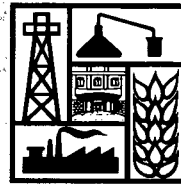


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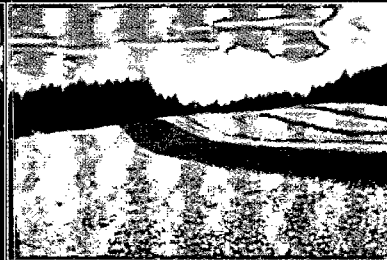
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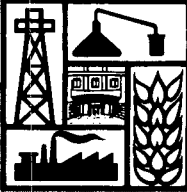
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The Balancing Act

IT IS entirely in our interest to put out the best foot forward to make the UN declared year of 2002 as the Year of the Mountains and Eco-tourism a success. We have possibly the longest range of mountains with the Himalayas being aptly described as a jewel of the world. Also, India is one of the seven major mega biodiversity countries with immense potential for eco-tourism. However, both are being subject to severe pressure—from lure of quick economic enrichment. The Himalayan eco-system is considered the most fragile because of its comparative newness. It is being denuded fast with repercussions like soil erosion, land slides, climatic changes, water run offs and water scarcity for drinking and a host of other purposes. This incursion in forests is mainly due to unprecedented rise in population and spread of its tentacles in developmental activities like housing, roads and other infrastructural needs.

Yet, we have to be realistic to note that tourism is now the world's largest industry, with nature tourism the fastest growing segment. Eco-tourism recognises the full potential of tourist industry. It recognises that travel and tourism provide a good source of income for the people of the area. In return they contribute to conservation, protection and restoration of the eco-system. Thus, environmental protection becomes a vital part of sustainable tourism. In this business, all players need encouragement, including legislative backing, which will also regulate the process.

All these and many other aspects of the theme have been subject to close scrutiny by authors, many of whom are nature lovers and mountaineers of standing. We are glad that in keeping with our promise, we have been able to incorporate a few rare and beautiful pictures to go with some articles. □

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The views expressed in various articles are those of the authors' and not necessarily of the government.

Letters

Bt Cotton

Sir,

This is with reference to the article "India adopts Bt Cotton" by E C Thomas (Vol. 46, June 2002). He has categorically brought out the myth and reality of genetically modified variety of cotton and various ramifications of using and propagating the same. The hullabaloo because of gene revolution has to be analysed in the backdrop of our experiences and knowledge of Green Revolution, which unfortunately couldn't metamorphose into an 'Evergreen Revolution' and ultimately ended up as a 'Greed Revolution'.

Secondly, agriculture being our strength and the backbone of our economy, whatever we plan and implement in this vital sector must be analysed threadbare, so that the entire process of production is a sustainable one. The idea is to make this development a revolution which will go a long way in serving our needs (of course, 'not greed') and that too maintaining a delicate balance with every aspect of our survival. We need to tread this path cautiously without being carried away by the illusions of short-term gains. This will ensure security (both livelihood and food) to the one at the very grassroots level.

Thirdly, for the judicious use of these genetically modified seeds (which is being cautioned time and again) we need to educate our farmer friends and make them realise the centrality of this for reaping the harvest on a long term basis. This would be achieved through field demonstrations and organising a group of farmer members at the village level, who would monitor this and encourage others for the judicious use of these seeds. Surely, this will go a long way in meeting its set targets.

Thanking you very much for publishing articles on very-very relevant topics.

*Jyotiraj Patra
Fakir Mohan Chhatrabas, Utkal
University, Bhubaneswar.
(The correspondent gets Rs. 100 for
the letter.)*

II

Sir,

Apropos to the article "India, Adopts Bt Cotton" by E C Thomas (Yojana, June, 2002), even though the farming community has welcomed India's adoption of Bt cotton, farmers at large remain in the dark about the following facts. The increase in productivity of Bt cotton results from resistance to bollworms rather than inherent yield superiority. It resists bollworm only, not other pests. Monsanto's Bt cotton shows no longer that much resistance as it did in the beginning. Australia has already started fortifying the plant's defensive mechanism by inserting two Bt genes. Markets are flooded with illegal seeds of Navbharat. Bt cotton farmers will be caught into biotech trap if not properly informed.

Jaydev Jana (e-mail)

Impressive

Sir,

I am fond of progressive literary matter of the type available in the periodicals of Publications Division in general and 'Yojana' in particular.

I happened to see your June 2002 issue. Its presentation has improved considerably. The picture on the cover is really eye catching. The articles too are so very interesting. Of them, Productivity in the age of Globalisation is impressive. The comparison of India's productivity vis-a-vis other countries and stress on mismatch between production and communications makes the write-up really objective.

Other articles like "GSI's Profile", Adoption of Bt Cotton', 'E-Governance' etc. are also equally interesting, meaningful and educative. How, I wish that such good magazines are liberally patronized by all educational institutions. The Ministry of Education and University Grants Commission might see that such informative magazines are subscribed by the libraries of educational institutions all over India.

*Shakuntla Devi,
Teacher, Kangra (HP).*

A Request

Sir,

I am a regular reader of Yojana. I find this magazine an important one from the viewpoint of social sciences. I find the article E-governance and Community Participation in June, 2002 issue very informative and useful. I have a request to make. Please give state specific articles on the various developmental issues.

Yatindra Singh (e-mail)

*—We leave this for state Publicity
Departments. Yojana will concentrate on
topical development issues—Ed.*

F.D.I.

Sir,

The article titled "Why FDI Inflow Needs to Improve" by Pulak Mishra and Ramakanta Prusty, published in Yojana June 2002 issue, is most interesting. However, it could have some more information relating to major states. This would have benefited both researchers and policy makers.

*J. Siva Ram
Librarian, Technical Library,
Planning Department, A.P.Secretariat,
Hyderabad.*

G.S.I.

Sir,

The article, "150 years of GSI : A Profile" was really a very good one. It is really amazing how with so little equipment and infrastructure, geologists went about their work to locate such rich mines. Shri Brijesh Barthwal has done a good job and so has Yojana.

*P. Mahesh
Chitlapakkam (Chennai).*

Where Are We in Football

Sir,

I was happy to see an article on "Magic of World Cup Football comes to Asia in the May issue. The question is where do we stand? We have to motivate students to play football from an early age. The government,

teachers and parents have to provide facilities to encourage students to go for this game from school level. It should be highlighted as much as cricket.

*Satyendra Kumar Singh
Sitamarhi, Bihar.*

Best Source of Information

Sir,

Being a regular reader of Yojana, I rate it as one of the best sources of social, economic, scientific and rural information. I want to suggest that for direct interaction between authors and readers, full address of authors may kindly be given for each and every article. For example, in the article "India Adopts Bt Cotton", published in the June issue, I have some doubts on the data given in the table titled "Cost Benefit Evaluation", but due to nonavailability of full address of author, I could not clear my doubts. Your "Letters" column is highly appreciated. Book Review' and 'Development Diary' are informative and timely.

—*You have a point. We agree. Ed.*

*Sukanta Kumar Sarangi BHU,
Varanasi.*

Author's Address

Sir,

Yojana is informative as well as educative. We value the magazine. The June 2002 issue provided a lot of informations on GSI, FDI inflow, E-governance and Biotechnology in developing countries. Other articles like production in the age of Globalisation & Regionalism in International Trade, Role of WTO, are also very interesting. Could you please provide us address of authors for further clarifications.

*Sukanta Kumar Mohanty
Secretary, Seva Bharati, Khurda, Orissa.*

Informative

Sir,

I am a regular reader of Yojana since 1996. This is my second letter. I like most articles related to labour issues, rural growth and productivity. Your June issue in new format is at my hand. I would like to thank you for the

article on "Productivity in the Age of globalization". In this article there are several aspects relating to productivity like wide gap; infrastructure productivity, cultural impediments, Organisational culture, productivity vision and harnessing the fruits of globalisation. I liked other articles like Commonwealth Games and the Disinvestment Scenario etc.

I would like to request you to publish articles on old age and retired persons and role of voluntary organisations.

I would like to thank you and your team and writers for the informative materials published in Yojana.

Govind Kumar, Patna.

Sir,

It is interesting to learn that two surgeons endeavoured to produce early geological maps of India. Thanks to Sh. Brijesh Barthwal (Yojana, June 2002). By quoting Oldham's reply on his pay fixation the author exposed the risk and hardships in a geologist's service. The services of geologists are ever under-realised both by the politicians, bosses and public. This article makes people aware of the nature and essentials of services of geologists besides the hostile terrain conditions in which they work. Appreciation is due to GSI for parenting many of its offspring departments. Yojana is certainly a channel to disseminate wide spectrum of GSI activities. The GOI should exclude GSI and the geological organizations from its "NO" (expansion, incentives, etc) policy and VRS in order to further strengthen the geological knowledge base of the country as nation's wealth comes from mineral resources. Advice of geologists on mitigation and management of natural disasters, natural power harnessing, etc save our exchequer a tidy amount.

V. Radhakrishnan

Sir,

I am a regular subscriber of the magazine-Yojana (English) and wish to extend my heartiest congratulations to the entire team responsible for giving the journal its present shape. The

articles included are all very informative, educative and make an excellent material for interesting reading. Although the topics included are of value for persons of all age-groups and walks of life but are indispensable for students preparing for competitive examinations such as the civil services and the like.

The article in the June edition on 'Productivity' in the age of Globalisation' is a very relevant one in the current scenario and brings out the need for enhancing productivity in assertive terms. The article '150 years of GSI: A profile' is of special interest to me as I am a student of M.Sc-II in geology. The photographs included in this article are appreciative as they are of the same nature as we take on our field excursions.

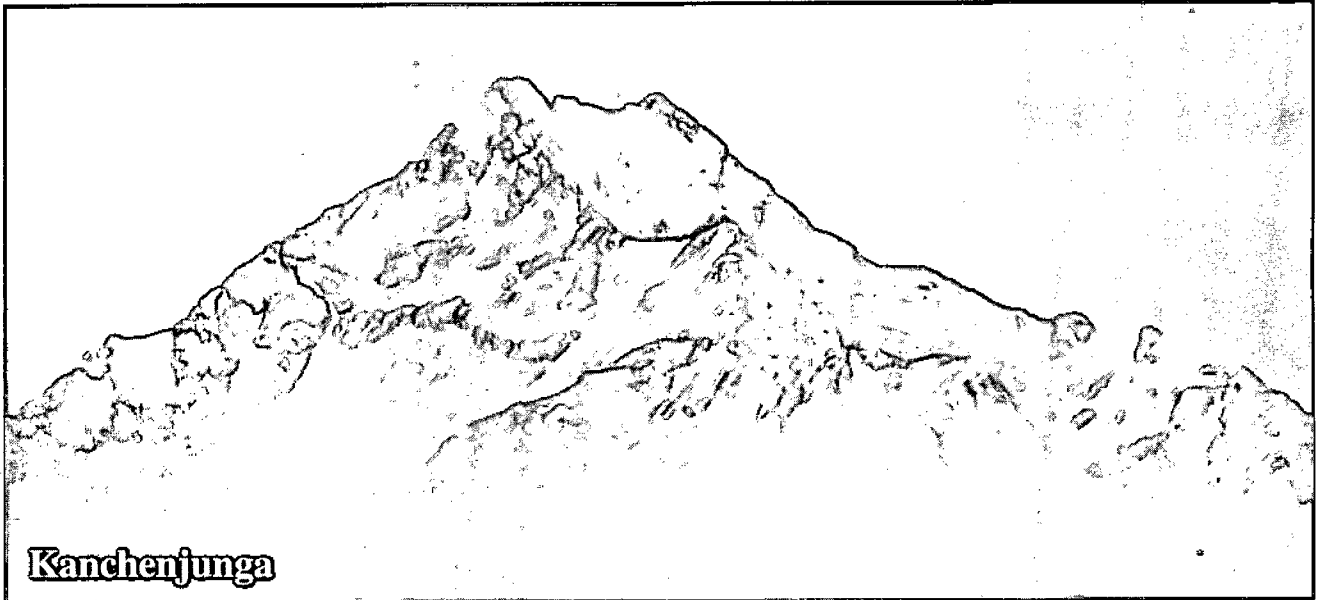
The article on 'India Adopts Bt. Cotton' provides insight into the various arguments in favour of Bt cotton cultivation in India by comparing the scenario in other countries using Bt cotton for their cultivation viz U.S., China, Mexico, Argentina, Australia, S.Africa and Indonesia. It also warns us the pit falls which must be avoided so that this boon is not converted to a bane.

The tables and charts which provide information on any topic to be studied are of additional significance as they provide comparative accounts among various nations or in different years. The Development Dairy which acquaints the reader with various projects or schemes being undertaken by the Government of India is an excellent job worth praise as it plays a vital role in disseminating information regarding government schemes. In it are also included data on the industrial or agricultural output which give an idea of the development scenario in various sectors.

The opening up of a Letters Column is appreciated as it will help in receiving effective feed back from the readers to make the magazine more responsive to reader needs and aspirations.

I hope Yojana will continue to inform all section of readers.

Nidhi Mishra, Lucknow



Kanchenjunga



← *Rhododendron*

↑ *Snow clad trees*



Nanda Devi

Eco-tourism Planning

Jagmohan

Experience of the last fifty years shows that the concept and ideals of sustainability, conservation, eco-tourism etc. are not likely to materialise on ground unless the global community, as a whole, gives itself a new mindscape and a new ethicscape.

FROM TIME immemorial, our sages and saints have been moving to mountains, meadows and streams and experiencing elevation of mind that close contact and communion with nature produced. They understood that man and nature were not two separate entities but an enmeshed part of the same organic entity, the same divine spirit. They believed that the basic elements of nature constitute the Cosmic Being—the mountains his bones, the earth his flesh, the sea his blood, the air his breath and the fire his energy. They propagated: "The earth is our mother and we are its children". One of the earliest vedic hymns, composed over 4000 years ago, gave the message of what is now termed as sustainable development:

"Whatever I dig of you, O Earth,

*May you of that have quick
replenishment!*

*O Purifying One, may my thrust
never*

*Reach right unto your vital
points, your heart!"*

The carrying and recouping

capacities of the earth were reverentially recognised and given a strong spiritual underpinning. That is why India, for centuries together, has remained a treasure-house of natural and cultural wealth.

Unfortunately, this long tradition of respecting nature and living in harmony with it has, of late, been mutilated due to onslaught of unbridled materialism of the times and increasing inequities of the global order that are undermining the capacities of the developing countries in various ways. It has become too effete to have any decisive impact on the ground. Like anywhere else in the world, through hymns in praise of sustainability are repeatedly sung at every symposia and seminar, declarations seldom get translated into deeds.

Inner Prompting

I have thought it necessary to invite attention to the above facts because of the paramount need for backing up our concept and ideals by inner prompting of an awakened and elevated soul. I believe that no healthy landscape

can come about unless there exists beforehand a healthy mindscape which can give birth to it and nurse it. Without a congenial and responsive soil, no seed, howsoever good and potent it may be, can strike roots and yield the desired harvest.

In this connection, let me invite attention to the experience of the United Nations and its agencies for last five decades or so. The economic, social and environmental goals set-out by them, though accepted by the member-states, show no sign of being reached at all, primarily because the values, the fundamental forces that govern the life of nations, have remained unaltered. In practice, little respect has been shown either to the fragility of the eco-system or to the principle of equity and sustainability; otherwise, there is no explanation as to why, after acceptance of the recommendations made by the Pearson Commission, Willy Brandt Commission, Brundtland Commission and the United Nations Environment and Rio Conferences, more people than ever before should be living in

Mr Jagmohan is Union Minister of Tourism and Culture.

slums, more should be going without safe drinking water and access to sanitary facilities; and global climate should continue to get warmer and endangering the very existence of the large parts of the coastal areas and islands.

If the present attitudes persist, the fate of advocacy for eco-tourism is not likely to be different. Article 3 of the Global Code of Ethics stipulates: "All the stakeholders in tourism development should safeguard the natural environment with a view to achieving sound, continuous and sustainable economic growth geared to satisfying equitably the needs and aspirations of present and future generations". All member-states, I have no doubt, would wholeheartedly accept this stipulation. But the issue is not of its acceptance in theory but of its materialisation in practice. This materialisation would not come about unless we all simultaneously take solid and sustained measures to create an inner motivation of the right kind. At the moment, we are doing very little in this direction.

The Brundtland Commission has emphasised: "Sustainable development involves more than growth. It requires a change in the content of growth, to make it less material-and energy-intensive and more equitable in its impact. These changes are required in all countries as part of a package of measures to maintain the stock of ecological capital, to improve the distribution of income, and to reduce the degree of vulnerability to economic crisis". This emphasis has largely remained on paper.

In regard to energy-use, for example, even today, the United States, with just five per cent of the

world's population, produces a quarter of the world's carbon emissions, more than any other country: 11 times more per head of population than China, 20 times more than India, and 300 times

"All the stakeholders in tourism development should safeguard the natural environment with a view to achieving sound, continuous and sustainable economic growth geared to satisfying equitably the needs and aspirations of present and future generations".

more than Mozambique. The moderate targets prescribed by Kyoto Protocol have been ignored, though, the international community has been repeatedly warned by eminent scientists that five to ten years delay in cutting-out green-house gas emissions could put the job of stabilizing the atmosphere beyond reach and the planet could well be on its way to becoming a human-free zone. What relevance would have concepts like those of sustainable development and eco-tourism if islands after islands disappear and coastlines after coastlines get eroded and if nations are put to severe economic losses on account of floods, cyclones, storms and droughts? During the last decade, 1990-2000, the losses due to weather related disasters are believed to be as high as \$ 480 billion.

