOVERNANCE DIALOGUE

Environmental Governance in the Context of Sustainable Development in India

July 29-31, 2012  
Indian Institute of Advanced Study, Shimla

# THE CASE OF MOUNTAIN ECOSYSTEMS



Konrad  
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50 YEARS OF WORLDWIDE COOPERATION

# Dialogues on Environmental Governance in the Context of Sustainable Development

The year 2012 marks the completion of 20 years of the United Nations Conference on Sustainable Development held at Rio in 1992. In these 20 years, sustainable development has, as a concept, come to rest upon the three mutually reinforcing pillars of economic growth, environmental protection and social equality. Out of these, environmental governance issues are increasingly coming to the forefront of socio-economic discussions and the developmental context.

Environmental governance has come to be understood as interventions aiming at changes in environment-related incentives, knowledge, institutions, decision-making and behaviour. It refers to regulatory processes, mechanisms and organisations through which different stakeholders influence environmental actions and outcomes. These stakeholders include the government, businesses, communities and NGOs. The two themes of the Rio+20 Conference—a green economy in the context of sustainable development and poverty eradication and the institutional framework for sustainable development—are pertinent for environmental governance, especially in a decentralised context that would promote greater policy coherence and coordination across levels of government, across sectors, actors and institutions contributing to the action on sustainable development.

**Environmental governance has become a matter of increasing concern and engagement at the global, national and local levels**

Environmental governance, as so understood, has become a matter of increasing concern and engagement at the global, national and local levels. Ecosystem approaches are particularly well placed to address environmental governance issues as they enable more careful assessments, information gathering, planning and action at multiple levels. In such approaches, 'ecosystems' may be defined relative to the objectives of the study—for example, a watershed or a river basin or an agro-ecosystem or an urban subdivision.

The series of 'Dialogues on Environmental Governance in the Context of Sustainable Development', being organised jointly by The Energy and Resources Institute (TERI) and Konrad Adenauer Stiftung (KAS), utilise this ecosystem approach to capture the diversity of stakeholder opinions using a multi-stakeholder approach and increasing participation of major groups in governance mechanisms for sustainable development. Particularly, these stakeholder dialogues have a role to play in:

- identifying and engaging with multiple viewpoints and outcomes;
- formulating and observing norms/rules for sustainability; and
- Embracing the concept of 'knowledge' as an enabling factor for 'science' in environmental policy-making and regimes.

The first in the series of these TERI-KAS Dialogues on Environmental Governance focused on the Indian Himalayan region. It was organised in collaboration with the Indian Institute of Advance Study (IIAS) from July 29-31, 2012, at Shimla.

## Himalayan Context

Extending approximately 3,000 km and ranging from heights of 100 m to more than 8,000 m above sea level, the Himalayas is the youngest mountain system in the world. Its physical boundaries extend from Afghanistan in the west to Myanmar in the east. The Indian Himalayan Region (IHR) covers 10 Indian states entirely—Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura and Meghalaya—and two more states partially—Assam and West Bengal. The IHR also covers the countries of Nepal and Bhutan and is home to approximately 74 million people of diverse cultures. Ecologically, it has been identified as one of the 34 biodiversity hotspots and the region contains 60 eco-regions, 330 important bird areas, 53 important plant areas and a large number of wetlands. The region is known as the 'water tower of Asia' and is the source of 10 major river systems supporting 1.4 billion people. The region has been strategically important to the Indian subcontinent not only for its ecological resources/services but also because of its geographical characteristics that have defined the climate of the region as well as provided comprehensive security to the people of the country since centuries.

The mountain region and mountain societies can be characterised by certain specificities that distinguish them from other ecosystems

and regions in the country and these are inaccessibility, marginality, diversity, biological niches and human adaptation mechanisms (Jodha, 1992).

The dialogue touched upon various issues of the Indian Himalayan region pertaining to natural resource management and sustainable development; environmental policy and governance framework; and the formulation of a Himalaya-specific agenda. The concerns emphasised during the dialogue are all interwoven with each other and also with numerous other issues that remain implicit or underemphasised. The partitioning of the issues perhaps enables a coherent account of the discussions, but it should be remembered that the issues are not insular or complete in themselves. While several issues raised in the following report may seem applicable to other ecosystems as well and may not seem specific to environmental governance in the Himalayas, there is still merit in conducting the exercise to bring together viewpoints that would formulate norms and generate knowledge within the sustainable development discourse.

