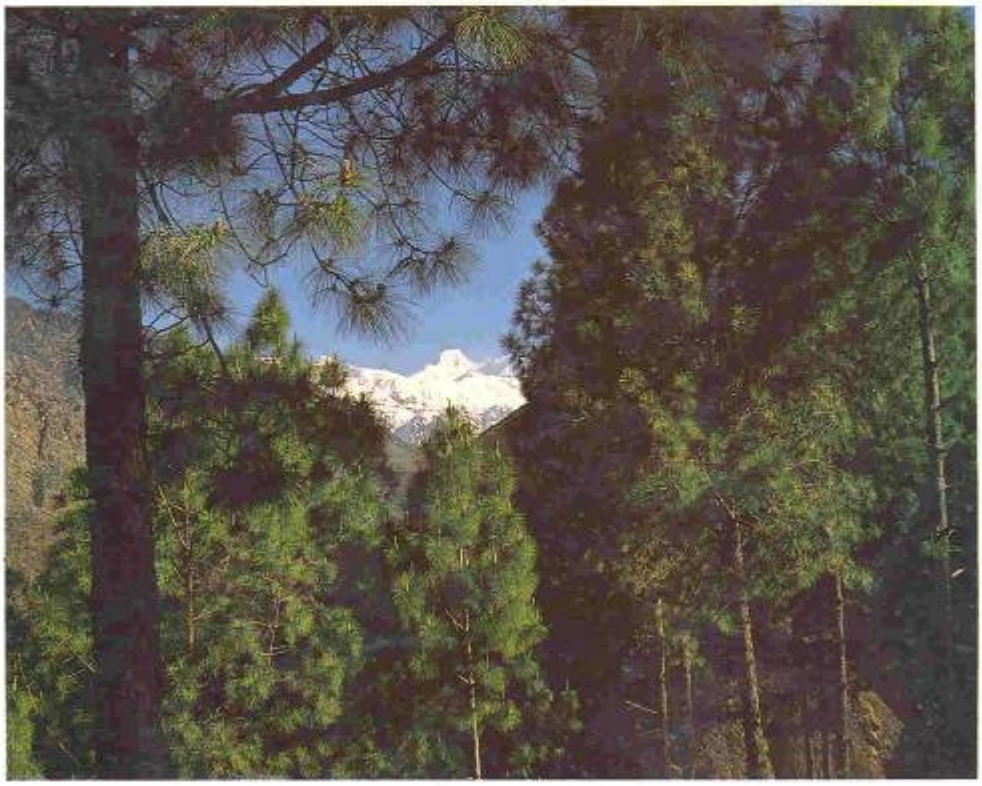
GOVIND BALLABH PANT HIMALAYA PARYAVARAN EVAM VIKAS SANSTHAN

(G.B. Pant Institute of Himalayan Environment and Development)

ANNUAL REPORT

1988-89



Ministry of Environment & Forests
GOVERNMENT OF INDIA

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CONTENTS

1. BACKGROUND, OBJECTIVES AND SCOPE

The Govind Ballabh Pant Himalaya Paryavaran Evam Vikas Sansthan (Govind Ballabh Pant Institute of Himalayan Environment and Development) was set up by the Ministry of Environment and Forests, Government of India, as an autonomous Institute in 1988. The objectives and functions of the Institute are:

(i) to undertake in-depth research and development studies on environmental problems of Himalayan region and Shiwalik ranges,

(ii) to evolve and demonstrate suitable technology packages and delivery systems for integrated development of the Himalayan and the Shiwalik ranges,

(iii) to co-operate with educational and other institutional organizations in any part of the world having objectives wholly or partly similar to those of the Institute.

1.1. Himalaya: A Unique and Complex Ecosystem

The management of the fragile ecosystem types, covering varied altitudinal and climatic regions with contrasting ecologic conditions, require detailed knowledge of the natural and the human resources and the interactions between the two.

—Because strong traditions link people with their environment, development processes in the hills have to be location-specific based on ecological and socio-cultural considerations.

—The complex and interactive problems faced in the Himalayan region need multi-disciplinary approaches and cross-sectoral actions that have a regional flavour.

—In the ultimate analysis, development programmes have to be based on a value system which people can understand, appreciate, assimilate and, therefore, participate therein.