So far as the issues of 'equitable impact' and distribution of incomes are concerned, the position is even more disconcerting. The disparities have

become so acute that today 20 per cent of the world's people have got 86 per cent of the world's GNP, 82 per cent of the world's export market, and 68 per cent of the foreign direct investment. As against this, the bottom 20 per cent of the people are compelled to live with income of only \$ 1 a day and get a share of 1 per cent of the world GDP, 1 per cent of world export market and 1 per cent of foreign direct investment. And these disparities are daily increasing. The last ten years have seen an increasing concentration of income, resources and wealth amongst people, corporations and countries. The ratio between the fifth of the world's people living in the richest countries and fifth in the poorest, which was 30 to 1 in 1960, has increased to 74 to 1 in 1997. The assets of the top three billionaires today are more than the combined GNP of all least developed countries and their 600 million people.

The lesson of the last fifty years, in short, is quite clear. All over the globe, a new design for life has to be evolved and erected on foundational planks of new cultural values. A new mind and a new world have to emerge simultaneously to give meaning and content to our theoretical proposition.

We, in India, are keen to learn from this lesson and persuade other countries to do the same and build a new ethicscape which looks at this universe as a single cosmic web, and which believes that all things are connected and 'whatever befalls the earth, befalls the sons of the earth'.

We must go to 'the basic of things', 'to the roots of the matter',

and create a frame of mind which is in tune with our concepts and ideals and which is conducive to their materialisation on the ground. We realise that eco-tourism would have little attraction for those who are bitten by the bug of present-day consumerism; or whose minds are conditioned by the hedonistic approach and driven to seeking pleasures of the flesh; or whose outlook is determined by the belief: 'The world is a machine, composed of inert bodies, moved by physical necessity, indifferent to the existence of thinking being'. It would have, on the other hand, fascination for those whose hearts, like Wordsworth's, leap up when they behold daffodils in the sky.

We are, therefore, giving top priority to the measures which help in creating a healthy mindscape—a mindscape that is sensitive to finer aspects of life and leads to acceptance of better value system. Environmental education at all levels and regeneration of ancient traditions of living in harmony with nature and respecting its carrying capacity constitute the fundamental planks of our national policy. Re-interpretation and re-strengthening of our basic belief in the integral unity and non-duality of the Cosmos—'One in all and All in One'—is also high on our agenda.

We also believe that eco-tourism should not be viewed as nature-tourism alone. It must have a wider scope. It must help in eliminating poverty, in ending unemployment, in creating new skills, in enhancing the status of women, in preserving cultural heritage, in improving overall environment, in promoting dialogue amongst civilisations and in facilitating the growth of a more just and fair world order. It must

also act as a smokeless industry and its ecological footprints should be so soft as to admit of their early obliteration by the sands of time.

Rediscovering India

In the arena of tourism and culture, India, for quite some time, has been a sleeping giant. It is fully awake now and making strides in the right direction. It is rediscovering its vast bounties of nature and also great treasures of art, architecture and improving their approaches and elevating their surroundings. It is putting signpost on its virtually immeasurable cultural and sacred space. It is also tapping all opportunities for hill, adventure, rural and wild-life tourism and placing before the world, through tourist spots, its unique techniques of yoga, siddha, ayurveda and unani system of dealing with physical and mental illness. It is laying down an enchanting network of 572 nature-endowed areas—89 national parks and 483 wild-life sanctuaries and 3606 protected monuments under the Ancient Monuments and Archaeological Sites and Remains Act. It is attempting to do all that in the context of its 'ancient nobility of temper' and its tradition of evaluating life in terms of its overall quality and not merely in terms of material possessions.

Our overall effort is to present to the world the wonder that is India—wonder not only in terms of beauties and bounties of nature but also in terms of a civilisation that was born, bred and beckoned here; a civilisation that sprang up from an original and powerful mind and created three of the five greatest thought processes in the world, namely, Hinduism, Buddhism and Jainism. We are keen to ensure that the tourist to

India should get physically invigorated, mentally rejuvenated, culturally enriched and spiritually elevated and, on return to his country, he should feel India within him.

We realise that India has to put its best foot forward if it has to ride over the rising tide of international tourism which, according to the estimates of World Tourism Organisation, would swell to 1.5 billion in 2020 from its present level of 700 million, with receipt going up from \$ 476 billion to \$ 2000 billion. At the same time, we are conscious of the grave damage that poorly controlled tourism and 'short-termism' could cause, particularly to the nation's bio-diversity and its natural environment and historical sites and also to the local communities.

At the institutional level, we have evolved a framework which is government-led, private sector-driven and community-welfare-oriented. Government have to provide a legislative framework to regulate tourism trade and industry, ensure safety and security of the tourists and create basic infrastructure and health-care facilities. The private sector has to act as a mainspring of the activities and impart dynamism and speed to the process of development as well as conservation. Both government and the private sector are required to safeguard the stability and also the social and economic advancement of the local communities and the communities in the neighbourhood.

Our basic approach to tourism, particularly eco-tourism, can best be illustrated by presenting brief facts about two recent cases. One pertains to the Vaishno Devi shrine in Jammu region of North India

and the other to the Ajanta Ellora Caves in the state of Maharashtra, Western India.

Vaishno Devi Shrine

The shrine of Mata Vaishno Devi is one of the most venerated shrines of India. It is connected with the cult of Shakti which, in turn, is connected with the pre-Aryan cult of the Mother-Goddess. The shrine, which is really a natural cave-temple, is located in the Trikuta hills, about 45 km from Jammu. The nearest town is Katra from the base of which the devotees have to climb to about 6000 ft. The unique sanctity of the Holy Cave lies in the existence of three pindis: Moortis, which represent all the three Shaktis—Maha Saraswati, goddess of intellect; Maha Laxmi, goddess of wealth; Maha Kali, goddess of recreation.

To reform the management of the shrine, and to improve the condition around the complex, a law was enacted. Under it, an autonomous Board, known as Mata Vaishno Devi Shrine Board, with the Governor as Chairman, was set up. The entire management of the shrine and the complex around it was vested in this Board. All the offerings and donations were deposited into the funds of the Board from which they were spent on humanitarian and development schemes.

Rapid improvement was carried out with the shrine funds. In a short time, the entire 14 km-route was widened, made pucca, tiled and lighted with about 1000 sodium vapour lamps. More than ten lakh tiles were fixed, about 5000 parapet walls constructed, about 2000 metres of rails installed at dangerous points, 26 shelter-cum-cafeteria units were set up and all modern sanitary facilities,

including thousands of flush latrines, vacuum cleaners, fogging machines and brooms were provided, besides thousands of blankets which were cleaned through automatic dry-cleaning plants. Scores of new rest houses, shops, kiosks were built. Sixty green spots with flower beds and shrubs were created in addition to massive plantation in the complex. Humanitarian services were rendered to the people residing in the neighbouring villages and small towns by opening dispensaries, schools and work-centres. Quite a few vestiges of history, which were scattered in the area, were brought back to life in the shape of memorials, such as to Baba Jitto and General Zorawar Singh.

Now, the Vaishno Devi shrine has become, in its own way, a manifestation of the reformative spirit, a symbol of social and cultural advancement, and also a model of creativity and dynamism in administration. The conditions appeal to our simple folks and also to those who are in search of the life-spiritual which could harmonise the perceptions of the inner eye with the insight and outlook provided by modern science. Fifty to sixty crore of shrine funds are being invested annually for economic and environmental upgradation of life in the region. And this has a strong ripple effect. The number of visitors has increased from about 10 lakh to 50 lakh per annum. Benefit arising out of job opportunities and health and education facilities have gone largely to the local population. History and heritage, too, have been preserved and put on a stronger pedestal. The requirements of development and conservation have been effectively harmonised. From a physical and spiritual wasteland, the shrine-complex, has transformed into a great vista of green, both inner and outer.

Ajanta Ellora are two sets of ancient caves that have been cut out of rocks and studded with exquisite paintings and images. They are reckoned among the world's most important cultural treasures and also as potent symbols of the "great beauty of India's rich artistic past". They have been declared monuments of world heritage.

Ajanta Ellora Caves

The Ajanta set comprises 30 caves, including an unfinished one. They came into being from the 2nd century BC to 6th century AD. The themes of the paintings mostly centre around Buddha's life and the Jataka tales from the previous incarnations. The intense humanity of the figures painted and the remarkable sophistication of the painter make them a class by themselves. It is virtually the only evidence "remaining of painting styles that first developed in India and then travelled with the spread of Buddhism into the Himalayan region, and then via the Silk Roads across Central Asia into China, and from there to Japan and Korea".

The Ellora set of caves, 34 in number, have their own magnificence. They represent some of the finest artistic traditions of India associated with its three great faiths—Buddhist, Brahmanical and Jaina. The rock cut temple, Kailasa, is particularly remarkable on account of "its striking proportion, elaborate workmanship, architectural content and sculptural ornamentation".

To serve the twin objectives of conservation and development and also to recapture the ambience of the ancient times when spiritual solace was sought amidst the wild solitude of thick forests and

majestic hills of Sahyadri range and meditation was done around the soothing rustle of Waghora rivulet, a comprehensive scheme of improvement was drawn up with the financial assistance of Japan Bank of International Cooperation. Of late, it is being speedily implemented. The entire 160 kilometres of road, from the nearest airport of Aurangabad to the sites, has been upgraded, and 730 hectares of land around afforested. The foothills have been elegantly landscaped. The paintings are being subjected to 'conservation surgery' and the caves are being illumined with soft-light of optic fibre. At a distance of two kilometres from the caves, an elegant tourist centre, with all modern amenities and parking lots for vehicles, punctuated with

green, is being constructed. A shopping arcade is also being provided. The shops would be allotted to the members of the local community. Some other members would also get absorbed in various employment opportunities that development and management of this centre would create. At this site, an

Fifty to sixty crore of shrine funds are being invested annually for economic and environmental upgradation of life in the region. And this has a strong ripple effect.

Interpretation-cum-Information Centre is also being built. From this centre, only electric trolleys would take the tourists to the

caves, thereby facilitating emergence of better environment and making it possible for the tourists to enjoy nature at its best and also receive calmly the message of great pieces of art and human skill. The entire work is likely to be completed in the next two-three months.

Keeping in view the broad principles, which the above two models incorporate, a large number of other projects have been taken in hand. And it is hoped that they, too, would soon become a springboard for a great leap forward in the arena of eco-tourism. □

(The article is based on the speech of the Minister at the Asia-Pacific Ministerial Conference at Maldives in February 2002).

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Eco-tourism : Problems and Prospects

Santosh Yadav

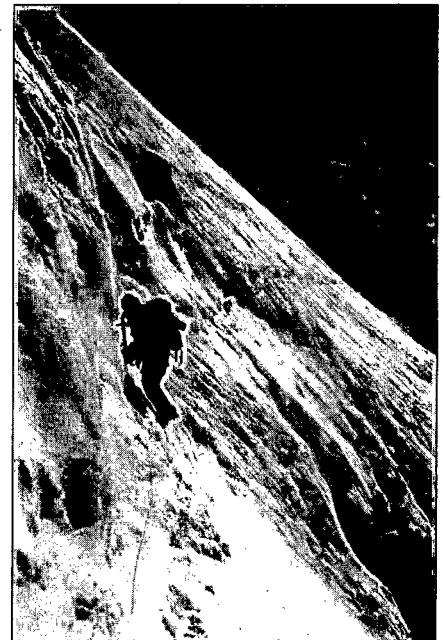
Only four per cent people live in ten per cent area of the hilly terrain all over the world, but they decide the destinies of 40 per cent living in the foothills. This should never be forgotten. This means that the planning and development of tourism infrastructure, its subsequent operation, and its marketing should focus on environmental, social, cultural and economic sustainability criteria.

AS A MAJOR initiative to spread awareness of the global importance of mountain ecosystems and the challenges faced by mountain people and to stimulate long-term on-the-ground action, the United Nations General Assembly (UNGA) declared 2002 as the International Year of Mountains (IYM). Celebrating IYM presents both a big challenge and a great opportunity. This unprecedented opportunity to address mountain issues and celebrate mountain culture evolved from the 1992 United Nations Conference on Environment and Development in Rio de Janeiro, where mountains became the singular focus of Chapter 13 of Agenda 21, the blueprint for sustainable development. It is indeed an important step within the long term process that began at the Earth Summit (UNCED) in Rio de Janeiro in 1992 of raising public awareness and ensuring adequate political, institutional and financial commitment for concrete action

towards implementing sustainable mountain development. Many mountain people are among the poorest, hungriest citizens of the world. They face massive barriers to development-rugged terrain, poor communications and transportation systems, political marginalization and limited access to education and capital. In such a context the goal of the IYM is to ensure the well being of mountain people by promoting sustainable development of mountain ecosystems. Peace and food security are the two pre requisites for any nation to achieve this goal. Indeed, as we begin commemorating the International Year of Mountains, conflict may be the single greatest obstacle to achieve our goals. Without peace, we cannot reduce poverty. Without peace, we cannot guarantee secure food supplies. Without peace, we cannot even consider sustainable development. As a matter of fact, the related barriers of armed conflict and hunger may today pose the most

significant obstacles. For instance in 1999, 23 of the 27 major armed conflicts in the world were being fought in mountain regions. And today many of the almost 800 million undernourished people in the world live in mountains.

As the new millennium unfolds,



A steep climb

Padmashri Mrs Santosh Yadav is the only woman to scale Everest twice. She is Vice President, Society for Environmental Awareness, Rehabilitation of Child and Handicapped, (SEARCH).

we are becoming increasingly aware of the finite, interconnected and precious nature of our planet



On the top of Everest Mrs Santosh Yadav

home. Likewise, tourism is becoming an increasingly popular expression of this awareness. With advances in transportation and information technology, even more remote areas of the earth are coming within reach of the traveller. In fact, tourism is now the world's largest industry, with nature tourism the fastest growing segment.

The year 2002 has also been declared the International Year of Eco-tourism (IYE). Since large portion of tourist activities occurs in mountain areas, this year provides an important opportunity to create and benefit from synergies in the observance of both events. This paper deals with a few aspects of eco-tourism in mountain regions and future strategies for sustainable mountain development programme through local community participation.

Eco-tourism as a Concept

Tourism is currently the world's largest industry (\$3.4 trillion annually) and eco-tourism represents the fastest growing sector

of this market. Tourism is already the largest source of foreign exchange in countries like Costa Rica and Belize; in Guatemala it is second. Throughout the developing tropics, protected area managers and local communities are struggling to balance the need for economic growth with the preservation of natural resources. Eco-tourism may offer one way of striking this critical balance. Well-planned eco-tourism can benefit both protected areas and residents of surrounding communities by linking long-term biodiversity conservation with local, social and economic development.

Eco-tourism in simple words means management of tourism and conservation of nature in a way so as to maintain a fine balance between the requirements of tourism and ecology on one hand and the needs of local communities for jobs—new skills, income generating employment and a better status for women on the other. The global importance of eco-tourism, its benefits as well as its impact was recognised with the launching of the year 2002 as the International Year of Eco-tourism (IYE) by the United Nations General Assembly. The IYE offers an opportunity to review eco-tourism experiences worldwide, in order to consolidate tools and institutional frameworks that ensure its sustainable development in the future. This means maximising the economic, environmental and social benefits from eco-tourism, while avoiding its shortcomings and negative impact.

Eco-tourism has recently come to be regarded as the panacea that enables us to aggressively seek tourism dollars with no obvious damage to ecosystems, since wild resources are not being harvested and there is no apparent associated

development. As a concept, eco-tourism has gained momentum recently in India, but as a way of life Indians have practised eco-tourism since times immemorial by their traditional approach to nature and rich cultural heritage. Eco-tourism has been defined in various ways. The International Eco-tourism Society in 1991 produced one of the earliest definitions: "Eco-tourism is responsible travel to natural areas that conserves the environment and sustains the well being of local people." The World Tourism Organisation (WTO) has defined it as "tourism that involves travelling to relatively undisturbed natural areas with the specified object of studying, admiring and enjoying nature and its wild plants and animals, as well as existing cultural aspects (both of the past and the present) found in these areas". According to World Conservation Union (IUCN, 1996) eco-tourism is "Environmentally responsible travel to natural areas, in order to enjoy and appreciate nature (and

The IYE offers an opportunity to review eco-tourism experiences worldwide, in order to consolidate tools and institutional frameworks that ensure its sustainable development in the future. This means maximising the economic, environmental and social benefits from eco-tourism, while avoiding its shortcomings and negative impact.

accompanying cultural features, both past and present) that promote conservation, have a low

visitor impact and provide for beneficially active socio-economic involvement of local peoples. " In sum, the definitions focus on three



Flora of Manapas (Garhwal Himalaya)

significant aspects viz., nature, tourism and local communities. It differs in a meaningful way from mass tourism that aims at consuming nature and leaving it depleted on more than one front. Conservation, sustainability, and biological diversity are the three interrelated aspects of eco-tourism. As a development tool, eco-tourism can advance the three basic goals of the Convention on Biological Diversity

- Conserve biological (and cultural) diversity, by strengthening protected area management systems (public or private) and increasing the value of sound ecosystems;
- Promote the sustainable use of biodiversity, by generating income, jobs and business opportunities in eco-tourism and related business networks, and
- Share the benefits of eco-

tourism developments equitably with local communities and indigenous people, by obtaining their informed consent and full participation in planning and management of eco-tourism businesses.