## Natural Resource Management and Sustainable Development

While there has been a need for developing greater conceptual clarity about the concept of 'sustainable development' and its relevance for the Global South, there is also a need to admit the existence of a plurality of positions



*Deepak Sanan (first from right), Additional Chief Secretary, Revenue and Power, Himachal Pradesh*

long held by diverse and differentiated communities. Even as we recognise that we share a common planet, the contention that we have a 'common future' has been met with a degree of scepticism. These have different implications for the path that the communities might choose to adopt in the future—especially with regard to objectives that have so far remained ambiguous and poorly defined from their point of view.

The idea of 'sustainable development' may have been, in some part, a conceptual device for protecting the older idea of development for the purpose of making it more complementary to other agendas. There exists an apprehension that 'sustainable development' is merely another way of saying 'development' and represents an interminable spiral with no achievable end, in a neo-liberal environment. It is important, therefore, to engage more critically with the concept. This raises the question about how and where the lines both of consumption and of development are to be drawn.

There has been a tendency to look at natural resources in purely material terms. For understanding an ecosystem it is important to accord equal importance to the culture with which it has a symbiotic relationship. Cultural and ecological diversity often go together, and

recognition of this will make for better and more effective ecological stewardship.

The development of norms for sustainable development must take into consideration the complexity involved. Environmental issues, especially those regarding depleting biodiversity and climate change, can neither be understood nor communicated through a limited number of indicators. There must, therefore, be a sound scientific basis for delineating 'no-go' areas for purposes of environmental protection.

At the same time, sustainability indicators need to be revisited. In order to make the indicators more context-specific and relevant to a society, it would be necessary for governments, NGOs and others engaged in development activities to shift from the audit of development to the audit of 'sustainable' development.

The development of norms for sustainable development requires a certain commonality of experience, or at least an agreement on how a particular experience is to be understood. Norms that bring together the diverse experiences and viewpoints of scientists and lay sections of society would be more relevant and acceptable. In this context, it would also be important to be able to develop scientific predictive tools that would help create a balance between sustainability and development.



*Saroj Kanta Barik (at the podium), Professor, North Eastern Hill University*

It was felt that over a period of time a vast amount of traditional knowledge had been lost and that there was a compelling need to recover this lost history. Embedded in this history were important cultural indicators that would enable us to develop norms of sustainability that had stood the test of time. Many of these are in the form of qualitative indicators based on deep knowledge of specific ecosystems, such as the movement of yaks or changes in the flowering time of certain plants. An improved understanding based on cultural indicators would also enable better management of conflicts arising over environmental issues.

The future of the commons is very seriously threatened by commercial, private interest in rural areas and also around the rapidly growing towns/cities. There has to be an effective system in place to deal with the increasing problem of encroachment on the commons. A need is felt for greater flexibility in responding to unprecedented challenges.

We are presently witnessing a period of increasing number of 'climate refugees'. This trend of climatic displacement is likely to increase considerably in the future and will cause widespread migration. A greater reflexivity is required from governments and the irrational compartmentalisation of departments has resulted in inefficient functioning and inability to respond to changing situations. Particularly with respect to climate change such reflexivity and adaptability is critical. The ability to adapt is an integral part of achieving sustainability, which is itself a dynamic process. It requires people and governments to make conscious and informed choices based on sustainable development. However, such choices are premised on the assumption that there is resilience, both in the government and in society, that will enable them to respond to challenges and opportunities while responding to development pressures. For example, the early phases of hydro-power development in Himachal Pradesh saw very little resistance from local communities, because there was minimal population dislocation. With the growth in the number and size of the projects, however, the larger environmental impact of

the dam rather than dislocation became the more contentious issue. The resolution of conflicts in such cases requires a considerable amount of negotiation and willingness to adapt though this may not resolve the 'scientific' questions that get raised in such contestations.