2. ORGANIZATIONAL SET-UP

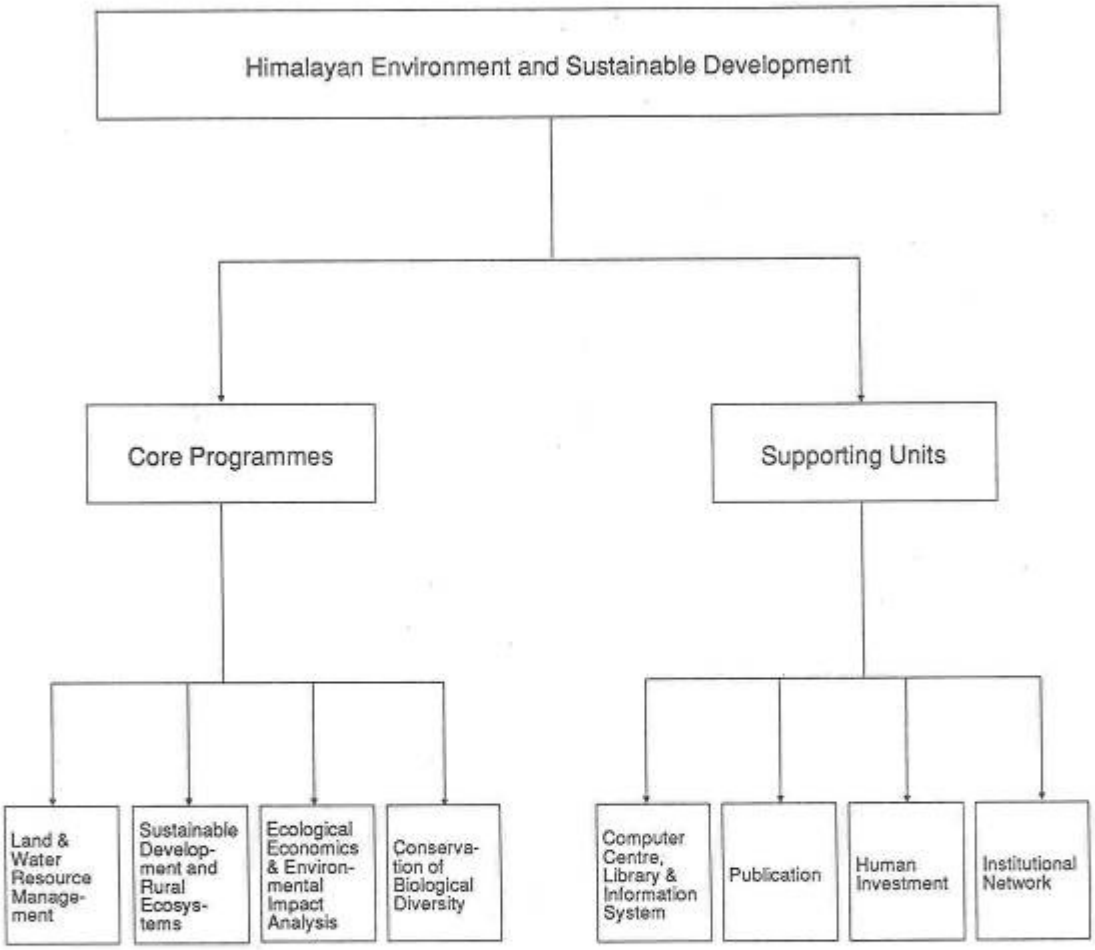
The Institute came in existence on August 1, 1988. With the help of the State Government of Uttar Pradesh, the Institute took possession of a building at Kosi, near Almora and about 8 hectares of land at Katarmal in Almora district.

Based upon extensive discussions at various fora, a framework to make the Institute as a centre of excellence and a nodal organization dedicated to Himalayan Environment and Development was formulated. Looking over the vast diversity in ecological, socio-economic and socio-cultural attributes in the Himalaya, participatory research/development programmes through interactive network of scientific institutions and voluntary organizations were emphasized. Further, emphasis was laid on undertaking multidisciplinary, investigative and technological approaches aimed at integrated and sustained development of the region.