The mountain world today is in a perilous ecological state. The biophysical and socio-economic resource base is undergoing disastrous impoverishment due to human action.

The strong orientation of the eco-tourism field towards principles, guidelines, and certification based on sustainability standards gives it an unusual position in the tourism field. In the years since the concept was first defined, a general consensus has formed on the essential key elements of eco-tourism: a well preserved eco-system to attract tourists, conscientious, low-impact visitor behavior during various cultural and adventure activities, lowest possible consumption of nonrenewable resources, active involvement of the locals who are able to provide authentic information about nature, culture and their ethnic traditions to the visitors and finally empowering the local populace to manage eco-tourism so that they ensure conservation through alternative livelihood opportunities and educational components for both the traveller

and local communities.

Being an environment friendly activity, eco-tourism aims at promoting environmental values and ethics and preserving nature in its uninterrupted form. It thus benefits wildlife and nature by contributing towards ecological integrity. Participation of the local communities ensures economic benefits for them, which in the longer run can ensure a better status and an easier life.

In the field, well-planned and managed eco-tourism has proven to be one of the most effective tools for long-term conservation of biodiversity when the right circumstances (such as market feasibility, management capacity at local level, and clear and monitored links between eco-tourism development and conservation) are present.

The mountain ecosystems are the unique creation having altogether distinct characteristics. They have been regarded as an abode of gods, symbols of peace, tranquility and austerity and cradle of civilizations. Mountains are fragile ecosystems and are globally important as water towers of the earth, repositories of rich biological



Yak (Tibbet) Kharta Valley

diversity, minerals and forests, target areas for recreation, and as a hub of cultural integrity and heritage.

Occupying one-fifth of the world's land surface area, mountains provide a direct life-support base for one-tenth of humankind as well as goods and services to more than half the world's population. They are inhabited by the richest human cultures. Mountains are crucial to all life on earth. They are also an essential source of freshwater. More than three billion people rely on mountains for water, to grow food, to produce electricity, to sustain industries and, most importantly, to drink. Mountains still provide the mechanism which causes precipitation from the global circulation. But, owing to ecological degradation, the regional hydrological cycle is being seriously affected and, mountains' role as water towers will be ceased. The "greenhouse effect" in the mountains will have serious repercussions. The Mountain Agenda discussed in the United Nations Conference on Environment and Development at Rio de Janeiro in June 1992 says, "A warming trend in mountain regions that support glaciers and ice caps would not only cause an increase in the altitude of the snowline, it would also increase water runoff by melting ice and snow. The glaciers themselves are reservoirs and were they to melt the runoff regime would change dramatically and serious water shortage may occur."

Yet the mountain world today is in a perilous ecological state. The biophysical and socio-economic resource base is undergoing disastrous impoverishment due to human action. A study by the International Center for Integrated Mountain Development (ICIMOD), Kathmandu, Nepal, reveals a large number of negative indicators suggesting that mountains are in a state of unsustainability. The mountains are far more fragile than lowland

environments. Throughout the world, unsustainable forestry and agriculture practices are degrading many mountain ecosystems, often as a result of poverty, urbanization and growing population. Scientists also believe that mountains are barometers of global warming. Mountain glaciers, the source of water for most of the world's river systems, are melting at an unprecedented rate.

India has seven principal mountain ranges and the most important amongst them are the Himalayas. Our country has been bequeathed with the majestic Himalayan range, that feeds and preserves life throughout the north. Tranquility and peace are synonymous with these mountains.

The Himalayas run across the top of the Indian subcontinent stretching over some 2500 kilometres. These mountains were formed between 50 to 60 million years ago. The most recently formed are the lower foothills known as the Shivaliks. Beyond the Shivaliks are the lower Himalayas which have the most popular hill resorts of India like Shimla, Dalhousie, Mussoorie, Nainital and Darjeeling at the height of four to eight thousand feet above sea level. Beyond the lower Himalayas are the Great Himalayas or the Himadaris.

In the Himadaris are Everest and Annapurna peaks which lie in the boundaries of Nepal and within India are Kanchenjunga, Nanga Parbat and Nanda Devi. The Aravallis, one of the oldest ranges in the world, run between Delhi and Gujarat to the south west. Its once snow covered peaks are no more there but this mountain range still has one hill resort, Mount Abu and one peak Guru Shikhar, over 6000 feet high.

The Vindhyas divide the wide gangetic plains of northern India from the southern parts of the country. They are stretched over a length of 1000 kilometres with an average altitude of 974 feet. The Satpuras which are south of the Vindhyas, run parallel to them. The name Satpuras is formed of two words Sat meaning seven and Puras meaning folds, referring to the seven lines of hills which made up the Satpuras. It has one hill resort, Pachmarhi which is located near the highest point in the range, Dhupgarh at a height of 4429 feet. The Sahyadris run for 1600 kms down the western edge to the southern most point of India. The Sahyadris catch the monsoon rains on the western side. The hill resort in this area is Ootacamund or Ooty, known now as Udhagamandalam



Auli in the Lower Himalayas

Hill Stations in India

State	Name of The Hill Station
Himachal Pradesh	Chail, Chamba, Dalhousie, Dharamshala, Kasauli, Kangra, Kullu, Manali, Naldehra, Parwanoo, Shimla
Jammu & Kashmir	Gulmarg, Jammu, Patnitop, Sonamarg, Srinager
Jharkhand	Ranchi
Kerala	Munnar, Nelliampathy, Wayanad, Devikulam, Peermade, Ponmudi, Thiruvananthapuram, Idukki, Palakkad, Kannur
Uttaranchal	Almora, Dehradun, Kasuni, Mussoorie, Nainital, Pithoragarh
Madhya Pradesh	Bhedaghat
Rajasthan	Mount Abu
Maharashtra	Mahabaleshwar, Panchgani, Lonavala, Khandala -Karla, Matheran, Amboli, Jawahar, Panhala, Chikhaldara
Sikkim	Gangtok
Tamil Nadu	Kodaikkanal, Yercaud, Courtallam, Udthagamandalam
West Bengal	Darjeeling

which stands at the foot of the 8615 feet high Doda Betta Peak. This peak is located in the Nilgiris (literally, Blue Mountains). Beyond the Nilgiris are the Anamalai or Elephant Hills, the summits of which are said to resemble elephant heads. The famous hill resort of Kodaikkanal is located in the Palani Hills. The Eastern ghats which run on the opposite side of the Sahyadris have summits over 3200 feet but are devoid of hill resorts. To their southeast are the Shevroy hills and the hill station of Yercaud. Purvanchal, or eastern mountains are the last great mountain ranges of India running along the Indo-Myanmar border in North East India.

But unfortunately the mountains in India are experiencing an inexorable decline in the resource base for local subsistence and a terrible deterioration in the already fragile environment. The results are landslides, loss of catchment values and frequent floods in the densely populated plains to the south of the Himalayan region in the Indus,

Ganga and the Brahmaputra basin. In the Kumaon Himalayas in the last few decades there has been an unprecedented growth in human population and a corresponding rise in developmental activities, including housing, industry, agriculture, mining and communications. Consequently, there has been a rapid shrinkage in the size of remaining natural habitats and forests.

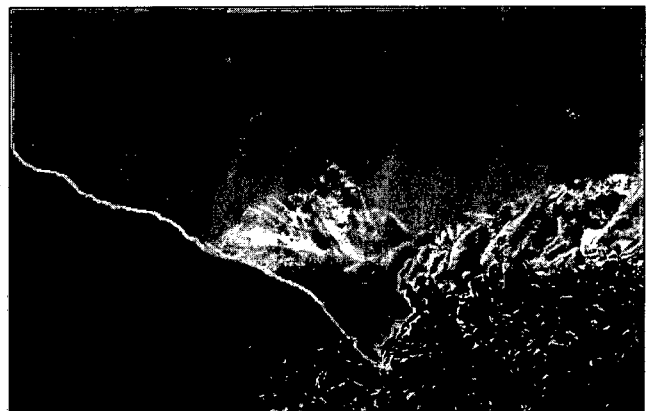
The tourism industry has succeeded in adding an impetus to the immense deforestation activities. Together with this, construction of roads and buildings plus movement of heavy vehicles is mounting degenerative pressure on the already weakened mountains.

Trekking is the latest craze with trendy youth. Trekking, for them, means just climbing up and down over treacherous terrain, and not following the basic rules of civics and hygiene that go with this sport. Trekking enthusiasts thus leave in their wake mounds of garbage and ecological destruction. As a result, even remote places like Yamunotri, Gangotri, Kedarnath and Gaumukh have become victims of destruction. The sanctity of these pilgrimages is being increasingly destroyed.

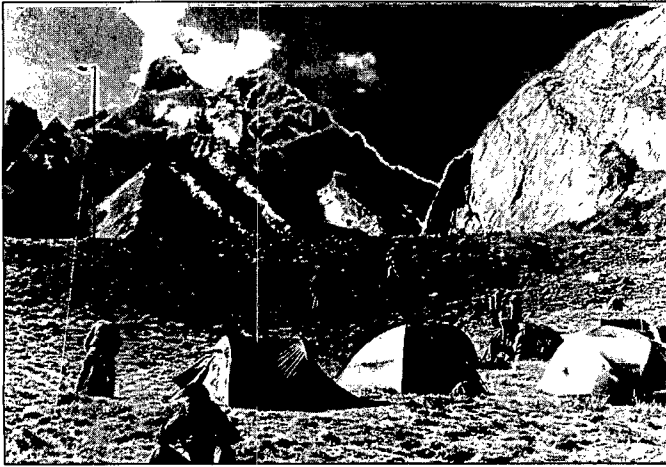
Eco-tourism in Mountains

Since the essence of eco-tourism lies in admiration of nature and outdoor recreation, it encompasses a wide range of activities such as trekking, hiking, mountaineering, bird watching, boating, rafting, biological explorations and visiting wildlife sanctuaries. In that it is akin to adventure tourism with the difference that whereas adventure tourism looks for thrill, eco-tourism ensures satisfaction. Its inspirational and emotional aspect is valued because it does not aim at consumptive erosion of natural resources.

India is one of the seven biodiverse countries of the world and has a rich cultural heritage. It has vast potential for eco-tourism that needs to be tapped for economic benefits as well as for



Nandadevi



Laskar Valley (J&K)

healthy conservation and preservation of nature. In the International Year of Eco-tourism, some important decisions have been taken by the government and the private sectors to promote eco-tourism. For example, the Himachal Pradesh Government has announced a policy of development of eco-tourism with special emphasis on the involvement of the local communities. Likewise, the forest and tourism departments of Karnataka, Sikkim, Rajasthan and Andhra Pradesh have designated officials to coordinate these activities. The Thenmala Eco-tourism Promotion Society, launched by Kerala will develop a model of eco-tourism. In the private sector, the concept of eco-friendly resorts and hotels is gaining recognition.

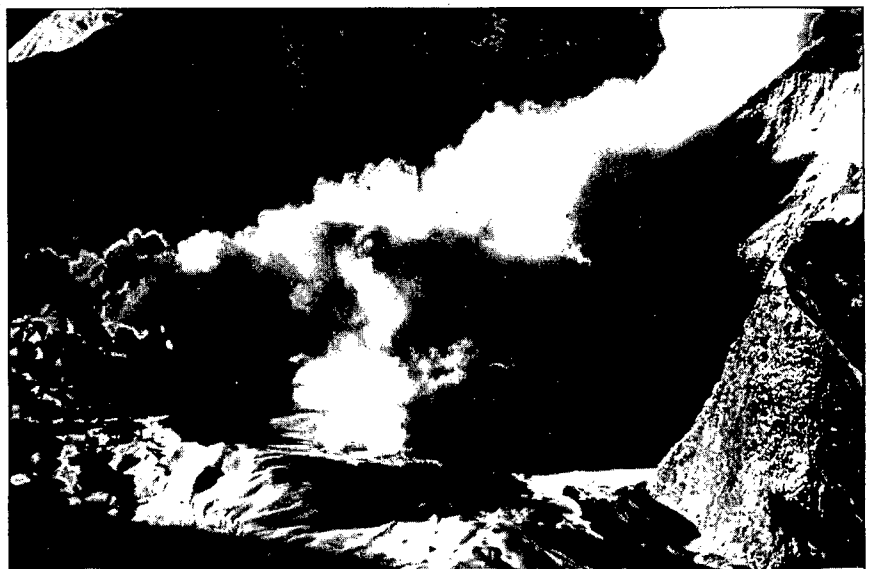
It is becoming evident that increased tourism to sensitive natural areas in the absence of appropriate planning and management can become a threat to the integrity of both ecosystems and local cultures. Increasing numbers of visitors to ecologically sensitive areas can lead to significant environmental degradation. Likewise, local communities and indigenous cultures can be harmed in numerous ways by an influx of foreign visitors and wealth.

systematic evaluation and analysis, using scientific techniques, before development decisions are taken. Any programme for tourism development should thus have the underlying objective of promoting the positive impacts and mitigating the negative impacts on the social, economic and physical environments of the designated areas. However, this same growth creates significant opportunities for both conservation and local community benefit. Eco-tourism can provide much needed revenues for the protection of national parks and other natural areas, revenues that

Tourism promotion and infrastructure development for tourism related activities is bound to have a series of socio-cultural, socio-economic, physical and environmental impacts on the habits which would require a

might not be available from other sources. In South and South East Asia, most of the archaeological and historic preservation taking place can be economically justified in such lower income countries because they provided attractions for tourists. In some cases such as Sri Lanka, admission fees paid by tourists is used directly for archaeological research and conservation.

Additionally, eco-tourism can provide a viable economic development alternative for local communities which may lack other income-generating options. Moreover, eco-tourism can increase the level of education and activism among travellers making them more enthusiastic and effective agents of conservation. Conservation and revitalisation of traditional arts, handicrafts, dance, music, drama, customs and ceremonies and certain aspects of traditional lifestyles directly feed into tourism. Eco-tourism industry in India is facing various challenges due to lack of strategic business plans; lack of well-trained local nature guides; lack of suitable marketing techniques (both for tourism and local artisans); lack of methods for gaining community



Avalanche at basecamp of Everest (Eastern face)

consensus on development projects; and lack of infrastructure etc.

The main thrust areas for developments of tourism in the Five Year Plans having implications on physical planning for tourism in macro and micro context are identified as under:

1. Development of selected tourist circuits and centres which are popular with the tourists instead of spreading limited resources over a large number of circuits/centres.

2. Diversification of tourism in India from the traditional sight-seeing tour centered (primarily places of cultural tourism interest) towards the more rapidly growing tourism market within the framework of country's milieu with a conscious attention to the aesthetic, environmental and socio-cultural implications of tourism projects.

3. Development of non-traditional areas such as (a) trekking (b) winter sports (c) wild life tourism and (d) beach resort tourism to exploit the tourism resource of the Himalayas, the vast coastline with sandy beaches and abundant sunshine and wildlife to attract more tourists and lengthen their period of stay in the country.

4. Restoration and balanced development of national heritage projects of both cultural, historical and tourist importance to exploit advantages if India's unique place as a cultural tourism destination and to utilise tourism as a major force in support of conservation of national heritage.



Mount Everest from Eastern side

A scientific approach to tourism planning, the hill regions and the habitat, would require analytical studies relating to:

- I. Likely impacts of development on the local environment and the hill habitat.
- II. Evaluating the tourist resources and infrastructure needs.
- III. Establishing certain developmental thresholds consistent with the carrying capacity of the area and similar aspects.

Any policy related to sustainable eco-tourism programme in India should have the following objectives:

- Defining the role of eco-tourism in the framework of a sustainable development strategy for India. Preconditions for eco-tourism in mountain areas (sustainable mobility, conservation and management of natural and cultural landscapes, etc.)
- Identifying best practices in

mountain eco-tourism in India.

- Development of strategies: Strategies for mountain eco-tourism development, at the global, national and regional levels.
- Reducing the threats posed by uncontrolled tourism development at the fragile sites we seek to conserve
- Developing a source of long-term financial sustainability for the conservation of protected area sites.