## **Policy-making and the Need for Reliable Evidence**

Questions have been raised about the credibility both of the kind of science practiced and of the people practicing it. There are deficiencies in the data available. The existence of different scientific epistemes within government bodies and scientific institutions has resulted in a lack of consensus. The privatisation of public research within an increasingly influential neo-liberal global order has further raised questions of legitimacy. Notwithstanding this, however, centralisation has increased and standardised policies are being implemented. Inappropriate policies based on inadequate information and the neglect of traditional institutions have caused natural resources depletion, especially of water, forests and minerals. The modern scientific approach needs to be combined with traditional Natural Resource Management (NRM) methods. Sustainable *jhum* cultivation of the Aos and the van panchayat system of Uttarakhand are two of the many examples that can be explored in this context. There should be a methodical use of trans-disciplinarity in research and management.

The 'science talks to policy' concept is of considerable importance for the higher levels of policy-making. But it should also be able to 'unpack' modern science in a manner that is comprehensible and relevant for the masses. Science, therefore, needs to be communicated more frequently in popular literature in a manner that reduces the prevailing knowledge gap between science and the people. This will enable science and popular participation in policy-making to come together. Moreover, the empirical is also about investigating the indigenous or traditional, and we need to establish a balance between modern science and traditional wisdom.



*Shekhar Pathak (second from right), Founder Editor, PAHAR*

Another issue requiring urgent attention is that of demographic transition in the mountain regions. While formulating policies there is a need to keep in mind that the diversity within the region and the uneven developmental trends in the mountain areas as well as in the adjoining lowlands have led to a variation (emigration/immigration) in demographic trends.

A better understanding is needed of the influence and implications of the pressures that are now increasingly exerted by supranational organisation(s) upon policy-making at the national level. The new global order has resulted in greater centralisation of environment regulatory policy. There has also been an increase in the number of standardised policies and trade routines and these have begun to affect state sovereignty. There is an urgent need to address the disconnect between federal environmental policies and the ecosystems that they are formulated for. This can be overcome by reducing the knowledge gap and the technology gap along with the policy gap.

While the ecological impact of large dams, climate change and seismicity in mountain regions has been reasonably well researched as separate issues, the linkage between the three has not been adequately explored. These inter-connections need to be scientifically studied.

## **Environmental Governance Framework**

An enabling regulatory framework has to be put in place to incentivise development and to compensate the losses wherever they do occur. It should be one that not only incentivises but also protects. In Himachal Pradesh, for example, the Local Area Development Fund required to be set up by hydro-power companies serves as compensation/incentive.

There is a need to develop focus on balance to have a systematic method of planning and monitoring and evaluation of outcomes. Threshold and baselines have to be established to track the ecological changes that may periodically occur. There is, therefore, a need to carry out environmental audits with an integrated approach towards sustainable development.

Multi-stakeholder platforms have to be set up that involve local communities, NGOs and CSOs and ensure higher participation from women, marginalised sections of society and particularly the vulnerable in the planning processes.

In terms of damage assessment, too, local bodies are better placed and it would most likely emerge that mountain regions are the most vulnerable and adversely affected in this



*Vinay Tandon (first from left), Former PCCF, Himachal Pradesh*

regard. However, community participation has tended to be rather passive so far and this defeats the purpose to effective policy formulation and governance.

More active engagement with neighbouring countries through cross-border institutions is necessary. This would facilitate the search for solutions to cross-border environmental challenges. The matter is particularly urgent with regard to the natural resources of the Himalayan region where there are points of conflict with Pakistan, Nepal, China and Bangladesh. The management and utilisation of the water of the Himalayan rivers is an especially important case in point.

For sustainability and proper governance there has to be a shift from the existing administrative boundaries to watershed boundaries. It is at the watershed level that planning, monitoring, implementation and evaluation need to be conducted. Such an ecosystem (watershed) approach would encourage more active local participation and have a better social outcome. All outcomes would further need to be evaluated on a regular basis and made part of the feedback mechanism informing policy formulation. The financial systems/arrangements, too, would need to be suitably reorganised to meet the specificities of the ecological region. For this purpose, a strong grassroots management

structure is needed to arrest the rapid loss of power and capacity that traditional institutions have recently experienced. At a higher level all this would contribute to a more detailed and better informed State Action Plan.