Efforts were made to build the Institute, as a decentralized set-up, by creating its bases in different regions of the Himalaya. In the initial phase, while basic infrastructure was provided to the Institute by the Uttar Pradesh Government, at Kosi, Almora, in Kumaon Division of U.P., efforts were initiated to set up centres to start activities in Garhwal, Sikkim and North-Eastern region.

2.1 Conceptual Framework

The following framework was evolved for building the Institute to achieve the envisaged objectives:



An information brochure on the institutional organization and the proposed activities was prepared by the Director of the Institute and released in September, 1988 by the then Minister of Environment and Forests, Government of India.

2.1.1. Core Programmes

(a) Land and Water Resource Management

Land and water constitute the backbone of the resource base on which agriculture, forestry and animal husbandary depend. Ranging from shifting agriculture in the north-east to intense terrace farming in the north-west Himalaya, this inter-linked system is critical for the hill people. A thorough knowledge about the traditional farming systems could form a base on which more modern agro-forestry systems could be developed. An efficient and optimal utilization of the available water resource and rational land use systems based on land capability classification of the region are important milestones, the Institute aims at.

(b) Sustainable Development and Rural Ecosystems

The rural setting in the hills varies tremendously depending upon a complex of socio-economic and cultural factors. Traditional systems are strongly based upon the concept of recycling of resources. Sustainable development based on ecological rehabilitation is the only remedy for mitigating the break-down of rural ecosystems which is a consequence of over-exploitation of natural resources. Sustainable development would involve activities such as energy conservation, creation of alternate sources of energy and strengthening of the biomass energy base. Rural industries for processing primary produce or for abating the drudgery of women are important.

(c) Ecological Economics and Environmental Impact Analysis

Exploitation of resources in the hills through mining, large-scale timber extraction or hydro-electric power generation have both positive and negative impacts. Environmental costs, therefore, need to be integrated with conventional economic cost-benefit analysis. Identification of strategies for ameliorating environmental damage and looking at alternate ways of development are important aspects of environmental cost-benefit analysis.

(d) Conservation of Biological Diversity

Ranging from dry deciduous forests of the north-west to extremely fragile rain forests of the north-east along the longitudinal gradient, reaching upto alpine meadows through temperate conifer-broad leaved forests and sub-tropical forests along the altitudinal gradient, the biological diversity in the Himalayan region is remarkable indeed. This being presently threatened for various reasons, conservation of biological diversity is essential for the very survival of the human race. The natural ecosystems which are repositories of the rich germplasm of traditionally used plants, contain many lesser known sources of food, drugs and chemicals. Conservation strategy should be based on an integration of ecological and social considerations.

2.1.2 Supporting Units

(a) Computer Centre, Library, Information System and Publications

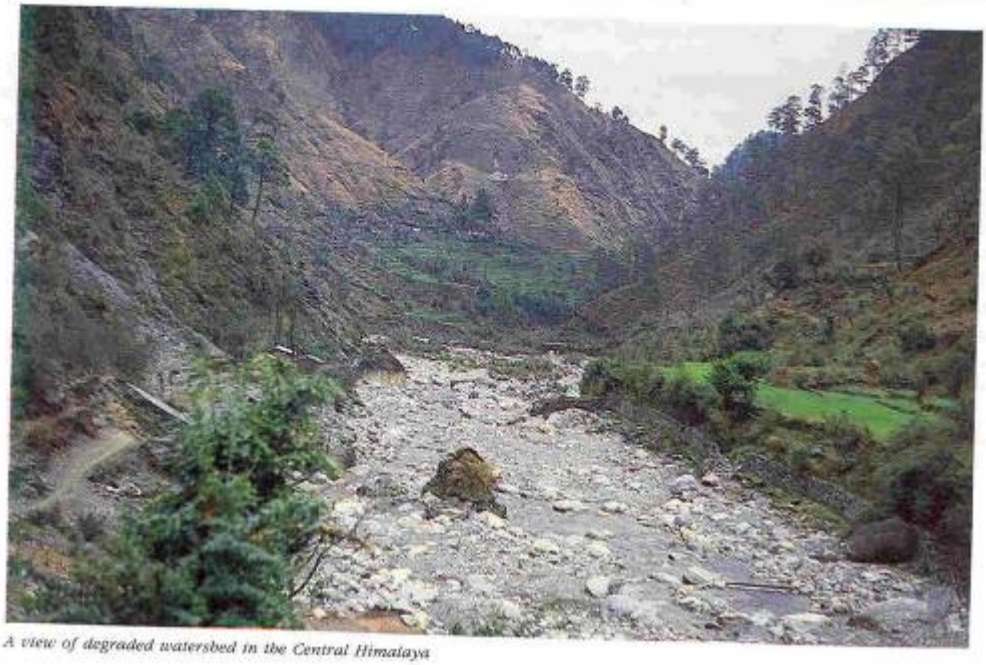
Documentation and dissemination of information are vital in realising the impact of any organization or programme. Innovative techniques of publications and audiovisual aids need to be evolved to reach out to the decision makers, administrators, scientists, managers and the common people.