To commemorate the IYM and IYE in true sense we should set few goals:

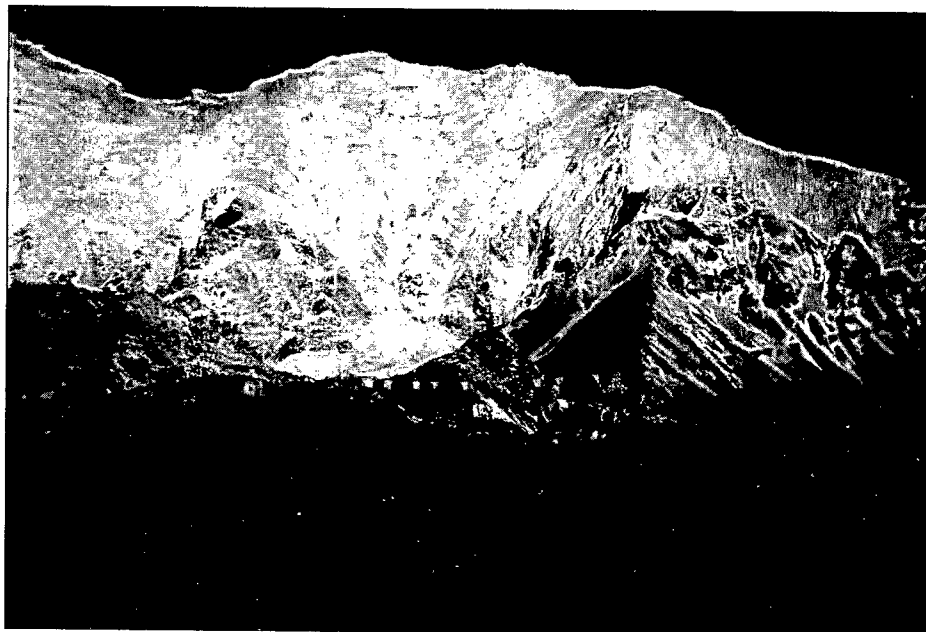
- To develop a methodology for monitoring impacts of tourism is an essential first step if we are to control those impacts.
- To train partners in developing joint eco-tourism strategies with local communities, including community-based eco-tourism enterprises.
- To promote guidelines for facilitating greater community

participation in the planning and management of eco-tourism.

- To assist and encourage non-governmental organizations (NGOs) to influence eco-tourism policy at the national and international level.
- To develop guidelines on eco-tourism planning, feasibility evaluation and appropriate, business planning.
- To facilitate the development of model eco-tourism programme and itineraries which generate benefits for site conservation, partners and local communities.

To realize potential of eco-tourism as a tool for conservation and economic development, new and more integrated approaches are needed which place greater emphasis on building local capacity and enhancing local benefits. There is a need to develop appropriate models for infrastructure development; frameworks to guide tour operator-NGO partnerships; effective training programmes for local nature guides; and methods and skills for participatory, community-based eco-tourism planning and development etc.

In the mountain context ecological stability, viable economy, energetic efficiency, resilience, farmers security and social justice should be the main indicators of sustainability. Keeping this in mind planning of any eco-tourism policy in their macro, meso and micro dimensions should give utmost importance for the empowerment of the local communities. The inherent qualities of hillman, which they have developed in the



Mount Everest from Eastern side—another view

mountain environment—courage, hard work, honesty and fast decision—should grow as these are the capitals of the whole humankind. Only four per cent people live in ten percent area of the hilly terrain all over the world, but they decide the destinies of 40 percent living in the foothills. This should never be forgotten. This means that the planning and development of tourism infrastructure, its subsequent operation, and its marketing should focus on environmental, social, cultural and economic sustainability criteria.

We in India should learn lessons from the progress made by Maldives in the field of eco-tourism. Since tourism is the prime industry in Maldives, they have grown dependent on it and have worked out ways and means to protect their reefs. It is incumbent on all the resorts and hotels to dispose of their garbage, conserve water and recycle the waste material. Other countries like Indonesia, the Philippines and Nepal have evolved effective methods for using the income

generated by eco-tourism for the benefit of the local communities. In the Philippines, for example, the fishermen have been convinced to shift from blast fishing to other more traditional and safe methods. In Indonesia, Project Bird Watch has been launched to protect its rare birds.

For most protected areas and surrounding communities, eco-tourism remains an unrealized possibility, and the links between eco-tourism development and conservation are poorly understood. Despite some isolated successes, efforts to promote eco-tourism development are often limited by a narrow focus on infrastructure development and have failed to maximize opportunities for generating local benefits. In addition, there has been a tendency for international technical assistance and institutional support to substitute for local capacity development rather than to foster it. Let us hope that this year will address all these issues and mountain development programme will be given top most priority for our better and sustainable future. □

Eco-tourism and Mountains

Usha Bande

India is one of the seven mega biodiversity countries of the world; it attracts tourists for its rich and ancient cultural heritage; and it has immense potential for eco-tourism development through which conservation and economic development can be planned.

Mountains are the beginning and the end of the natural scenery.

John Ruskin

We have not inherited the earth from our ancestors; we are borrowing it from our children.

A Native American Saying

ECO-TOURISM IS an amalgam of two separate concepts: ecology and tourism, but viewed jointly the coinage assumes great significance both for ecological conservation and development of tourism. Tourism has been recognized of late as a revenue earner with the potential for generating employment for the local populace; on the other hand, an ecological perspective is considered significant for preserving the ecosystem of the earth; thus eco-tourism has drawn the attention of the world community as a positive contributor towards the preservation of the natural and cultural resources and also towards the development of tourism. Since mountains hold great tourist attraction for their grandeur, natural beauty and the unique ecosystem, they have been viewed as haven for eco-tourist activities,

which are generally outdoor and adventure-oriented.

In general, eco-tourism stands for the management of tourism in such a manner that man derives maximum benefit from nature without disturbing its innate balance. It seeks to restore man's communication with nature and to ensure the fulfillment of the need of the local communities, so that their local cultures and traditions remain undisturbed and intact. Eco-tourism recognizes the full integration of tourist industry in order to ensure that travel and tourism provide a source of income for the people of the area, and that in return they contribute to the conservation, protection and restoration of the earth's ecosystem. Thus, environmental protection becomes a vital part of sustainable tourism. It is important that ecological perspective and tourism requirements are so handled that they fulfill the "aesthetic, economic and social needs," and also "ensure the maintenance of the cultural integrity, essential ecological processes, biological diversity and life-sustaining systems."

Eco-tourism has been defined variously as "an economic process

where rare and beautiful ecosystems are marketed", or as "tourism with a specific motive of enjoying wildlife and underdeveloped natural area" or as "purposeful travel to natural areas to understand the culture and natural history of the environment taking care not to alter the integrity of the ecosystem." These definitions show two specific trends: in the one, eco-tourism has been viewed as a consumer item and in the other, as a satisfying experience. The definition provided by the World Tourism Organization (WTO) is more exact and comprehensive. According to it, eco-tourism is "tourism that involves travelling to relatively undisturbed natural areas with the specified object of studying, admiring and enjoying nature and its wild plants and animals, as well as existing cultural aspects (both of the past and the present), found in these areas." Eco-tourism then is an environment friendly activity, as it does not involve consumptive attitude to nature; it fosters environmental ethics and ensures that the eco-tourists have an inspirational and emotional satisfaction as it aims at benefiting the wildlife and environment; and

ultimately it promotes local development, and empowers the local communities.

Eco-tourism ensures satisfaction, and it is conducted for small, homogenous groups. Its inspirational and emotional approach is valuable because it does not aim at looking at nature as a consumable item but as something to be appreciated for its own sake.

Eco-tourism gained popularity when the UN designated the year 2002 as the year of Eco-tourism and the year of the Mountains, with an objective to generate better awareness among public authorities, private sector and civil society about the capacity of eco-tourism to contribute to the conservation of the natural and cultural heritage; the improvement of the standard of living in those areas; and to disseminate techniques for planning and management of eco-tourism. Moreover, the aim of focusing on the mountains is to draw the attention of the world community towards the rapid environmental degradation of the mountain regions because of unchecked trekking and mountaineering expeditions, resulting in making the valleys and mountainsides the dumping grounds of garbage and denuding the forest to provide firewood to the campers.

The international eco-tourism year offers an opportunity to review eco-tourism experiences worldwide and to consolidate efforts towards sustainable development. Apart from this, one of the aims of declaring the year 2002 as

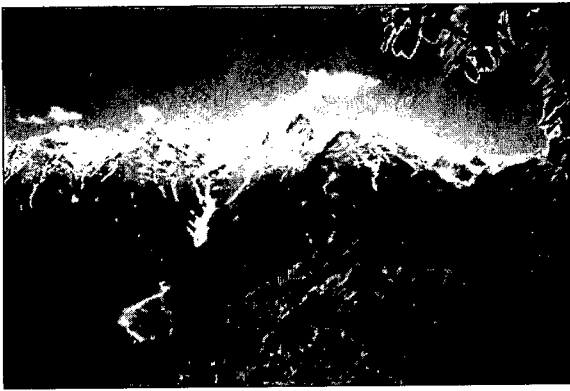
International Year of Eco-tourism has been to "foster better understanding among peoples of the world, leading to the greater awareness of the rich cultural heritage of various countries and of bringing about a better appreciation of the inherent values of different cultures, thereby contributing to world peace." The Government of India, in keeping with the spirit of the UN declaration has drafted a new tourism policy with a specific view to "foster understanding between people, to create employment opportunities and bring about socio-economic benefits to the community, particularly in the interior and remote areas and to strive towards a balanced and sustainable development and preserve, enrich and promote India's cultural heritage." The draft further takes note of the significance of encouraging people's participation in the programme and of making it a common endeavor so that agencies other than the central and state governments help achieve the objectives.

Before we consider the significance of mountains as potential areas for developing eco-tourism, let us throw a glance at the various activities that come under the concept of eco-tourism. These encompass a wide range of activities that can be termed as outdoor recreation, such as: trekking, hiking, mountaineering, mountain cycling, kayaking, bird-watching, boating, river rafting, skiing, biological explorations and visiting wildlife sanctuaries. Most of these activities are akin to adventure tourism but there is a major difference in that in adventure tourism the accent is on deriving thrill out of nature. A person enjoying rafting may or may not be aware of the river as such, whereas an eco-tourist will be emotionally

drawn to the mighty force. In other words, one could use poet William Wordsworth's analogy and say that in the former it is the animal spirit of robust activity, in the latter, the approach is more sentimental and mature. Again, in adventure tourism generally the young people participate, whereas in eco-tourism the older and mature tourists can be involved along with the young. Eco-tourism ensures satisfaction, and it is conducted for small, homogenous groups. Its inspirational and emotional approach is valuable because it does not aim at looking at nature as a consumable item but as something to be appreciated for its own sake. Further, eco-tourism differs from mass tourism or what may be termed as resort tourism in a significant way. In the latter, the main objective of the tourist is to get away from the usual routine, enjoy a holiday, visit places of historical or tourist interest and go back carrying the memory of a good outing. A majority of these tourists do not



Mother-tree with 13 trees grown as one, in one of the sacred groves of Chamba (Himachal Pradesh)



The denuded forests, receding snow-line—Himalayas must be saved

feel much inspired by the natural beauty or the cultural uniqueness of the areas.

Mountains provide an effective arena for the conduct of eco-tourism activities. The unique eco-system of the mountains, their grandeur and the awe-inspiring scenic beauty are a source of perennial attraction. Trekking, hiking, mountaineering, in fact almost all the eco-tourism activities can be organized on the mountains. Let us consider some special features that mountain eco-tourism holds out to us. Mountains are rich pockets of green. The variety of trees, herbs and flowers is breathtaking. These green pockets are significant in many respects: they add to the beauty of the landscape, they are an abode of flora and fauna and they are a treasure of plants, shrubs and herbs of medicinal value. The locals revere these green pockets and traditionally conserve them as sacred groves. Hundreds of sacred groves are scattered all over India in the plains as well as in the mountainous regions. Shipin, about 12 kms from Shimla, in the Himalayas has the biggest deodar grove that is home to trees, hundreds of years old. There are many such groves in the Himalayan region that find mention in our ancient scriptures. The Himalayas is our natural as well as spiritual

heritage: it embodies our highest ideals and aspirations. Unfortunately, the ecology of the Himalayas is undergoing fast deterioration and requires immediate attention. It is at this point that eco-tourism with proper management of conservation can help

the mountain eco-system.

The mountains have a large

Mountains provide an effective arena for the conduct of eco-tourism activities. The unique eco-system of the mountains, their grandeur and the awe-inspiring scenic beauty are a source of perennial attraction. Trekking, hiking, mountaineering, in fact almost all the eco-tourism activities, can be organized on the mountains.

variety of animals and birds. Watching them in their natural surroundings in sanctuaries and forest reserves can be a thrilling and educative experience. Chikhaldara in Maharashtra, for example, is situated in the Satpura ranges. Mythologically, it is associated with Keechak of the Mahabharata. Chikhaldara is a tiger reserve and is also the habitat of some of the ancient tribes. For eco-tourism, the place is an ideal setting with rocky ranges, thick forest, tigers and other wildlife and the locals whose culture and traditions can be studied and appreciated. The same could be said of very many other places that

abound in the country. The Western ghats and the hilly areas of Kerala have large tracts of sacred groves as also the possibility of outdoor recreational and cultural activities.

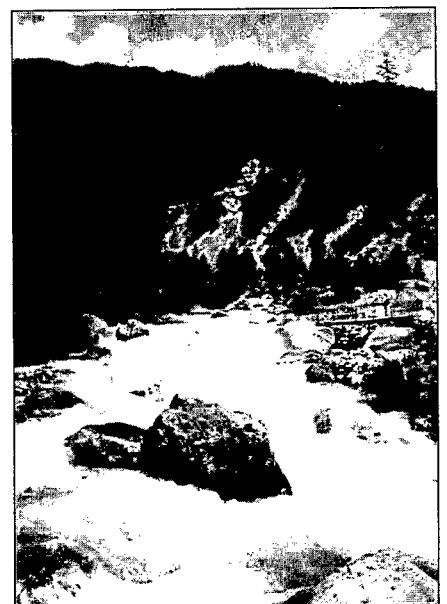
Eco-tourism activities on and around the mountains can be grouped as under:

- Outdoor activities such as trekking, hiking, mountain cycling, mountaineering, river rafting etc. for small groups.
- Visit to sacred groves and the heritage spots with a conscious effort to understand their religious and cultural significance for the locals.

Visit to wildlife and bird sanctuaries and national parks.

- Treks to lakes, valleys and snow peaks where possible.
- Staying with the local communities or in the pristine surroundings, watching and appreciating their traditions and culture.

Now the question arises as to what steps need be taken to make eco-tourism an effective way to fulfill its triple functions: economic, social and



A gurgling, dancing mountain stream

environmental? For the success of eco-tourism, there are some cardinal points that should be attended to. It is essential to ensure that tourists desirous of enjoying the benefit of eco-tourism are taken around in small groups; they should be aware and environmental friendly and should be motivated to admire nature for nature's sake. The areas demarcated for eco-tourism should be exclusively set aside for the purpose and should be well preserved, having natural environment with variegated and thick vegetation, water, historic, ethnic and cultural resources. The activities should be so planned that they are eco-friendly and least damaging to the eco-system. These should also be conducive to the local cultures and should hurt neither the visitors' sentiments nor those of the locals. The local people with knowledge of their culture, traditions and customs should be involved as the key actors in the venture so that they have full participation as also the ability to satisfy the curiosity of the visitors.

Effective Measure

Eco-tourism in the mountains can be an effective measure to ensure economic growth without harming or disturbing the natural environment. The case of Nepal can be cited as an example. Nepal, the mountain kingdom, has had a peculiar problem generated by the constant influx of tourists, particularly the trekkers going up the peaks: Everest, Annapurna and others. The mountainsides, littered with garbage and trees hewn for firewood for the campers, made a pathetic sight. Seeing the mess the government adopted eco-tourism measures to intensify tourism and to achieve eco-balance. Some of the steps taken included cleaning up campaigns and conservation

efforts for which the authorities decided to divert a part of the funds collected as trekking fees. Knowing that the lamas command the respect of the locals and would willingly pay heed to their call, the government, aided by the WWF and the local lamas of the Tengboche monastery set up the Khumbu group and assigned it the task of cleaning up the mountainsides. The area is now fast recovering its original shape. The



Temple complex, chamba (H.P.)—visits to heritage places is an important aspect eco-tourism

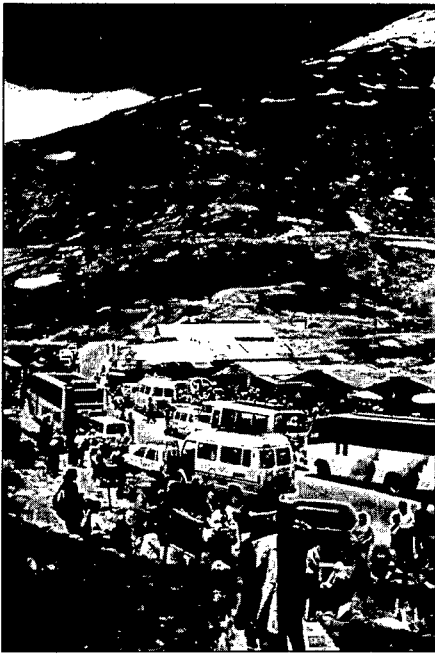
Everest was ridiculed as the "toilet bowl" and as Mingma Norbu Sherpa of the WWF puts it "we were tired of hearing that the Everest was a toilet bowl." Today, the Annapurna Conservation Area Project has over \$ 5000,000 a year out of the tourist fees and the money is used for conserving biodiversity and local culture. Similarly, Namche Bazar—the gateway to the Everest—is now economically well off and ecologically stable. The Nepal government is also developing several national parks and sanctuaries to attract tourism. The Makalu-Barun National park is so

situated that it has tropical rain forest at elevations just above the sea level and the majestic mountain peaks, nestling together. Since the park is also home to several ethnic groups it has a vast potential for eco-tourist activities. But, more efforts are needed if the Himalayas and its biodiversity are to be saved. The Nepal government which is allowing unchecked inflow of tourist and trekkers need to restrain and regulate influx.