Better documentation of indicative evidence for environmental pressures caused by tourism, hydropower projects and mining in mountain areas is necessary. For example, the unprecedented growth of tourist traffic in Ladakh has created immense environmental pressure scarcity of resources. Shortage of drinking water here is particularly acute and even agriculture has been affected.

Reliable and scientifically derived information should be conveyed to communities affected or likely to be affected by climate change. There is a knowledge gap in this respect and it requires detailed hazard mapping and risk assessment. Only thereafter can realistic adaptation techniques to climate change become possible. Communities thus have to be made active participants in finding solutions to the problems caused by climate change.

Only institutions situated at multiple levels will be able to re-conceptualise and use natural resources for the larger public good. Not only do they need to be at different levels of official governance such as national, state and local,



*Jarjum Ete (third from right), President, Galo Welfare Society and former Chairperson, State Women's Commission*

but cut across different sectors—academic, corporate, government, NGOs and so on in order to work in accordance with the principle of sustainability.

The functions of environmental governance should include not only matters of law and governmental regulation, but also a considerable degree of local community self-regulation that is enriched and supported through the dissemination of good practices. Implementation of policies should be made the responsibility of communities. It would also require local bodies to be given greater legal authority to resolve issues at the grassroots level.

## **Formulation of a Himalayan Agenda**

### **Compensation to Mountains for Providing Comprehensive Security**

The escalating national demand for power and water resources has put immense pressure on the highly sensitive mountain ecology. This has caused serious environmental degradation in the Himalayan states and has therefore to be recognised by government at the national level and redressed.

An effective ecosystem services management has to be put in place which would also provide compensation for the ecosystem

services provided by the mountain states. The management of these services cannot be uniform and would need to be suitable to the varied ecosystems within the Himalayas.

### **Better Vision and Planning**

Mountains need to be seen in their totality and not in terms of different components such as forests, rivers, tribes and so on. They represent a distinct socio-cultural and ecological formation whose contribution to the subcontinent has tended to be underestimated because of their peripheral location. Simultaneously, however, the heterogeneity of the Himalayas is a reality and the internal diversity of the region needs to be dealt with in an equally sensitive manner.

Socio-economic marginalisation is often a result of the isolation caused by the difficult mountainous terrain. There is a need to create and support livelihoods in such areas. An effective role can be played by focusing on the youth by making them partners in protecting biodiversity and water resources at the local level. The local area development fund to be established in each specific case by corporate investors utilising resources can serve to supplement this effort.

The largest part of the land and resources of the region are in government hands, and only a small part is privately owned. To this



is also connected the question of putting an appropriate value to the aesthetic wealth of the Himalayan 'wilderness' that has so far been neglected.

More concerted efforts are required to improve the quality of available human resource throughout the Himalayan region. There is a need to build an educational platform that would be more attentive to rural agendas and ensure appropriate levels of knowledge and relevant skills amongst the youth. Equally importantly, however, rural agendas in the mountains should be such that they offer future opportunities that are as good and progressive as those available in 'developed' areas of the country.

Disagreements about the definition of what constitutes the Himalayas have surfaced time and again. These are, not unexpectedly, the result of the internal diversity and differences of opinion that exist in the region. It is possible, nevertheless, to overcome this by adopting the earlier suggested integrated approach to the region that follows inter-linkages within the region that operate across different sectors: not only social, economic and environmental but also academic, corporate, government, NGOs and so on.

The adoption of functional criteria for defining the entire region should be followed up by developing a National Sustainable Development Plan for the Himalayan region that would be part of the larger Plan formulated by the Planning Commission (Plan within a Plan). There is a need to recognise the special role of the Himalayas and for special policies to address their needs.

### **Knowledge Exchange between Himalayan States**

For many resource management issues, local solutions already exist and the factors that contribute to their success need to be better understood. A documentation of methods of possible community management and solutions should be carried out across the Himalayan states. Several of these successful grassroots and community practices can thereafter be upscaled through a process of systematic dissemination of good practices and knowledge exchange.