(b) Human Investment

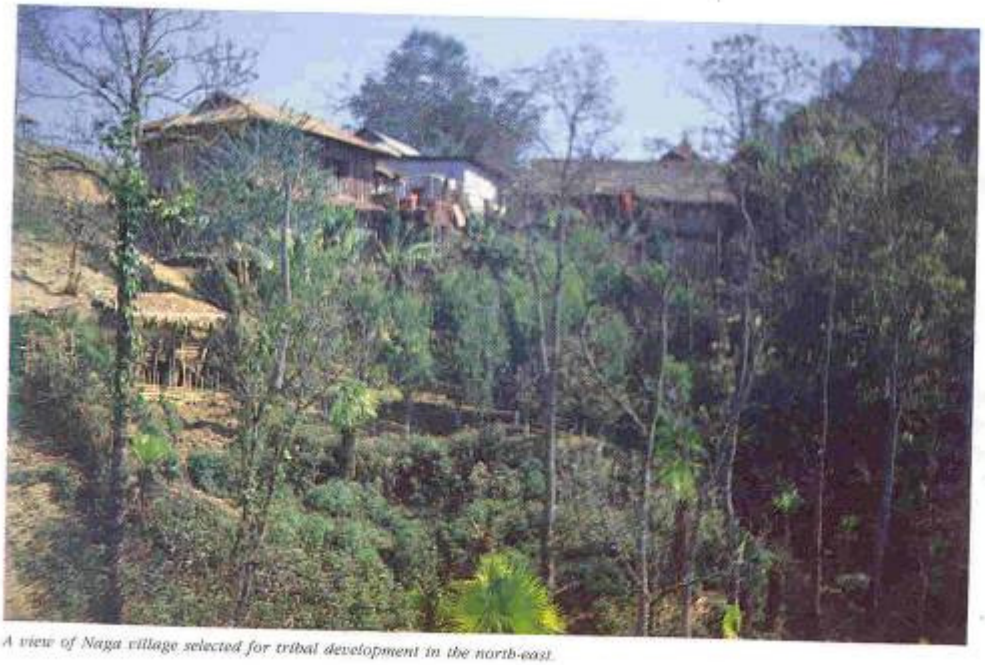
People's perceptions of environment and development are crucial for involving them in the effective management of natural resources. The objective is not only to build direct links with the people, wherever possible, through regional centres, but also to strengthen the links through non-governmental organizations by organizing interactive workshops and training programmes.

(c) Institutional Networking

Apart from undertaking research and development programmes on its own, the Institute would perform the task of pooling, analysing and synthesizing the information relevant to Himalayan environment and development, that are available from other organizations. This would optimize the use of available scientific talent for achieving the objectives.



A view of degraded watersbed in the Central Himalaya



A view of Naga village selected for tribal development in the north-east.

3. RESEARCH AND DEVELOPMENT PROGRAMMES

3.1. Workshop on 'Himalayan Environment and Development-Institutional and NGO Participation', December 31, 1988—January 2, 1989

This workshop marked the inaugural function of the Insitute at Hortico Building, Kosi, Almora. The objectives of the workshop were:

(i) to promote interaction of scientists, planners, administrators, non-governmental organizations and managers involved in research and development in the Himalayan region;

(ii) to identify critical areas of research and development to be prioritized by the Institute;

(iii) to define a few relevant research and development projects and to discuss the possible means of their effective implementation for development in the Himalayan region.