Maldives, rich in biodiversity, has taken to eco-tourism seriously and effectively. Well, this small island country recognizes that it expects from eco-tourism a fine balance between the requirement of tourism and conservation and the local communities' need for jobs and generation of income. For Maldives tourism is a full-fledged industry and they are dependent on the revenue brought in by it but at the same time they are also aware of the pitfalls of unplanned tourism. They have taken strict measures to protect their reefs and have made incumbent on all resorts and hotels to dispose of their garbage by burning, conserve water and recycle waste material. As the Maldives President once observed, for them tourism is not only a route to development but to survival.

Suitable Strategies

Most of the countries have evolved strategies as per their eco-requirement. Say, for example, on the Olango Island of Philippine (a birdwatchers' paradise), fishermen are not allowed to use land blast fishing. They have reverted to the traditional methods and the members of the fishing community have been motivated to be the lifeguard-guides of the sanctuary. Their women folk are involved in food preparations and visitor management. The project has



Madhi, Mid-way between Mandi and Rohtang. Chattered with tourists. Harmful for ecology

benefited many of the families economically.

In Indonesia, the Seram Parrots were an endangered species because of bird trade. They have started Project Bird Watch. Its aim is to draw the bird trappers into the conservation effort and convert them into guides. In Japan, they have formed a Forum for Green Transformation of Culture, while in Australia the Eco-tourism Association is providing nature-based tourism to educate the consumers, enhance the environment and strengthen the local communities in the Blue Mountain. The regional conference of SAARC countries was organized in January this year to discuss the strategy to work with communities to preserve South Asia's endangered species. The Chairperson of the Sikkim Eco-tourism and Conservation Society expressed his satisfaction at the range of awareness among the SAARC countries and said, "There is a range of awareness and product development in the region, where it can be beneficial for other countries to learn from each

other." Many states of India have adopted measures to promote eco-tourism in their areas. For example, Kerala has launched the Thenmala Eco-tourism Promotion Society to develop model for eco-tourism; Himachal Pradesh has announced a policy of eco-tourism development with special emphasis on the involvement of the local communities. The Forest Corporations of Uttaranchal and West Bengal have initiated eco-tourism activities, whereas in some states the Tourism Departments and the Forest Department are joining hands to promote eco-tourism.

To reduce the impact of environmental deterioration, various organizations have taken steps to stop deforestation in the Himalayan region. One of the steps is to provide kerosene stoves or fuel-efficient wood stoves to the campers. It is also envisaged that consumption of food items that do not need to be cooked is encouraged. Alternative hydropower is made available wherever possible. As regards garbage dumping on the hillsides, it is incumbent on the trekkers, campers etc. to use garbage pits or to pack it to the more populated centres to be disposed of. The mountain states nestling in the Himalayas in particular need to intensify their conservation efforts and make their policies more effective to get satisfactory results and benefits from the year of the mountains.

India is one of the seven mega biodiversity countries of the world; it attracts tourists for its rich and ancient cultural heritage; and it has immense potential for eco-tourism development through which conservation and economic development can be planned. But usually, mass tourism and uncontrolled tourist traffic prove detrimental to the already fragile and depleting eco-system of the mountains. Researchers in the field

are not wrong in observing that sometimes "tourism destroys tourism." But, the adoption of the principles of eco-tourism can help regain for them their fast vanishing beauty and help the locals in improving their economic conditions and maintain their cultural integrity. There are several success stories that can be cited as examples. To quote but one instance, a programme that converted poachers into guides at the Periyar Tiger Preserve in Kerala has resulted in the conservation of species, while providing employment that benefits forty families.

However, one cannot be complacent with the existing situation. There are some misgivings regarding eco-tourism, which need to be tackled first: the local population in many areas is apprehensive about the outsiders' influence on their culture, and they tend to resist interference; it is, therefore, necessary to clear their doubts, educate them and instil confidence in them. Secondly, it is imperative to regulate access to sensitive areas in meaningful ways and reasonable but strong fees structures should be appropriated to realize the inherent potential for generating revenue. Thirdly, it should be ensured that the monetary profits accrued out of tourism are earmarked and reinvested into conservation and community development. "The key is working with funding and planning agencies to understand and establish eco-tourism as a development tool that can help provide necessary economic development for impoverished communities living near sensitive natural areas," said Ms Megan Epler Wood, President of The International Eco-tourism Society. It is this kind of understanding that is necessary to ensure the success of eco-tourism. □

Eco-tourism and Himalayas

M S Kohli

Strict conservation of the Himalayan region is no solution. It is necessary to develop this region in order to improve the standard of living of the local people and to promote further growth of national economies of this region. The solution lies in carrying out all this development in a new era of heightened cooperation without disturbing the ecosystems of the Himalayas.

UNITED NATIONS General Assembly has proclaimed the year 2002 as the International Year of Mountains. Since a large portion of tourist activities occur in mountain areas, eco-tourism and Himalayas, a world heritage, need to be given due importance. Environmental degradation is a threat that has permeated into the Himalayas. Similar processes can be observed in the Andes and in Northern Africa. In the Alps, despite a wide range of measures taken during the last century to cope with the destructive forces of water, they face new indications of environmental problems.

Environmental groups have recently brought attention to the European Alps being ravaged by millions of tourists. Should we not then learn from this lesson of the Alps and not wait till the damage is irreversible? The environmental problems are nowhere more acute than in the Himalayas, as this vast ecosystem stands under a great threat.

The magnificent Himalayas resplendent in beauty and majesty,

striking in their stark immutability and their massive grandeur are in fact the most fragile eco-system on earth. The Himalayan region shared by China, India, Nepal, Pakistan, Bhutan, Burma, Afghanistan and Russia is inhabited by over 30 million people, and an additional 350 million live in adjacent large river basins. This region, the source of many great rivers—the Indus, the Ganges, the Brahmaputra and the Hwang Ho Yangtze—is the repository of natural resources of various kinds and magnitudes, vital for the well being of hundreds of millions of people. The Himalayas, considered the 'Abode of the Gods' have contributed to the growth and development of myriad cultures and ethnic groups, some in isolation but others blossoming into living faiths for millions.

During the past three decades this region of eternal snow and varied vegetation has witnessed changes of geological proportions, besieged with problems of massive erosion and landslides, population pressure and migration in mountain areas, changing flora and

fauna, and above all the effects of increasing number of trekkers and mountaineers.

Strict conservation of the Himalayan region is no solution. It is necessary to develop this region in order to improve the standard of living of the local people and to promote further growth of national economies of this region. The solution lies in carrying out all this development in a new era of heightened cooperation without disturbing the ecosystems of the Himalayas.

It is a mammoth task for the local people themselves, for their governments, and for the international mountaineering community.

Forty nine years ago, when Sir Edmund Hillary and Tenzing Norgay reached the summit of Mount Everest, there were fewer than a dozen mountaineering expeditions to the Himalayas, and under a hundred trekkers. Today the number of trekkers has increased to a staggering half a million and the number of expeditions more than 1,000, with

Capt M S Kohli, leader of the historic expedition that put nine men atop Mount Everest in 1965, is Chairman, Himalayan Environment Trust.

adventure tourism in the Himalayas still growing at a rapid pace.

Besides, the number of pilgrim-tourists who visit various Buddhist, Hindu and Sikh shrines strewn all over the Himalayas, are over five million.

International Centre for Integrated Mountain Development (ICIMOD): To discuss developments of mountain ecosystem and to look for more interdisciplinary and international cooperation in coping with these problems, an international workshop was organised in Munich in 1974 by the German Foundation for International Development. The aim was to reach a 'feasible compromise between more intensive development of mountain regions, with their great variety of resources, and maintenance of their protective function. The workshop raised the idea of creating an autonomous international institution which would be concerned with collecting, preparing, checking, and using scientific information and practical data concerning the whole complex field of mountain development. Such an institution would function as a clearing house which would, apart from making information available, would also provide expertise and train personnel. One of the main promoters proposed that the new institution should have branches in at least three continents.

Another milestone towards the making of ICIMOD was set at the regional meeting for Integrated Ecological Research and Training Needs in the Southern Asian Mountain Systems, particularly the HinduKush Himalayas, organised by UNESCO in 1975 in Kathmandu. This meeting took place within the frame of

UNESCO'S programme on Man and the Biosphere (MAB) with the cooperation of His Majesty's Government of Nepal, and was

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attended by delegates from many countries and representatives of international organisations. Discussions centred around problems of biosphere reserves, and proposals for increasing problem awareness, training activities, and documentation. Recommendation was also made for the establishment of a regional institute for integrated research and training, and technical advisory services. The meeting also welcomed the offer of the Kingdom of Nepal to house the proposed institution in Nepal. ICIMOD has engaged all countries of the region in the discussion of the work programme. Realistic outlook or cooperative links were developed with some countries. ICIMOD has also attracted the broad interest of the world-wide scientific community.

Annapurna Conservation Area Project (ACAP): An interesting

development was the Annapurna Conservation Area in 1986. The government set aside over seven percent of its total area in more than a dozen national parks and preserves. Much more than a mere park, the 1000-square mile Annapurna Conservation Area Project is administered by the King Mahendra Trust for Nature Conservation, and is financed by the World Wildlife Fund and other private donors.

The ACA project, a grand experiment of a new spirit of cooperation, incorporates some of the latest thinking and environmental management. Recognising, there can be no meaningful conservation without the active involvement of the local inhabitants, ACAP's funders vested villagers with control over the natural resources of the region.

Most of the income from a user fee imposed on tourists goes directly to the villagers to manage the preserve. They now have nurseries to grow wood for fuel, a kerosene depot to prohibit the use of firewood in and around the sanctuary. Training is given to forest guards for repair and cleaning of trails, sanitation, alternative use of energy sources and the hazards of erosion.

The future of ACAP depends on how the people handle the decisions they will make regarding their future in protecting their land, balancing short term benefits against long term gains.

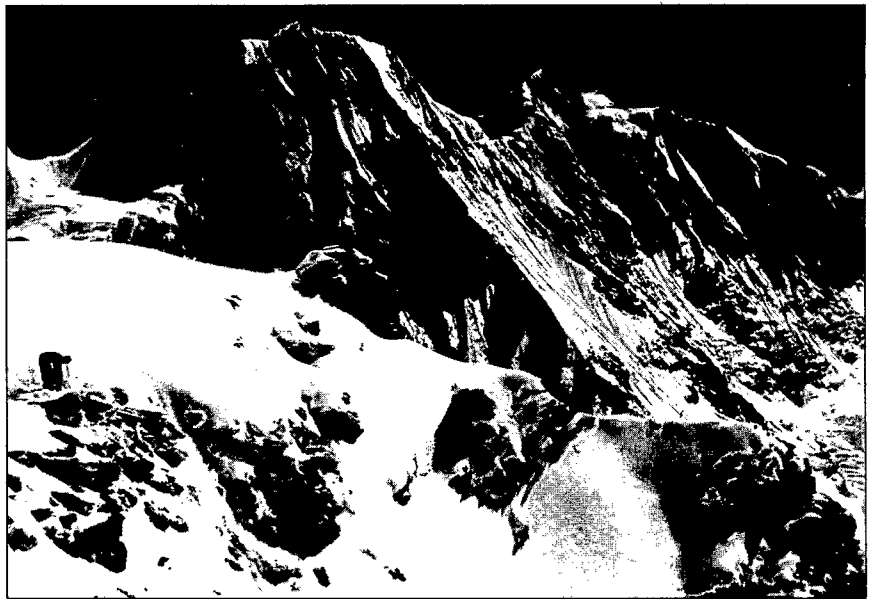
Himalayan Environment Trust (HET): Towards the end of 1988, I realised that for almost two decades, I have been touring all over the world on behalf of Air India, popularising the Himalayas through my books, adventures, radio and television interviews, and addressing Alpine Clubs. I felt it was

time to return with gratitude something to the Himalayas, a project to protect their grandeur. I approached Sir Edmund Hillary, who was then the High Commissioner of New Zealand in India, and discussed my plan regarding the formation of the Himalayan Adventure Trust. Sir Edmund liked the idea. We thus joined forces in a consolidated effort to preserve and renew the ecosystem. Close friends and mountaineers, likewise leaders in this field, all from different parts of the world interested in this noble cause were pleased to be invited to join the Trust.

The Trust was originally registered in New Delhi on June 17, 1988, and was formally inaugurated in Hong Kong on October 14, 1989. Name of the Trust was later changed to Himalayan Environment Trust which was registered under the Indian Trust Act on June 12, 1991.

Aims and Objectives

- To mobilise support from mountaineers, trekkers, alpine clubs, adventure tour operators, and the Himalayan region governments, to protect the Himalayan environment, its flora, fauna and natural resources, as well as to protect the customs and interest of the local people.
- To evolve a code of conduct and ethics to be followed by the visitors to the Himalayan region, as part of continuing effort to maintain and sustain the well-being of the Himalayan environment.
- To hold International conferences, seminars, and Himalayan tourism meets, to discuss problems of Himalayan environment and focus world attention on such matters.
- To exchange information and



Himalayan Range

cooperate with other local, national and international agencies engaged in similar work, such as the International Centre for the Integrated Mountain Development, Kathmandu, and the Mountain

The trustees, who are all eminent climbers and in a way responsible for the unprecedented growth of adventure tourism in the Himalayas, were concerned at some of the recent adverse effects—pollution on some of the Himalayan trails, lack of anti-pollution measures by some trekking agencies, over-crowding of certain trails, and lack of environment education.

Protection Commission of UIAA.

- To evolve necessary guidelines in consultation with the Himalayan countries concerning adventure tourism, to avoid over-crowding of

certain popular trails, and achieve a fair spread of trekkers and mountaineers throughout the Himalayas.

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The Trust decided to concentrate in building up expertise in all environmental aspects of Himalayas to effectively assist the governments in the Himalayan region, and other organisations involved in this mammoth task. The Trust aims to encourage and educate the trekkers into a sense of responsibility towards the Himalayan environment, to leave these beautiful areas as they found them-or may be better! And to build a fierce sense of responsibility that these magnificent mountains belong to

the world in general and must be protected for centuries to come.

Code of Conduct

The trustees, during the international conference in Tokyo in 1991, formulated the "Himalayan Code of Conduct" for all visitors to the Himalayas which has been accepted world-wide and followed. The "Himalayan Code of Conduct" finalised by the HET is as under:

- **Protect the natural environment**
- **Camp site:** Remember that another party will be using the same camp site after you have vacated it. Therefore, leave the camp site cleaner than you found it.
- **Limit Deforestation :** Make no open fires: discourage others from doing so on your behalf. Where water is heated by scarce firewood, use as little of it as possible. When possible choose accommodation that uses kerosene or fuel-efficient firewood stoves. You will help the cause greatly by taking saplings with you and planting them on your trail.
- **Burn dry paper and packets in a safe place:** bury other waste paper and bio-degradable material including food. Carry back all non-bio-degradable material including food. Carry back all non-biodegradable litter. If you come across other people's rubbish, remove it as well.
- **Keep local water clean and avoid using pollutants :** such as detergents in streams or springs. If no toilet facilities are available, make sure you are at least 30 metres away from water source, and you bury or cover the waste.
- **Plants should be left to flourish in their natural environment:** taking away cuttings, seeds and

roots is illegal in many parts of the Himalayas.

- **Help your guides and porters to follow conservation measures:** Do not allow the cooks or porters to throw garbage in streams or rivers.
- **Let Himalayas change you—do not change them.**
- **Respect local traditions, protect local cultures, maintain local pride.**
- **When taking photographs, respect privacy:** ask permission and use restraint.
- **Respect holy places :** preserve what you have come to see, never touch or remove religious objects. Remove shoes when visiting temples.
- **Refrain from giving money to children since it will encourage begging:** A donation to a project, health centre or school is a more constructive way to help.
- **Respect for local etiquette earns you respect :** loose, lightweight clothes are preferable to revealing shorts, skimpy tops and tight fitting action wear. Hand holding or kissing in public are disapproved by local people

During the last 13 years a number of international conferences on the subject of Himalayan environment, were held. First international conference on Himalayan environment, sponsored by the HET, was held in New Delhi on March 30-31, 1990. In October the same year, the UIAA General Assembly met in New Delhi and issued the Delhi declaration with a focus on Himalayan Environment. In 1991 the Himalayan Mountaineering and Tourism meet, jointly sponsored by the Himalayan Environment Trust and the Indian Mountaineering Foundation was held in New Delhi

on September 21,22. The same year, on November 10-11, our Japan Chapter—the Himalayan Adventure Trust of Japan—organised an international symposium on Himalayan environment. It was attended by over 2000 delegates from all over the world.

In 1992, a seminar on "Save Gangotri" was held in New Delhi, on 4th April, chaired by Sir Edmund Hillary, followed by a meeting of the UIAA's Mountain Protection Commission in Kathmandu on May 8-9. On September 21-22, 1992, the Himalayan Mountaineering and Tourism Meet in New Delhi discussed various aspects of Himalayan Environment. A month later was held a symposium on Mountain Protection in Matsumoto, Japan.

The launch of the Gangotri Conservation Project in 1994 was a major landmark for the HET. It is a joint integrated project involving the Govt. of India, the Govt. of U.P. where the project is located, and the Himalayan Environment Trust. The HET funds were contributed by the American Himalayan Foundation. It is the experience of all of us that participation of the local people is a must. The entire objective of the GCP is to work out the nitty-gritty of how to get everyone together.

In January 2000 the HET celebrated its Golden Jubilee in New Delhi.