It would be useful to create a learning alliance of Centres of Excellence within the Himalayas. There is a pressing need to build an ecological database obtained through scientific and empirical criteria. On the basis of this database, developmental planning can be carried out and sustainability issues addressed. We should create an Environmental Master Plan based on vulnerability assessments and which uses a multi-state, multi-pronged response to meet the challenges posed by specific kinds of vulnerability. The environment does not recognise political boundaries and everyone is affected by its degradation—though conversely politically determined policies affect the environment. Regional institutions such as ICIMOD, SAARC have to become more proactive in this regard as the Himalayas stretch across several countries of South Asia and affect the subcontinent as a whole.

### **Developing a Multi-pronged Rural Agenda**

There is considerable potential in organic farming in the mountain regions, apart from horticultural and other crops that grow only in the distinct ecosystems found in the Himalayas but have a good market in the lowlands.

### **Understanding Himalayan Urbanisation**

Unprecedented urban growth presents the most challenging phenomenon in the Himalayas today. Systematic urban planning for mountain regions has never been seriously considered, and only small projects on a piecemeal basis have been carried out. Expertise in urban planning for the Himalayas has to be developed as a specialisation. This has to be integrated with the larger planning process for sustainable development in the region.

The process of urbanisation is intimately linked with the issues of migration. This is an extremely complex issue and needs to be sensitively handled. The voice of the states of the Himalayan region too needs to be heeded and not constantly over-ruled by centrally determined policies. Regional consultations have not been carried out. A collective approach has to be adopted by the Himalayan states and the central government needs to be persuaded to take a more holistic approach.

# Conference Agenda

**Monday, July 30, 2012**

- 9.30 am – 10.00 am **Registration**
- 10.00 am – 10.15 am **Welcome Address** by  
**Peter D'Souza**, Director, IIAS  
**Pankaj Madan**, KAS  
**Ligia Noronha**, Director, RRGs, TERI
- 10.15 am – 11.00 am **Opening Remarks: Setting the Agenda for the Dialogue**  
**Chetan Singh**, Professor, Himachal Pradesh University  
**Harsha Meenawat**, Associate Fellow, TERI
- 11.00 am – 11.15 am Tea/Coffee Break

## **SESSION I**

- 11.15 am – 1.00 pm **Diverse Viewpoints on Natural Resource Management and Problems of Environmental Governance in the Himalayas**  
*Chair: Madhav Karki*, Deputy Director General, ICIMOD  
*Framing the Issues:*
- **Saroj Kanta Barik**, Professor, North Eastern Hill University (Diverse Viewpoints on Natural Resource Management)
  - **Deepak Sanan**, Additional Chief Secretary, Revenue and Power, Himachal Pradesh (Problems of Environmental Governance)
- Discussants:*
- **Sonam Dawa**, Advisor, Ladakh Ecological Development Group
  - **Jayant Choudhary**, Coordinator, Centre for Rural Studies, Tripura University
  - **Shekhar Pathak**, Founder Editor, PAHAR
  - **Sunita Raina**, Fellow, IIAS, Shimla
  - **Jasjit Singh Walia**, Additional Principal Chief Conservator of Forests, Himachal Pradesh

- 1.00 pm – 2.00 pm Lunch

## **SESSION II**

- 2.00 pm – 3.30 pm **Indicators and Impacts of Climate Change and Rules/Norms for Sustainable Development in the Himalayas**  
*Chair: Mahendra Lama*, Vice Chancellor, Sikkim University  
*Framing the Issues:*
- **Madhav Karki**, Deputy Director General, ICIMOD (Indicators and Impacts of Climate Change)
  - **Vinay Tandon**, Former PCCF, Himachal Pradesh (Norms of Sustainable Development)
- Discussants:*
- **B.P. Mishra**, Associate Professor, Mizoram University
  - **Chandan Mahanta**, Professor, Indian Institute of Technology, Guwahati
  - **Shyam Prasad**, Professor, Himachal Pradesh University
  - **Sayantoni Datta**, Fellow, IIAS, Shimla