The workshop was attended by over 100 participants.

It was emphasized that the Institute should attempt at linking-up the natural sciences with social sciences and for implementation of case studies, keeping in view people's perception of environment and development. The discussions were centred around four thematic areas, *viz.*: (i) food, fodder and fuelwood (ii) watershed management (iii) appropriate technologies for rural development (iv) conservation of biological diversity.

3.2 Research Projects

A number of projects were formulated for different parts of the Himalayan region based upon a network strategy. All the projects were planned as collaborative ventures involving scientists and the people.

3.2.1 Land and Water Resource Management

The following projects were formultated:

(i) Restoration of the ecology of degraded land at Katarmal, Almora.

(ii) Restoration of abandoned terraces and redevelopment of agro-ecosystems at Kosi-Katarmal, Almora.

(iii) Integrated watershed management—a case study in Sikkim.

(iv) A comparative study of selected watersheds in the Western Ghats and the Himalaya.

3.2.2 Sustainable Development of Rural Ecosystems

The following projects were initiated:

(i) Sustainable development of a village cluster in Srinagar (Garhwal).

(ii) Sustainable development of villages surrounding Binsar Sanctuary (Almora) with a view to the management of the Sanctuary with people's participation.

(iii) Ringal bamboo and sustainable development at Kapkot (Almora).

(iv) Jhum and sustainable development of a village cluster in Nagaland.

3.2.3 Conservation of Biological Diversity

A project on "Long-term ecological research in the Binsar Sanctuary" was initiated.

3.2.4 Ecological Economics and Environmental Impact Analysis

A project on "Environmental impact analysis and restoration of Magnesite mined areas in Almora" was initiated.

3.2.5 Environmental Education and Awareness

Following projects were initiated specifically for creating awareness towards multiple dimensions of problems in the Himalaya:

(i) Ecology and sustainable development—a 40-minute duration 16mm film production.

(ii) A publication on socio-economic analysis of agriculture in Kumaon.

4. ACADEMIC ACTIVITIES

4.1 Publications

Kumar, A. and Ramakrishnan, P.S. 1989. Village ecosystem function of tribal societies in north-eastern India with special reference to hill Miris of Arunachal Pradesh. In : *Perspectives in Ecology*, J.S. Singh and B. Gopal (Eds.), Jagminder Book Agency, New Delhi, pp 353-376.

Ramakrishnan, P.S. 1988. Patterns of primary terrestrial productivity and ecosystem function. *Proceedings Indian National Science Academy*, B54, 349-360.

Ramakrishnan, P.S. 1988. Successional theory: Implication for weed management in shifting agriculture, mixed cropping, agro-forestry system. In: *Weed Management in Agroecosystems: Ecological Approaches*, M.A. Altieri and M. Libeman (Eds.), CRC Press, Boca Raton, Florida, pp 183-196.

Ramakrishnan, P.S. 1989. Agricultural systems of the north-eastern hill region of India. In: *Agricultural Systems*, S. R. Gleissman (Ed). Springer-Verlag, Berlin. pp 251-274.

Ramakrishnan, P.S. and Vitousek, P.M. 1989. Ecosystem level processes and consequences of biological invasions. In: *Biological Invasions—A Global Perspective*, J.A. Drake, H.A. Mooney, F. Di Castri, R.H. Groves, F.J. Kruger, M. Rejmanek and M. Williamson (Eds.), SCOPE 37, John Wiley, New York, pp. 281-299.

4.2 Miscellaneous

4.2.1 Linkages with other Scientific Bodies

Linkage of the Institute was developed with research/development organizations including Indian National Science Academy (New Delhi), Indian Academy of Sciences (Bangalore), National Academy of Sciences (Allahabad), Council of Scientific and Industrial Research (New Delhi), Department of Science and Technology (New Delhi), National Institute of Ecology (New Delhi), Indian Society of Tree Scientists (Solan), International Congress of Ecology (The Hague), International Society for Tropical Ecology (Varanasi), International Union for Conservation of Nature and Natural Resources (Switzerland), Man and Biosphere Programme of United Nations Educational, Scientific and Cultural Organisation (Paris), International Union of Biological Sciences (Paris), International Union of Wildland Fire (USA).