All these conferences had a focus on Himalayan environment. Besides several alpine clubs and various travel trade organisations have included the conservation of Himalayan environment in their programmes. Almost all the trustees of the Himalayan Environment Trust have been globe-trotting spreading the message of Himalayan conservation. □

Being Stewards of Land

Mandip Singh Soin

The one thing we can do as sensitive developers and designers is to truly be the stewards of the land and we will be able to prolong our own extinction. There is a lot to learn from the indigenous tribes of the world and their relationship to mother earth. Their landscapes were "one with the land" and we do not see why we should not be able to use these principles for the design of eco-tourism facilities.

THOUGH WE have witnessed a growing awareness for environmental concern, in the Indian tourism industry, we are really far from being a 'smokeless industry'! And, yet, even at a business level, it demands us to preserve the very resource that tourism thrives on—the physical and cultural environment, the cultural values and of course, our heritage and biodiversity.

Hopefully, once we understand aspects of the intricate laws of nature, and those that govern us as good earth citizens, not only would we find it rewarding financially in one's operations, but also being a form of service to our globe which would make us feel good as a human being. As that happens, we will be able to touch our spiritual core and evolve our consciousness to become a better humanity.

It must be recognised that conventional mass tourism is still the mainstream of the tourism industry and it is quite probable that this situation will prevail for some time. For this reason it is

vitaly important to aim our attention on mass tourism, striving to apply measures to make it more environmental friendly and minimising its negative impacts on biodiversity.

We should not consider only eco-tourism linkages with biodiversity conservation, but also linkages of mass tourism, especially the effects of big hotels on the environment and how their design and operation can become more environmentally friendly. At a global scale, perhaps providing a number of eco lodges is not going to make much of a difference—ultimately we have to affect the larger tourism industry. This means we have to consider how to improve the environmental record of very different items like airlines, airports, big amusement and theme parks, golf courses, and sports stadia.

Again, the private sector has an enormous responsibility in providing environmental friendly hotel design, construction and operational methods.

As tourism numbers grow, all

stake holders need to start with a simple set of environment guidelines that can evolve into Environmental Management Systems (EMS), be it the national or state tourism boards/governments, hotels, airlines, railways, transporters, cruise liners, tour operators and the media as well.

Training to develop skills of tour operators, hotel owners and others to understand what sustainable tourism is and education about best practices are vital activities. There is a need to strengthen and to revise legislation so that this approach is well understood and widely disseminated. Environmental legislation should act as a motivation force, and also as a base for certification. Also, a widespread educational campaign is urgently needed, so that tourists will be demanding environmental friendly services.

It is vital to disseminate codes of ethics for conventional tourists, which will serve as a tool for alleviation of negative impacts. In analysing mass tourism impacts, both new tourism facilities and pre-existing tourism facilities must be

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considered. In the former case, the application of minimal environmental standards for setting up of new tourism services and facilities is urgently required. In the latter case, methods for improving the operation, making it more environmental friendly, should be applied, through retrofitting or adding new, more appropriate technologies. In every case, the benefits to the tourism sector (market demand, economics, effective management) must be persuasively demonstrated.

It is not a matter of sanctions and pressurising, rather encouraging the tourism sector to become more environmental friendly. For example, water heating in many conventional hotels is currently very inefficient and costly, so that wide use of alternative energy sources should be more than welcome by mainstream tourism operations. Many traditional beach destinations are experiencing a loss of repeat visitors because of water pollution, so that more environmental friendly practices are definitely in the interest of beach resort owners and operators.

A new approach to architecture and physical facilities planning is needed, not only in tourism, but also in all human activities, if we are really going to stop the irreversible damage to the environment, further pollution, and depletion of energy sources. This new approach should be based on the concept of eco design, which may be defined as "any form of design that minimises negative environmental impacts, by integrating itself into the surrounding ecosystem".

Tourism facilities should be particularly designed in an

environmental friendly way, since they are frequently located in areas of great scenic beauty and ecological significance. Application of appropriate waste treatment methods and the use of alternative energy sources (especially in remote locations) are especially important items to be considered. Physical facilities

Training to develop skills of tour operators, hotel owners and others to understand what sustainable tourism is and education about best practices are vital activities. There is a need to strengthen and to revise legislation so that this approach is well understood and widely disseminated.

should be technologically viable and adequate, and also socially acceptable and economically feasible. Joint ventures, communication and working with funding agencies can assist with addressing the expense of technologies. Physical planning and building (planning of expansion) should always be long-term endeavours.

It is important to remember that economic benefits come from environment friendly facilities and technologies.

Eco lodges are often located in remote and wild areas, and therefore, very few typical infrastructure elements and services found in more traditional settings are available, such as access by paved highway, public transportation service, electric and

telephone lines, piped potable water, public drainage and sewage, refuse collection and disposal, nearby school and medical services, shopping areas, etc.

For this reason, a totally new and different approach to physical planning is required, one based on a high level of functional, energy and food self-sufficiency. Before designing and building an eco-lodge, realistically and clearly identify the specific characteristics of isolation and difficulty of access to infrastructure elements and public services and define beforehand the level of self-sufficiency you wish or need to attain.

Many nature tourists do not expect, in a poor rural area, the facilities found in rich cities and beach resorts. Some enjoy roughing it for a while, and are even prepared to pay more for the privilege. Certain standards will always remain non-negotiable though—especially security and basic hygiene.

It is always important to harmonise tourism facilities with the surrounding environment (both natural and cultural), using architectural forms in harmony with the natural landscape (vegetation and land forms), designing with long-term environmental criteria. A tourism facility should always possess a sense of place.

Site planning and design is a process that involves in an integrated way the issues of land use, human circulation, structures, facilities and utilities within the natural and human environment. In order to ensure harmony between tourism development and environmental protection, it is indispensable to apply sensitive

design of infrastructure, master site planning, ecologically and socially conscious site design, and landscaping.

Preserving the special characteristics of a tourism destination demands an in-depth understanding of the natural systems of the site, as well as an immersion into the time-tested cultural responses to that environment's opportunities and constraints. If we want to change the way we build conventional tourism facilities, we need a new way of thinking about site planning and design, which involves a holistic approach. Sustainable site planning and design can lead to a better integration of physical facilities for tourism and their site and surroundings and can indeed help to lessen the environmental impact of these facilities.

Site planning and design for any tourism facility must clearly indicate the process of ordering human actions and works in a specific tract of land. In addition to constituting a graphic representation (to scale) that shows location, layout, general size and shape, and orientation of the different elements of the project, site planning and design should indicate the sequence of activities that make up the project, clearly establishing a space-time interaction. Also, it should ensure that all on-site human activities should have a minimum negative impact on the natural and human environment.

Considering the increasing visits to wilder areas over the past decade and the resultant effects on the carrying capacities of the ecosystems, it would be prudent to select sites for developing eco-tourism facilities that are situated just outside the nature preserves,

although this is not always possible since some of the preserves are very large.

It is always important to harmonise tourism facilities with the surrounding environment (both natural and cultural), using architectural forms in harmony with the natural landscape (vegetation and land forms), designing with long-term environmental criteria. A tourism facility should always possess a sense of place.

What are eco lodges? Since the term eco lodges emerged in the early 1990's, there have been several interpretations.

It is the basic principles that differentiate eco lodges from traditional hotels. The design of an ecology and the activities provided within the facility should encourage close interaction with the natural and cultural environment and have an atmosphere that is appropriate to the site's specific setting. It is this atmosphere that is one of the key ingredients in distinguishing eco lodges from traditional facilities. There are ten basic principles that need to be considered for ecolodges. Ecology should :

- (1) Help in the conservation of the surrounding flora and fauna
- (2) Have minimal impact on the natural surroundings during construction
- (3) Fit into its specific physical and

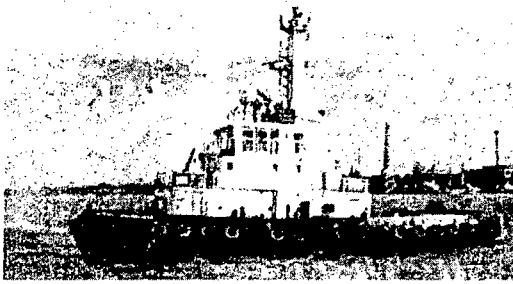
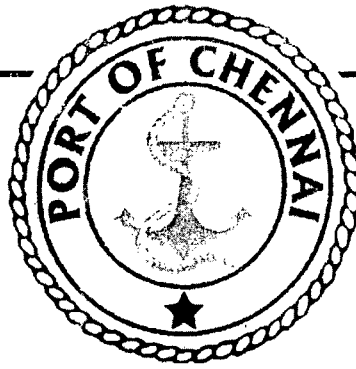
cultural contexts through careful attention to form, landscaping and colour, as well as the use of local architecture

- (4) Use alternative, sustainable means of water acquisition and reduce water consumption
- (5) Provide for careful handling and disposal of solid waste and sewage
- (6) Meet energy needs through passive design and renewable energy sources
- (7) Use traditional building technology and materials whenever possible and combine these with their modern counterparts for greater sustainability
- (8) Endeavour to work together with the local community
- (9) Offer interpretive programmes to educate both its employees and tourists about the surrounding natural and cultural environments
- (10) Contribute to sustainable local development through education programmes and research.

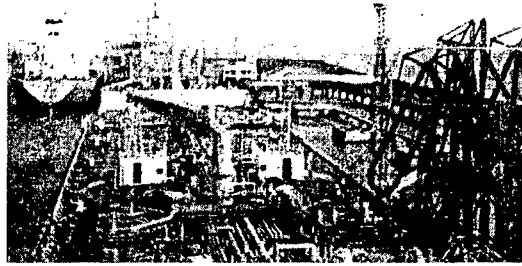
After a lull in development as a result of the worldwide recession of the early nineties, eco lodges have sprung-up in all corners of the world and the tourism industry is, to say the least, flourishing with eco lodges.

Innovative developers and designers are synthesizing traditional and hi-tech concepts for land and site planning, architectural design, construction, and are creating plans that incorporate local community involvement, show increasing sensitivity to existing ecosystems

(Contd. on page 40)



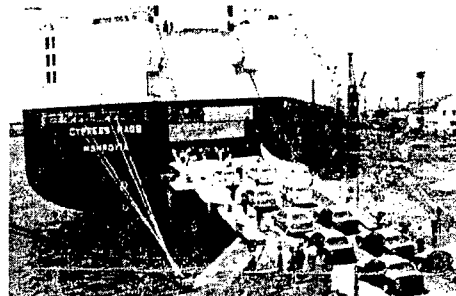
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BHARATHI DOCK - Handling of POL at oil Jetty.

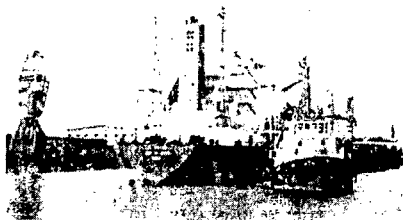


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Preserving and Protecting Nature

Maheshwar Rao

India with its vast geographical and climatic diversities is really blessed with one of the richest varieties of flora and fauna with all potential for being among the world's very best. It is sad indeed that our bounteous and splendid natural beauty has been so ruthlessly subjected to man's murderous assaults. It is surely time for us all to awaken to this reality and do our level best as good citizens to restore our environment and ecology to their past splendour, and thereafter preserve and protect mother nature restored to all her pristine purity.

TOURISM IS indeed a vital component of the economy of any country, especially in a developing country like ours. Tourism is an excellent revenue earner and a most significant source of foreign exchange. It therefore goes without saying that all facilities should be extended towards tourism promotion.

Yet at the same time, tourism, when not properly organised, has every potential for environmental degradation and adverse effects on the ecological balance. It is in this context that eco-tourism acquires utmost relevance in sustaining our economic growth while also ensuring ecological maintenance. The irony of it is that with rapid increase in the number of tourists leading to a spurt in commercial activity at all tourist centres, the environment, thus subjected to a murderous assault, will require colossal monetary resources for drastic revival efforts as and when

subsequently taken up. Hence, what is perceived today as a major revenue earner may well turn out to be a major revenue waster in the absence of systematic precautions against any possible consequential ecological degradation.

The severe disturbance to our ecological balance caused by haphazard commercial tourism or otherwise is nothing new. The slow poison of environmental degradation has been going on in our country for at least the last 4-5 decades. Today however, it has assumed alarming proportions which have shaken the conscience of not only our nation but the whole world. This is the natural corollary of atrocious commercialisation together with population explosion. No doubt India is not alone in this serious environmental degradation, which has to a great extent become a worldwide phenomenon. It is indeed in recognition of this serious problem that international

agencies like the UN have begun to emphasise environment, especially since the International Conference On Environment at Rio de Janeiro on 5.6.92. Since the Rio Summit, 5 June every year is observed as World Environment Day. It is also most appropriate that in the light of commercialised tourism's adverse impact on the environment and ecology, particularly as witnessed at most of our hill stations, 2002 has been declared the International Year of Eco-Tourism and Mountains.

Needless to say, India (as perhaps any overpopulated developing country) is one of the worst affected by the worldwide curse of ecological degradation. A fleeting look at any of our hill stations today makes this obvious especially to one who has had the opportunity to visit the same hill stations about three decades ago. Verdant hill forests have yielded place to denuded hill slopes with ugly buildings. What would have

Mr Maheshwar Rao, a trekker and nature lover, is a Joint Director in Field Publicity Directorate.

been a feast to the eye decades back has today often turned out to be an eyesore. Beautiful picnic spots, hill tops or other view points, resplendent in the past with enchanting scenic beauty, have today become overcrowded with shops, hotels and restaurants. The most unfortunate lack of civic sense in our country has led to indiscriminate littering and even sullyng of all such erstwhile natural beauty spots. Clear, clean hill streams have yielded place to dirty streams of drain water, the inevitable result of commercialisation and the consequent overcrowding of buildings with no proper planning.

It is surely time for us all to awaken to this imminent danger of total ruin of our entire environment. There is no doubt, a lot of economic constraints and compulsions that may put spokes in the wheel of any major attempt at resisting or drastically restricting commercialisation. Yet, it goes without saying that the distinct line has to be drawn in such a way as to totally arrest the murderous assault on our ecology and environment, while at the same time channelising tourism in a regulated manner that sustains reasonable environment friendly economic development. Achieving and maintaining this very tricky balance of eco for ecology and eco for economy is indeed an uphill task in which, we as good citizens, all have to put our shoulder to the wheel, but once the optimum balance is achieved in this regard, its sustenance in the decades ahead should surely be a much easier task.

The depressing eyesore posed today by so many of our erstwhile beautiful hill stations often gives us the feeling of utter ruin to the

point of no return. Yet it should not really be so bleak a picture as it strikes us. Where there is a will there is a way. The need of the hour is a step by step systematic approach inspired by the

With the spectre of ecological disaster looming large on our horizon, the crying need for Vana Mahotsava is felt much more keenly today than ever before. Apart from restoring the verdant scenic splendour this will help greatly reduce the havoc caused by floods or landslides.

determination to set things right and restore our environment and ecological balance. Although it may seem very baffling and one may at this stage not even know where and how to begin, the following basic guidelines when followed should put us nicely on a corrective course that takes us a long way on our road to ecological restoration:

1. With an iron will and sincerity of purpose we must put an end to any further deforestation especially in the immediate neighbourhood as well as distant hinterland of all our hill stations. The most essential first step is indeed the least we can do to drastically arrest the murder of our environment.

2. This vital first step should be backed up by the most logical positive step of restoring the already destroyed jungles. Rigorous afforestation programmes should be launched to revive the scenic splendour of all our disfigured and denuded hill

slopes. Without exception all our mountain ranges are in dire need of this healing touch—the Himalayas, the various North Eastern Mountain ranges, the Eastern Ghats, the Satpuras and Vindhya and the Aravallis—all alike. The indiscriminate denuding of our hill forests throughout our vast country has had an immensely adverse impact on the climate and rainfall pattern, besides greatly enhancing the danger of natural calamities like landslides and flash floods. With the spectre of ecological disaster looming large on our horizon, the crying need for Vana Mahotsava is felt much more keenly today than ever before. Apart from restoring the verdant scenic splendour this will help greatly reduce the havoc caused by floods or landslides.

3. There is the dire need for at least drastically minimising (if not totally banning) all further building activity in proposed or existing green belts thus identified. Indiscriminate building activity will surely defeat the very purpose of intensive afforestation drives taken up together with prevention of further deforestation. A fleeting look at any of our hill stations and their neighbourhood today drives home the need for drastic curbs on building activity more than ever before. It will be best to totally ban further commercial building activity in the immediate neighbourhood of all our major hill stations already overcrowded.

4. Whatever building activity is taken up in and around identified scenic beauty spots with potential for developing into new hill stations, must be restricted and highly regulated. The purpose should be to totally avoid needless encroachment on our environment, and yet facilitate the

basic essential infrastructure and facilities for a properly regulated tourism. A very good example of such a place with splendid scenery and scope for development into a beautiful hill station is Dhanolti, about 75 kms east of Mussoorie. It may be mentioned here that in this regard we certainly have a cue to take from the British, who in the past had in our own country set up so many hill stations with properly planned development, having no adverse impact on the environment and ecology. Though today we have to contend with thrice the population that we had at the time of Independence, sincere and sustained efforts will gradually yield fruit.