- 3.30 pm – 3.45 pm Tea/Coffee Break

### SESSION III

3.45 pm – 5.15 pm

#### **Institutional Methods and Capacities for Policy-making in Environmental Governance**

*Chair:* **Jarjum Ete**, President, Galo Welfare Society and former Chairperson, State Women's Commission

*Framing the Issues:*

- **Sarojini Ganju Thakur**, Former Additional Chief Secretary, Himachal Pradesh  
(Institutional Methods in Environmental Governance)
- **T.B. Subba**, Professor, North Eastern Hill University  
(Capacities of Policy-making in Environmental Governance)

*Discussants:*

- **Mahendra Lama**, Vice Chancellor, Sikkim University
- **R.S. Tolia**, Chair, Central Himalayan Environment Association and former Chief Secretary, NTPC
- **Kuldip Tanwar**, President, All India Kisan Sabha, Himachal Pradesh and former General Secretary, Bharat Gyan Vigyan Samiti
- **Satish Sharma**, Fellow, IIAS, Shimla

5.15 pm – 5.30 pm

Closing remarks by **Chetan Singh**, Himachal Pradesh University

## Tuesday, July 31, 2012

9.30 am – 10.00 am

Summary of last day's discussion by Harsha Meenawat, TERI

### SESSION IV

10.15 am – 12.15 pm

#### **Panel discussion: Way Forward for Sustainable Development of the Himalayas**

*Chair:* **Chetan Singh**, Himachal Pradesh University

*Panelists:*

- **Madhav Karki**, ICIMOD
- **T.B. Subba**, North Eastern Hill University
- **R.S. Tolia**, Central Himalayan Environment Association
- **Sarojini Ganju Thakur**, Former Additional Chief Secretary, Himachal Pradesh
- **Vibha Arora**, Fellow, IIAS
- **Piyush Mathur**, Fellow, IIAS

12.15 pm – 12.45 pm

Concluding remarks for the dialogue by **Ligia Noronha**, TERI



# List of Participants

Name	Designation and Organisation
Vibha Aurora	Fellow, IIAS
Saroj Kanta Barik	Professor, Centre for Advanced Studies in Botany, North Eastern Hill University
Jayanta Choudhury	Senior Lecturer and Coordinator (Centre for Rural Studies), Tripura University
Sayantoni Datta	Fellow, IIAS
Sruti Davuluri	TERI
Sonam Dawa	Advisor, Ladakh Ecological Development Group
Peter D'Souza	Director, IIAS
Jarjum Ete	President, Galo Welfare Society
Mareen Haring	KAS
Madhura Joshi	Research Associate, TERI
Madhav Karki	Deputy Director General, ICIMOD
Mahendra P. Lama	Vice Chancellor, Sikkim University
Pankaj Madan	KAS
Chandan Mahanta	Professor, Indian Institute of Technology, Guwahati
Piyush Mathur	Fellow, IIAS
Harsha Meenawat	Associate Fellow, TERI
B.P. Mishra	Department of Environmental Science, Mizoram University
Ligia Noronha	Executive Director (Research Coordination), TERI
Sanjeeva Pandey	Himachal Pradesh Forest Department
Shekhar Pathak	Parikrama
K.G. Paulose	Fellow, IIAS
Pradip Phaniojbam	Fellow, IIAS
Sunita Raina	Fellow, IIAS
Deepak Sanan	Additional Chief Secretary, Revenue and Power, Government of Himachal Pradesh
Satish Sharma	Fellow, IIAS
Chetan Singh	Professor, Himachal Pradesh University
Tanka B. Subba	Professor and Head, Department of Anthropology, North Eastern Hill University
Jonathan Donald Syiemlieh	Research Associate, TERI
Vinay Tandon	Former PPCF, Himachal Pradesh
Shresht Tayal	Fellow, TERI
Sarojini Ganju Thakur	Chairperson, Himachal Pradesh Private Educational Institutions Regulatory Commission
R.S. Tolia	Chairperson, Central Himalayan Environment Association
J.S. Walia	Additional PCCF, Himachal Pradesh Government

*Policy paper prepared by Chetan Singh, Himachal Pradesh University and Harsha Meenawat, TERI*

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