4.2.2 Meetings attended by the scientists

The Director of the Institute delivered a series of lectures on Rainforest Management during UNESCO Workshop on "Ecosystem Restoration in the Humid Tropics", Bogor, Indonesia, August 24-25, 1988.

The Director of the Institute delivered a special lecture on "Conservation Strategies: An

Agro-ecologist's Viewpoint" during the International Workshop on "Identification of Key Species for Conservation and Socio-economic Development" organised by IUCN and Commonwealth Science Council at Trinidad and Tobago, March 14-15, 1989.

Scientists of the Institute participated in various meetings and outlined the scope of the Institute.

5. GOVIND BALLABH PANT HIMALAYA PARYAVARAN EVAM VIKAS SANSTHAN

MEMBERSHIP OF THE SOCIETY

Minister in-charge Union Cabinet Ministry of Environment & Forests Government of India New Delhi	President
Minister of State in-charge Ministry of Environment & Forests Government of India New Delhi	Vice-President
Two Members of the Parliament (to be nominated by the Government of India every three years or upon sooner determination of the Membership of the Lok Sabha)	Members
Minister in-charge Environment Government of Jammu & Kashmir	Member
Minister in-charge Environment Government of Sikkim	Member
Minister in-charge Environment Government of Himachal Pradesh	Member
Minister in-charge Environment Government of Uttar Pradesh	Member
Minister in-charge Environment Government of West Bengal	Member
Minister in-charge Environment Government of Assam	Member
Minister in-charge Environment Government of Arunachal Pradesh	Member
Minister in-charge Environment Government of Mizoram	Member
Two Members of Legislative Assembly, State of Uttar Pradesh (to be nominated by the Government of India every three years or upon sooner determination of the membership of Uttar Pradesh Legislative Assembly of an incumbent Member)	Members
Five non-officials (to be nominated by the Government of India)	Members
A representative from Indian Institute of Forest Management Bhopal	Member
Secretary Ministry of Environment & Forests New Delhi	Member
Secretary Department of Science & Technology New Delhi	Member
Secretary Department of Scientific & Industrial Research New Delhi	Member

Secretary Ministry of Human Resource Development New Delhi	Member
Secretary Department of Rural Development New Delhi	Member
Secretary Department of Urban Development New Delhi	Member
Secretary Department of Biotechnology New Delhi	Member
Secretary Department of Non-Conventional Energy Sources New Delhi	Member
Secretary Department of Mines New Delhi	Member
Secretary Department of Water Resources New Delhi	Member
Secretary Department of Agricultural Research & Education New Delhi	Member
Secretary Planning Commission New Delhi	Member
Chief Secretary Government of Uttar Pradesh Lucknow	Member
President Forest Research Institute Dehradun	Member
Inspector General of Forests New Delhi	Member
Director Botanical Survey of India Calcutta	Member
Chairman Indian Council of Social Science Research New Delhi	Member
Director Centre for Social Development New Delhi	Member
Director Govind Ballabh Pant Himalaya Paryavaran Evam Vikas Sansthan Almora	Member

6. GOVERNING BODY

Secretary Ministry of Environment & Forests Paryavaran Bhawan C.G.O. Complex, Lodi Road New Delhi.	Chairman
Secretary Department of Biotechnology C.G.O. Complex, Lodi Road New Delhi.	Member
Chief Secretary Government of Uttar Pradesh Government Secretariat Lucknow.	Member
Inspector General (Forests) Ministry of Environment & Forests Paryavaran Bhawan C.G.O. Complex, Lodi Road New Delhi.	Member
Joint Secretary & Financial Advisor Ministry of Environment & Forests Paryavaran Bhawan C.G.O. Complex, Lodi Road New Delhi.	Member
Prof. A.K. Sharma Department of Botany University of Calcutta 35 Ballygunge Circular Road Calcutta.	Member

Prof. S. Ramaseshan Department of Civil Engineering Indian Institute of Technology Kanpur.	Member
Prof. S.K. Sinha Water Technology Centre Indian Agricultural Research Institute New Delhi.	Member
Prof. K.S. Valdiya Kumaun University Department of Geology Nainital.	Member
Director G.B. Pant Institute of Himalayan Environment and Development Kosi, Almora.	Member-Secretary