5. Commercial activity needs to be systematically regulated. The economic activity encouraged and facilitated in and around our hill stations should be centred around giving the maximum possible boost to local produce including local handicrafts. At the same time tourism can be given such an orientation as to sustain and encourage the local folk art and folk culture, giving the tourists vivid glimpses into the local folk art and culture in all its pristine purity. For this purpose it will be worthwhile to set up cultural centres. Such steps will be conducive to providing a good livelihood to our folk artistes and craftsmen.

6. Economic activity centred around boosting the local produce as well as local culture, arts and crafts should get the maximum possible support. Yet it will be helpful and perhaps even necessary to at least discourage if not altogether stop all superfluous economic activity which is in no way connected with the local economic growth. The excessive

commercialisation of our hill stations (as also of various other tourist spots of scenic beauty like seaside resorts) often has no

It may become essential for us to emulate Singapore in making the sullyng of our environment a punishable offence; but before enforcing such measures we will have to ensure that all essential civic amenities for public hygiene are properly in place.

connection at all with the essential growth of the local economy. For instance, the indiscriminate deforestation going on for decades together is in no way helpful or directly related to the local economic growth. Instead it has hit really hard the local people like forest dwellers who are so dependent on the forests for their simple legitimate day to day living. It is this inhuman exploitation of the local people by excessive irrelevant commercial activity that has given rise to protests by way of the Chipko Movement in Uttaranchal and Appiko Movement in Karnataka. Today it is often depressing and disappointing to find so much of superfluous commercial activity at hill stations and other places of tourist interest. Such commercial activity is totally irrelevant to the local economy and contributes only to sullyng the environment. Any number of shops and restaurants have come up not only at the mall/town proper but also in and around scenic beauty spots or historical and cultural heritage sites.

And in almost all such cases the products sold have nothing to do with the typical local products, but

are instead sure to be available aplenty at places of normal residence of the tourists. Where, after all, is the need for tourists to flock to hill stations, beach resorts or places of historical interest to make bulk purchases of things available aplenty at their places of domicile? It is indeed a vicious cycle in which the excess irrelevant commercial activity is encouraging tourists to travel not for enjoying the natural beauty but for either indulging their palates or indulging in a wild shopping spree. And given the awful lack of civic sense in our country, the mushrooming of hotels or restaurants is leading to the indiscriminate littering and sullyng of our environment. To prevent the further destruction of our environment we have to take the firm step of rooting out this excessive irrelevant commercialisation, and sustaining only the locally relevant economic activity.

7. Last but not least, it is of utmost importance for us all as good citizens to cultivate in ourselves good civic sense with pride in our surroundings. All our efforts at restoring our environment and ecology will come to naught in the absence of proper civic sense.

Needless to say of course, all tourism promotion activities should take full care of the basic infrastructure and facilities for maintenance of our environment and ecology. This vital issue is engaging the keen attention of ITDC and all our State Tourism Development Corporations. Yet the mere provision of such infrastructure cannot take full care of the problems. The ultimate solution lies in our proper use of the basic civic amenities as good

citizens. The beginning in this regard lies no doubt in proper education. It is tragic indeed that in our country even the economically prosperous sections of our society, our elite and intelligentsia, betray such a miserable lack of civic sense, and callously sully the environment even when the best of civic amenities are provided. To cite just one instance, even when closed foot operated litter bins are provided our public often callously litter the surroundings even with decomposing matter. In this regard, while IEC efforts should no doubt play a most significant role, the need for legislative and administrative compulsion cannot be ruled out. It may become essential for us to emulate Singapore in making the sully of our environment a punishable offence; but before enforcing such measures we will have to ensure that all essential civic amenities for public hygiene are properly in place.

Closely associated with the public hygiene and sanitation issue is also the vital issue of biodegradable material most significant from the ecological angle. Biodegradable may be defined as that which can be degraded by micro-organisms. The synthetic wave and plastic/polythene culture sweeping the world over the past 4-5 decades has taken its toll on the ecological balance. Unfortunately indeed, by virtue of their strength, durability, waterproof character, convenience in handling and economic viability these plastic polythene bags or containers have swept the market. Rooting them out is proving indeed an uphill task. Efforts are afoot to evolve substitutes in biodegradable material viable in every way to be able to sweep these

plastic/polythene materials right out of the market. While plastic/polythene no doubt may be ecologically most harmful, it is also a fact that there are other materials

Ever since Everest's conquest by Hillary and Tenzing in 1953, Himalayan mountaineering expeditions have grown from strength to strength. It is heartening indeed to note the increasing love for mountaineering, trekking and other adventures among various sections of our lay public.

like tins and bottles, which too are detrimental to the ecology by virtue of not being biodegradable. The dire need for viable biodegradable substitutes assumes immense significance with respect to not merely eco-tourism but also our day to day living. It is good indeed that we have now at least woken up (better late than never) to the imminent ecological danger posed by non biodegradable materials.

Eco-tourism apart, it is also significant to throw some light on environmental and ecological aspects related to adventures like mountaineering and trekking. Ever since Everest's conquest by Hillary and Tenzing in 1953, Himalayan mountaineering expeditions have grown from strength to strength. It is heartening indeed to note the increasing love for mountaineering, trekking and other adventures among various sections of our lay public. But it is unfortunate that such wholesome and laudable activity that needs all

encouragement also has its detrimental side effects on our mountain ecology and environment. The answer to this tricky question lies not only in civic sense and ecological awareness but also in the successful evolution of viable biodegradable containers for various purposes.

It may be mentioned here that our mountaineering institute, viz the Himalayan Mountaineering Institute (HMI) Darjeeling, the Nehru Institute of Mountaineering (NIM) Uttarkashi and the Western Himalayan Mountaineering Institute (WHMI) Manali, are all rendering yeomen service not only in promotion of mountaineering and related adventures but also in arousing environmental and ecological awareness. Apart from arousing the participant's interest in the natural scenery and vegetation at various altitudes on the mountains, the courses run by these institutes emphasise basic environmental requirements like hygiene on the mountains. One of the most important points stressed is the need to scrupulously cover one's waste with heaps of mud, etc. This goes together with the general principle that for answering the call of nature one should always go below the camp. This is because in the event of rain or landslides the same waste can get carried downwards long before decomposition and merger with the soil. The same principle applies to the disposal of any other form of refuse, such as fruit skins, capable of decomposition. All such basic care for the mountain environment is inculcated in the trainees side by side with love for adventure.

We thus see how easy it is to ensure the expeditious and environmental friendly disposal of biodegradable wastes provided one

has the essential civic sense and pride in one's surroundings. The tricky problem arises with respect to the disposal of non biodegradable substances, for which purpose the ultimate solution lies in rigorous steps towards production and use of viable biodegradable substances. In this noble eco-friendly pursuit we must all put our shoulder to the wheel whole-heartedly.

Side by side with the regulation of tourism to make it eco-friendly in every way, we also have the relevant question of streamlining and systematic regulation of mountaineering, trekking and other adventure activities. This is being done by the government largely in close coordination with the Indian Mountaineering Foundation (IMF) New Delhi and the active cooperation of institute like HMI, NIM and WHMI. This regulation of tourism and adventure involves restrictions on tourism and expeditions at specific places designated as biosphere reserves. The most significant example of such a highly protected biosphere reserve is the Nanda Devi Biosphere Reserve. This biosphere reserve extends from the snowline on Nanda Devi and its neighbouring peaks down to mountain slopes and valleys at more moderate altitudes, nurturing and sustaining a rich and varied treasure of flora and

fauna. To ensure the preservation of this vast bio-diversity mountaineering expeditions to Nanda Devi and its neighbouring peaks are very greatly restricted,

It should be worthwhile identifying various other biosphere reserves along the Himalayas as well as other mountain ranges, and take similar steps to protect them from encroachment. Such steps will take us a long way in safeguarding our vast treasures of bio diversity

and in any case they are advised to take such routes that steer clear of the Nanda Devi Biosphere Reserve.

It should be worthwhile identifying various other biosphere reserves along the Himalayas as well as other mountain ranges, and take similar steps to protect them from encroachment. Such steps will take us a long way in safeguarding our vast treasures of bio-diversity vital to maintaining our ecological balance. So near and yet so far—the Silent Valley forests nestling deep in the Western Ghats of Kerala form another natural biosphere reserve

by virtue of the vast treasures of varied flora and fauna. Needless to say of course, located at tropical latitudes and low altitudes unlike the Nanda Devi Biosphere Reserve, the Silent Valley flora and fauna are entirely different. Silent Valley has a vast and unique bio diversity of damp tropical flora and fauna. The only marked affinity lies in the very existence of such a treasure of bio-diversity featuring a wonderful variety of flora and fauna. Yet the marked difference at Silent Valley over 2000 miles south of Nanda Devi, lies in its bio diversity of damp tropical flora and fauna in sheer contrast to the variety of temperate and frigid zone flora and fauna of the Nanda Devi Biosphere Reserve.

India with its vast geographical and climatic diversities is really blessed with one of the richest varieties of flora and fauna with all potential for being among the world's very best. It is sad indeed that our bounteous and splendid natural beauty has been so ruthlessly subjected to man's murderous assaults. It is surely time for us all to awaken to this reality and do our level best as good citizens to restore our environment and ecology to their past splendour, and thereafter preserve and protect mother nature restored to all her pristine purity. □



Mountaineering, Trekking and Adventure

M S Gill

Large hotels by plains people are no good for places like Manali. They pollute and destroy the environment and the income does not go to the local people. On the other hand the bread and breakfast accommodation in local homes allows the tourists to stay with local families, and thus learn to appreciate their culture, and ofcourse the income goes to the owners of the homes.

MY PERSONAL involvement with the Himalayas goes back to 1958 when I joined the IAS and went to Darjeeling on Bharat Darshan. Meeting Everest hero Tenzing was a great experience, and fixed my interest in the mountains. I started to read every book I could find. In the then Punjab where I was posted, all of Kangra and Lahaul Spiti on the Tibet border were part of the state. I am the first IAS officer in India to ask for and train at the HMI (Himalayan Mountaineering Institute), Darjeeling with Tenzing. I later helped to set up the Western Himalayan Mountaineering Institute in Manali. I was clear that administrators should be encouraged in mountaineering and other adventure sports in order to give our country well motivated officers for the high mountain frontier districts. In 1961 I asked for and became Deputy Commissioner Lahaul Spiti, and was there at the time of the

Chinese war. As a young bachelor, I had the pleasures of trekking and climbing those high valleys from 10 to 20 thousand feet. As I wrote in my book Himalayan Wonderland—Travels in Lahaul Spiti, “for once my pleasure became my duty”. I maintained my mountain interest all through my career, and travelled extensively from Ladakh to Arunachal. I valued my friendship with Tenzing, Hillary and other great mountaineers.

When Everest was climbed in 1953, it was Nehru’s idea to set up the Himalayan Mountaineering Institute, Darjeeling. He made Tenzing Director of training and encouraged Indian youth towards high adventures. Indians had in the past centuries travelled in the Himalayas with a religious focus for pilgrimage and penance, but to climb the high mountains for adventure and sport is a British idea. Free India needed to encourage this sport, to create in its youth a desire for adventure and risk taking. Only then can great

administrators be produced. HMI Darjeeling became a mother nursery of all our famous climbers. They came mainly from the Armed Forces, and Indians soon began to climb the highest peaks. By 1965 Everest had been climbed, putting 9 people on top. Other major peaks like Annapurna, Nanda Devi, Trishul etc. were all being quickly climbed by young Indians. These achievements excited and encouraged our youth.

The Himalayan Club of which I have the honour to be the current President, was set up by the British in 1928. It has continued for the last 74 years to promote adventure sports in the high mountains, as well as a study of their botany, geology and culture. In about 1957 again with Nehru’s encouragement, and the efforts of some leading civil servants, the Indian Mountaineering Foundation was set up. The IMF received strong support from the government of India, and became the main body to encourage Indian

Mr M S Gill, former Chief Election Commissioner and former President, Indian Mountaineering Foundation, is currently President, Himalayan Club.

attempts on the high peaks, as well as the training of young Indian mountaineers. Over the decades, it did tremendous work in spreading mountaineering and trekking across the country. Many training institutes were set up and we have at least 5 of them now. Climbing and mountaineering clubs sprang up all over, and young people started going out on expeditions. Very soon Indian woman climbed Everest. We have the distinction of Santosh Yadav being the only woman in the world to have climbed Everest twice. The young women of India showed remarkable achievements in climbing difficult peaks, and undertaking other adventures in the hills. The Govt. of India through the mountaineering institutes, subsidises training for young people in a big way. The IMF too spends considerable money in training our mountaineers and upgrading their skills.

The population of India has unfortunately risen from 30 crore at independence to 100 crore now. Our cities have expanded beyond desirable limits, and all our urban population faces difficult living conditions. It is all the more necessary now, that our youngsters from the big urban centres like Bombay and Calcutta should be enabled in the summer to go to the cool Himalayas for adventure and spiritual communion. The number of trekkers and climbers has risen in a big way.

I also have to say that in the last 50 years the rising population has put unacceptable pressure on our high mountains, rivers, forests and wild life. All these treasures have diminished. I remember climbing in thick forested Sikkim in 1961. I have in later decades travelled there, and seen sad, barren hillsides. In my 40 years of

administrative life, I can personally record the reduction of forests from Himachal to Arunachal, and in the Madhya Pradesh's Shivpuri

I want to warn that in this new century, there will be water wars, between countries and within countries. With little forests, the rivers are drying up and being polluted by uncontrolled industries.

forests, where the tigers have now entirely disappeared. The reduction of forests is damaging our rivers. I want to warn our young people, that in this new century, there will be water wars, between countries and within countries. Already minimum water availability is a crisis in every big city. With little forests, the rivers are drying up and being polluted by uncontrolled industries. The Yamuna in Delhi is a sewer and so it continues all the way to Agra and the Taj Mahal. Therefore while we must go to the Himalayas for rest and sustenance, we must also guard and preserve them. The forest on the hillsides is precious and the only way to prevent erosion. The Himalayas too have turned into a mountain desert in many parts. We must check these for the sake of future generations. I have seen outstanding eco-plantation work in Mussoorie and elsewhere. This must be made an all India movement. Our rivers and mountains are sacred, and should be treated with respect and honour.

In the 50s and 60s we followed the European practice of climbing with big expeditions, for prestigious conquest of peaks. Our

culture does not believe in the conquest of high peaks, which themselves are the sacred abode of the Gods. We go there only to pay homage. The Europeans too have today become very conscious of environment protection. They now travel in small expeditions of 2s and 4s and 6s only. They make sure no damage is done to the trees and environment, and all rubbish brought back to the plains for destruction. Our youth must learn this basic civic sense.

I have travelled extensively in the Himalayas as well as in European mountain areas. I found that in countries such as Austria and Scotland, the local population has a major source of earning from the beauty of their mountains and environment. Vast numbers of tourists come to climb, trek and enjoy the scenery. These countries maintain a very efficient bread and breakfast culture for tourists i.e., the residents in the hills are given financial and other help to maintain good quality homes with attached bathrooms, etc. During the summer season they welcome visitors to stay in bread and breakfast accommodation. Thus they earn good money. For the long snow bound winters, the family has the full use of a large house and enough to eat. I believe we need to encourage the same policy in the hill states from Himachal to Arunachal. Large hotels by plains people are no good for places like Manali. They pollute and destroy the environment—Manali is in poor shape now—and the income does not go to the local people. On the other hand the bread and breakfast accommodation in local homes, allows the tourists to stay with local families, and thus learn to appreciate their culture and of course the income goes to the owners of the homes. I am very clear, that the main possibility of higher

earning for the hill people is eco-tourism, through the dispersed bread and breakfast method. Therefore I would hope, that the hill state govts. guard the beauty of their environment, allow no pollution by large industries or hotels etc. and in fact encourage through cheap financial loans, their local citizens to upgrade their housing accommodation, for both summer tourists, and their own living in the winter. In places like Manali bread and breakfast accommodation should be listed, supervised, properly controlled, and known to the tourist offices locally as in Europe, so that tourists can be

guided to good and cheap accommodation, which still gives excellent earnings to the house owners. Along with this of course will go the service industries of transport, eating, well mannered guides etc. It is therefore of prime interest to the govts. of the hill states to maintain well considered laws in order to check any damage to the environment, forest or rivers.

As President of the Indian Mountaineering Foundation for 6 years ('93-99'), I pressed very hard, to have the size of Indian expeditions reduced to the minimum, and for them to be conscious of environment protection. Our

Armed Forces and Police sometimes, are guilty of large prestigious expeditions, even now. We tried very hard to focus them on environment protection. Due to our Armed Forces being on the Himalayan borders, there is severe pressure on the scarce forest cover of the mountains. That too must be guarded by all of us. Therefore in this year of eco-tourism and mountains, I would plead for a national consciousness and aggressive movement, to safeguard the Himalayas and the great rivers which come from them, and sustain our life in the plains. □

BEING STEWARDS...

(Contd. from page 31)

and that bring about financial gains. By blending the wisdom of the past with the know-how and technology of the present, eco lodges are being built that provide healthy and comfortable places to enjoy nature, as well as buildings that camouflage with the surroundings, conserve material resources in their construction, save energy and water resources in their operation and most importantly, involve the native population through the design, construction and operation processes.

Majority of government agencies around the world do not have specific regulations or minimum standards for eco lodge design and development and therefore it has fallen on the landscape architects, architects and interior designers, to develop their own design criteria and codes of ethics that guarantee the least environmental and social impact, as well as having a harmonious and sustainable interaction between

the physical structure and the surrounding environment.