7. SCIENCE ADVISORY COMMITTEE

Dr. M.S. Swaminathan B4/142, Safdarjung Enclave New Delhi.	Chairman
Prof. K.S. Valdiya Department of Geology Kumaon University Nainital.	Member
Dr. V.V. Dhruva Narayana Director Central Soil and Water Conservation Research Institute, Dehra Dun.	Member
Prof. A.N. Purohit Director High Altitude Plant Physiology Research Centre, Srinagar (Garhwal).	Member
Prof. A. Ahmad Vice-Chancellor Sher-e-Kashmir University of Agricultural Science & Technology Srinagar (Kashmir).	Member
Dr. D.R. Thakur Vice-Chancellor Y.S. Parmar University Solan.	Member
Shri S. Deb Roy Chief Conservator of Forests Rehabari Guahati.	Member
Dr. B.P. Ghildyal Liason Scientist International Rice Research Institute, Room No. 382, Samrat Hotel New Delhi.	Member
Prof. B.L. Deekshitulu Director National Remote Sensing Agency Department of Space Balanagar Hyderabad.	Member
Shri Chandi Prasad Bhat Dasoli Gram, 'Swaragya and Sarvodaya' P.O. Gopeshwar (Garhwal).	Member
Dr. (Mrs) Manju Sharma Chief (Science) Planning Commission, Yojna Bhavan New Delhi.	Member
Mrs. Chubla Ao Kohima.	Member
Prof. S.L. Bhatt Indian Statistical Institute New Mehrauli Road New Delhi.	Member
Shri R.K. Dar Principal Secretary Hill Development Government of Uttar Pradesh Lucknow.	Member
Shri S.K. Pandey Director Forest Research Institute Dehradun.	Member

Dr. V.C. Thakur Director Wadia Institute of Himalayan Geology Dehra Dun.	Member
Miss Mukti Datta NGO, Binsar Almora.	Member
Dr. Lalit Pandey Manorath Sadan Champa Naula Almora.	Member
Prof. Padma Vasudevan Centre of Appropriate Rural Technology Indian Institute of Technology New Delhi.	Member
Prof. Vijay Paranjpye Research Fellow Gokhale Institute 92/2 Erandawana Pune.	Member
Director G.B. Pant Institute of Himalayan Environment and Development Kosi, Almora.	Member

8. SCIENTISTS OF THE INSTITUTE

1. Professor P.S. Ramakrishnan, Director
2. Dr. Afroz Ahmad
3. Dr. K.S. Rao
4. Dr. B.P. Kothyari

(Scientists at Serial Numbers 2-4 are recruited on *ad hoc* basis).

9. AUDITED STATEMENT OF ACCOUNTS

UTILISATION CERTIFICATE

Certified that out of Rs. 50,00,000/- (Rupees fifty lakh only) of Grants-in-aid sanctioned during the period 1st August 1988 to 31st March 1989 in favour of Govind Ballabh Pant Himalaya Paryavaran Evam Vikas Sansthan, a sum of Rs. 48,51,056.20 has been utilised for the purpose for which it was sanctioned subject to "excess/deficit" as shown in the Receipts & Payment Account annexed hereto and that the balance of Rs. 1,48,943.80 remaining unutilised at the end of the period will be adjusted towards the Grants-in-aid payable during the next year 1989-90.

Certified that we have audited the books of accounts for the period 1st August 1988 to 31st March 1989 and further certified that the Receipts and Payment Account for the eight months period ended 31st March 1989 is correct to the best of our knowledge, information and belief and is in accordance with the books of accounts and papers produced before us and explanations given to us during the course of our audit.

For J.C. BHALLA & CO.
CHARTERED ACCOUNTANTS

NEW DELHI
DATED: 6.3.1990

(RAJESH SETHI)
PARTNER

EXPENDITURE STATEMENT FOR THE YEAR 1988-89

Receipt	Amount	Payment		Amount	Sanctioned Amount	Savings	Excess	Remarks
By Cheque (18.8.88)	11,00,000/-	Salary to Staff		1,21,186.65	2,00,000/-	78,813.35	—	
		T.A.		6,365.00	50,000/-	43,635.00		
By Cheque (8.11.88)	25,00,000/-	Office Expenses						
		Postage	8825.10					
By Cheque (15.12.88)	12,00,000/-	Conveyance	1097.80					
		Petrol	43178.50					
		Vehicle	50417.88					
By Cheque (17.3.89)	2,00,000/-	Maintenance						
		Telephone	59976.00					
		Electric &						
		Water	83771.00					
		Stationery	117830.98					
		Office						
		Equipment	222122.73					
		Hospitality	3872.50					
		Other Contg.	72888.90					
		Furnitures	465592.57					
		Rents	47595.00					
		Advances	30000.00	12,07,168.76	13,60,000/-	1,52,831.24		
		Workshop/ Seminar		70,223.50	—	—	70,223.50	
		Vehicle purchase		6,49,186.78	6,50,000/-	813.22		
		Library		1,53,997.51	1,00,000/-	—	53,997.51	
		Building		26,42,928.00	26,40,000/-	—	2,928.00	Negligible
		Cash in hand		1,48,943.80				
Total	50,00,000.00			50,00,000.00	50,00,000.00	2,76,092.81	1,27,149.01	

Details of Cash in hand

Cash in Bank	1,10,998.73
D.M., Almora	20,000.00
Dr. K.S. Rao	10,095.11
As per Cash Book	7,849.96
Total	1,48,943.80

Details of Reappropriation

From	Amount	To	Amount
other Contg.	1,24,221.01	Library	53,997.51
		Symposia	70,223.50
		Seminar	
Total	1,24,221.01	Total	1,24,221.01

Certified that we have audited the books of account for the year ending March 31, 1989 and further certify that the same is correct to the best of our knowledge, information and belief and according to the books of accounts vouchers and papers produced before us and explanation given to us during the course of our audit.

For J.C. BHALLA & CO.
CHARTERED ACCOUNTANTS

(RAJESH SETHI)
PARTNER

BALANCE SHEET OF G.B. PANT INSTITUTE OF HIMALYAN ENVIRONMENT AND DEVELOPMENT AS ON 31.3.89

Liabilities	Amount	Assets	Amount
Grants-in-Aid received from Ministry of Environment & Forests during 88-89	50,00,000.00	Office Equipment	2,22,122.73
		Furniture	4,65,592.57
		Vehicles	6,49,186.78
Less: Expenditure as per Income & Expenditure Account	7,17,228.61	Library books	1,55,997.51
		Building	26,42,928.00
		Cash in hand	1,48,943.80
Total	42,82,771.39	Total	42,82,771.39

Certified to be in accordance with Books of Accounts & Vouchers produced to us.

New Delhi
Dated: 4.3.1990

Sd/-
C.P. Kapoor
Finance officer

Sd/-
K.G. Saxena
Acting Director

For J.C. BHALLA & CO.
CHARTERED ACCOUNTANTS

Sd/-
(RAJESH SETHI)
PARTNER

INCOME & EXPENDITURE ACCOUNT OF G.B. PANT INSTITUTE OF HIMALAYAN ENVIRONMENT AND DEVELOPMENT FOR THE YEAR 1988-89

Expenditure	Amount	Income	
Salary	1,21,186.65	By Excess of expenditure over income carried over to the Balance Sheet	7,17,228.61
T.A.	6,365.00		
Postage	8,825.10		
Conveyance	1,097.80		
Petrol	43,178.50		
Maintenance of Vehicles	50,417.88		
Telephone	59,976.00		
Water & Electricity Charges	83,771.00		
Stationery	1,17,830.98		
Hospitality	3,872.30		
Office Contingencies	72,888.90		
Rent and Rates	47,595.00		
Advertisement	30,000.00		
Seminar/Symposia	70,223.50		
Total	7,17,228.61	Total	7,17,228.61

Certified to be in accordance with Books of Accounts and Vouchers produced to us.

New Delhi
Dated: 4.3.1990

Sd/-
C.P. Kapoor
Finance officer

Sd/-
K.G. Saxena
Acting Director

For J.C. BHALLA & CO.
CHARTERED ACCOUNTANTS

Sd/-
(RAJESH SETHI)
PARTNER