The eco lodge industry is increasingly confronted with arguments about its sustainability and compatibility with environmental protection and community development and is facing serious and difficult choices about its future. If we are to move positively from these crossroads, lodge owners and operators will also be required to rise to the challenges and demands of activities that give the visitors a natural unspoiled experience that affords them a non-polluted environment close to nature.

If we are to create a sustainable world-one in which we are truly responsible for the needs of the coming generations of humans and all living creatures—we must recognize that our present ways of doing architecture, engineering and construction present serious shortcomings. To develop a sustainable world, we must inevitably transform these practices. We need to impregnate the design of products, buildings

and landscapes with a rich and detailed understanding of ecology. Sustainability needs to be rooted firmly in the more minute details of design.

The human population is presently living far beyond the carrying capacity of the earth. The one thing we can do as sensitive developers and designers is to truly be the stewards of the land and we will be able to prolong our own extinction. There is a lot to learn from the indigenous tribes of the world and their relationship to mother earth. Their landscapes were "one with the land" and we do not see why we should not be able to use these principles for the design of eco-tourism facilities.

Two years into the new millennium, there is a sense of optimism that eco lodges are on the upswing. There are no real surveys to point to, but one could feel the tremendous energy at eco-tourism conferences in the past years. All this bodes well for the fledging eco-tourism industry in the days to come. □

Nagadhiraj Himalaya

A Review of the Indian Himalayan Range

Harish Kapadia

Though a lot has been done in the Indian Himalaya in the last Millennium, a lot remains to be done. After all what is a 100 years for the Nagadhiraj Himalaya, standing there for centuries. Today as we celebrate the International Year of Mountains we must pledge to know more about the range and protect it.

In the northern direction there is a noble souled mountain called the Himalaya. He is Nagadhiraj, the Lord of all mountains, with his two extending arms fathoming the eastern and western oceans. He stands unsurpassed as the measuring rod of the earth.

—Kalidas in Kumarsambhava

INDIANS have always looked up to the Himalaya as the abode of snow, which literally this name means. Like the above quote by the famous Indian bard, since time immemorial the Himalayan range has been called the jewel of the world. There are Hindu shrines located here and they are visited by many. In the Hindu scriptures spiritual tranquillity is always associated with these snowy mountains. The Indian Guru, Adi Shankrachaya, is recorded to have crossed Mana Pass from Badrinath to Guge district in Tibet in A.D. 800.¹ From Europe the Jesuit fathers have left a long record of crossing the Mana Pass into Tibet. Father Antonio de Andrade and Brother Manuel Marques crossed this pass to Guge in Tsaparang Province in Tibet in 1624.

Many local villagers crossed the

range for trade. But the exploration and climbing as we know today started with the arrival of the British. It was out of the necessities of the 'Great Game' in the Karakoram that explorers were first sent into the range. Then came the soldiers, the most famous being the Francis Younghusband's expedition across Sikkim to reach Lhasa. They were followed by the surveyors as the Survey of India under the British officers systematically drew maps of each area and this resulted in the discovery of the highest peak in the world—Everest. Finally came the climbers. All the pre-war Everest expeditions, attempting the peak from the north passed through Sikkim and climbed several peaks.

There are no 'Everests' to be climbed in the Indian Himalaya, for the only 8000er in India is the

Kanchenjunga. But if one is interested in many smaller peaks, of course many above 7000 m, out of the ordinary, difficult routes, historical perspectives and many unexplored valley, then the Indian Himalaya will be attractive. This article covers the brief history of the Indian Himalayan range in last 100 years as seen by me and based on my travels.²

The Range

The Himalayan chain is spread across the Asian continent, going southeast to northwest. Generally the Himalaya, Karakoram and the HinduKush are talked about as part of one chain. When we talk of the 'Indian Himalaya' we are talking of that part of the Himalayan chain which falls within Indian territory. Starting from the east, the Indian Himalaya originate from a knot between Burma-China

Mr Harish Kapadia is a veteran mountaineer and writer.

1 This was one of the earliest Himalayan travel recorded in the Indian range.

2 This article is based on 40 years personal mountaineering experiences of the author in the Indian Himalaya.

and India, from where the Brahmaputra river enters Arunachal Pradesh. The chain continues till the borders of Bhutan. Beyond that we have Sikkim, which is a full-fledged state of India since 1974. It has many peaks, including the world's third highest peak Kanchenjunga. The Himalayan ranges east of this are in the Nepalese area till we reach the borders of Kumaon and Garhwal. From here without a break the Indian Himalayan chain continues—Kinnaur, Spiti, Ladakh and lastly East Karakoram. The areas further west are controlled by Pakistan and Afghanistan.

Two officers were taking a stroll on the Mall below the Jakhoo hill in Shimla. From their casual talk, to help the visiting British mountaineers, the Himalayan Club was formed in 1928. Its main role was to assist mountaineering expeditions coming to climb in India.³ This was the beginning of the influx of more explorers and climbers. Some of the better-known early expeditions to this range were that of Hugh Ruttledge, which explored Kumaon. In 1905 and 1907 Arnold Mumm and Charles Bruce spent five months in Garhwal and climbed several peaks. Trisul, 7120 m was climbed in 1907 by Dr Longstaff and it remained the highest climbed peak in the world for several years. Frank Smythe reached the summit of Kamet in 1931 to break the record. This was soon overtaken by the climb of Nanda Devi in 1936.

After the War and Indian independence in 1947, there were serious doubts whether the sport would continue to flourish. Some of the people who 'stayed on', like

Jack Gibson and John Martyn enthused Indians into climbing and the sport continued. One of their students, Gurdial Singh climbed Trisul in 1951, the first peak to be climbed by an Indian on an Indian expedition. In 1953 Everest was climbed and one of the summiteers, Tenzing was an Indian. To celebrate this event a mountaineering institute was established in Darjeeling which has trained many Indians. Now at least three such institutes operate to full capacity and this has contributed to the growth of the sport. In 1958 the Indian Mountaineering Foundation was born and was recognised by the government to deal with the sport. With its base of Government bureaucrats and other officers it set up procedures and for 23 years was managed by H.C. Sarin. He was responsible for the growth of the Indian mountaineering achieved during these years. Today a fine building and a strong foundation of the IMF stands as testimony to his efforts.

Kumaon

If I am asked to name one Indian peak which I like the most—I would say Nanda Devi. I have seen it from almost all directions and at close quarters. In fact it is the centre-piece of the Indian Himalaya. The exploration of routes to its base by Eric Shipton and Bill Tilman in 1934, its ascent in 1936, and all other subsequent expeditions are part of mountaineering history. They left a permanent mark on the history.⁴ To its east lies the Milam glacier. The Poles who climbed in this valley in 1939, made the first ascent of Nanda Devi East but two of them were unfortunately killed later whilst climbing Tirsuli peak.

Further east in Kumaon stands the 'Mountain of Long life' Chiring We, on the Kalabaland glacier. My team from Bombay made the first ascent of Chiring We in 1979 and it has not been climbed since. There are several peaks on the Kalabaland glacier which are attractive. A special mention must be made of unclimbed Suitilla, which could be called the 'Changabang of Kumaon'.

To the west of Nanda Devi, on the outer rim of the Sanctuary stand the Bethartoli Himal peaks. In 1970, I climbed the South peak but we lost four climbers on the main peak in an avalanche. One of them was Ang Kami, a charming personality from Darjeeling. Bill Murray had tried this main peak first, in 1950. Finally it was climbed by the Italians after our attempt. Nearby stands Trisul, the 'Longstaff Mountain'. In 1907 Longstaff had climbed it speedily and it remained a 'height record' for a long time. To my mind, it was when Gurdial Singh climbed Trisul in 1951, that the beginning was made of the age of mountaineering for the Indians.

The inner Sanctuary was closed to expeditions for some time. The first expedition entered the abode in 1974. Chris Bonington and his Indo-British team climbed Changabang, the northernmost peak of the inner Sanctuary. It was an extraordinary achievement by any standards. The southernmost peak of the inner Sanctuary, Devtoli was climbed by my team within a few days of the above climb. Whilst returning from the summit, I fell in a crevasse and was carried on a makeshift stretcher or piggyback, for 13 days, to be rescued by a helicopter. As I wrote

³ Today, after 72 years, the Himalayan Club is active and has its offices in Bombay and Hon. Secretaries at various places in the world.

then—looking at the peak from air— ‘Devoli, the honours are even’!

In 1992 the honours went to two brave Indian Air force helicopter pilots as they rescued injured Stephen Venables from higher slopes of Panch Chuli V. With snow slopes inches away from the helicopter rotors they landed on ski of the chopper and lifted Venables to safety. This Indian-British team had climbed Panch Chuli II and made first ascent of Peak V when the tragedy had struck Venables. A loose piton made him tumble hundreds of feet injuring knee and ankle, till the spirited historic rescue saved his life.

Sikkim

After two years on crutches to recover from that injury, I was on my way to north Sikkim. We were amongst the early trekkers allowed there. On our visit to the Green Lake, Zerksis Boga and I went across high passes to the Lhonak valley. Freshfield had written that the July snow storms here are ‘proverbial’. We were spared a sample. Once, as we neared Thangue Boga suddenly sat down near a bridge. The slope before us was covered with yellow rhododendrons in bloom. Such are the pleasures of Sikkim. I took one photo then he firmly stopped me: ‘No more photos please. This loveliness must belong only to memories, Harish’, he said.

While trekking in Sikkim I was often reminded of the history of this region. Pre-war expeditions attempting Everest from the northern approaches passed through Sikkim and thus many famous names were registered in



Tso Moriri Lake in Ladakh—one of the most beautiful lakes in the world

the rest house log-books. Calcutta was the headquarters of the British Raj; so the approach to Sikkim was easy and quick. Cooke, Hunt and Kellas had done some excellent climbing here. The Himalayan Club built a hut at the foot of the Sela pass. That allowed trekkers to go across from Lachen to Lachung valleys without carrying a tent or much food. When I visited the hut, it was in ruins, but I could imagine the echoes of memsahibs ordering khansamas to fetch tea!

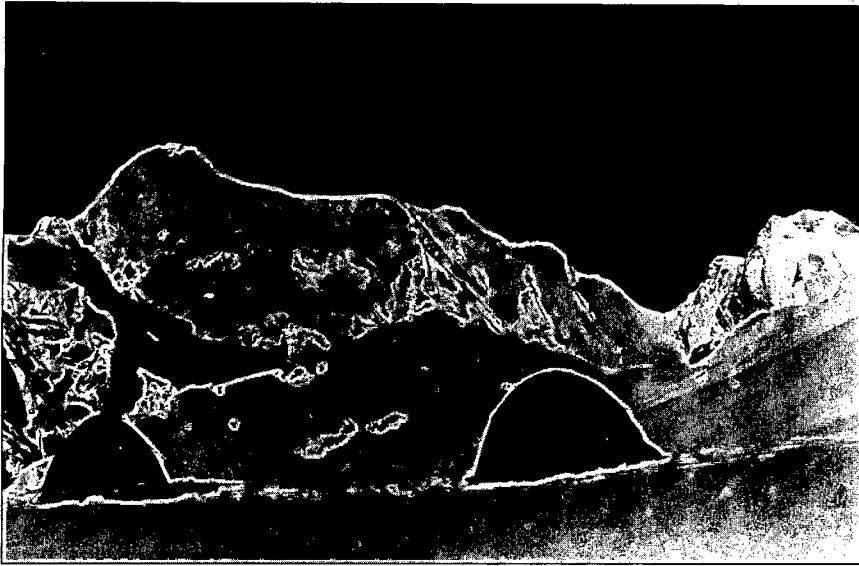
Kanchenjunga is the prime attraction of Sikkim Himalaya. Paul Bauer and his German team repeatedly attempted it but were stopped by the northeast spur, which they could not cross. Finally it was in 1977 that an Indian army team crossed that spur to reach the summit from this side. Kanchenjunga rises steeply from the Zemu glacier—too steeply even for the setting sun to be visible from late-afternoon. Doug Freshfield, who was here in 1899 wrote about an ‘Eastern sunset’,

which we witnessed years later. The steep rise of Kanchenjunga blocks the western horizon and the sun disappears behind it. Thus early in the afternoon dark shadows gather over the glacier. The east, up to Bhutan, remains brightly lighted for a long time with its changing colours, creating a unique illusion.

Assam Himalaya

Further east, the thickly wooded valleys of Arunachal Pradesh have not been much explored. The only areas which are visited often are in the Tawang valley, famous for its monastery. Tilman visited the area in 1939 and wrote of his experiences in *Assam Himalaya Unvisited*. In 1913 F. M. Bailey and H.T. Morshead had made an attempt to reach the base of Gorichen. The route was named as the ‘Bailey Trail’. In 1962 the Chinese came down this trail and the ensuing war put this area out of bounds for civilians. The army has constructed ‘ALGs’ (Advance Landing Grounds) to guard the area, avoiding the overgrown

‘In a novel experiment all the members at a recent Indian Mountaineers Millennium Meet were asked to vote to select the- “Indian Himalaya Millennium Person”- a person who has contributed most to progress of mountaineering in the Indian Himalaya in last 100 years. The list included several leading mountaineers, explorers, administrators and others. Happily the person voted to this coveted honour was: Eric Shipton (1907-1977).



Chaukhamba Peak, seen from Deo Dehni plateau. The peak is in the Badrinath area.

valleys. In recent years the peak of Gorichen has been climbed by different routes. Routes to Kangto and Nyegi Kangsang have also been explored. But still a lot remains to be seen and done here.

In Arunachal Pradesh the expedition to Nyegi Kangsang in 1995 became mired in controversy. It was an expedition led by Col M P Yadav and sponsored by the IMF. This peak is on the border of unknown Arunachal Pradesh and Tibet. The team crossed into Tibet and the summiteers reached a point about 600 m lower than the real summit. Faced with evidence and studies this time the leader and summiteers had to admit that this was the case. Dr M S Gill the President of IMF, who stood for the truth of climbs during his tenure, did everything to set correct records.

Every range has its share of controversies. Indian climbers had more than its share perhaps. I must record the second of the 'jewels' after the Nyegi Kangsang.

Claim of ascent of Nilkanth in 1961 by a team led by Col N Kumar is one of the most infamous

episodes. This expedition had no perspective of this peak and its summit ridge which they claimed to be a 'gentle trudge'. A 'first ascent' was claimed on 13 June. When faced with substantial evidence by J.C. Nanavati, President Emeritus of the Himalayan Club, the bureaucracy moved to defend itself. Then President of the IMF H.C. Sarin remained adamant not to accept the findings under political pressures. In fact even the Himalayan Journal also, rather curiously, did not record the correction until Soli Mehta and myself were editors late in the seventies. For the past four decades the world has accepted the fact that of non ascent while officially it remains otherwise.

Garhwal

Back to the central Indian Himalaya. The Gangotri glacier is one valley where a lot of trekking and climbing has been done. Satopanth, Chaukhamba, Sudarshan Parvat, Shivling and Thalay Sagar are just a few of the peaks that are the pride of this area. The mountaineering history of the area can fill up an entire

volume. Here I must mention a story. A group of four sadhus, barely clad and with sparse food crossed the Kalindi Khal to go from the shrine of Gangotri to Badrinath. At the same time, Andre Roch, the famous Swiss mountaineer was climbing several peaks in the area. He met the party, was impressed by this feat and presented them an altimeter. This instrument was passed on, like a baton, to successive generations of Indian mountaineers with the condition that when one stops climbing it must be passed to the next active mountaineer. It reached me after a long journey.

Another landmark in Garhwal is Kamet which stands tall over the Saraswati valley. It was from this valley that early travellers like the Hindu guru Shankracharya and the Spanish priest, Father Andrade, crossed to Tibet over the Mana pass. The peak of Kamet was attempted several times and finally in 1931 Frank Smythe and Eric Shipton reached the summit along with some others. R.L. Holdsworth, who was with them, smoked a pipe on the summit, which I believe still remains a height record for smokers. (—except someone has had that pleasure on Everest!).

Moving towards north Garhwal first comes to the Jadh Ganga valley, which was surveyed by J.B.Auden. I visited the valley in 1990 and we climbed Trimukhi Parvat East, a shapely peak. Monesh, my young companion, wanted to catch a leopard-cub and keep him warm in his sleeping bag—like Auden had done. I was worried that the mother wouldn't like that—this was their territory, Valley of Snow leopards. Luckily wiser counsel prevailed.

Western Garhwal can be called 'Gibson territory'—as a testimony



Ancient Karzog village and Mata group of peaks in background

to his training of young Indian mountaineers. Here on the slopes of Kalanag, Swargarohini Indians learned the sport of climbing. More importantly they also learnt about the flowers of Har-ki-Dun, the birds in the Tons valley and the culture of Garhwal. Gibson was a firm believer in small and friendly expeditions and I wish we Indians had remained firm followers of his philosophy.

Kinnaur

The Himalayan range, onwards from Garhwal, takes a north-westerly turn. It enters what is loosely called the western Himalaya. Immediately to the north are the valleys of Kinnaur. This is where Rudyard Kipling sent his agent-boy Kim, in the book of the same title. Travelling on the Hindustan-Tibet road, now motorable, he exclaimed, 'this is no place for man'. The bungalow at Kalpa was a favourite haunt of Lord Dalhousie. He drew plans for the Indian Railways sitting in front of Jorkanden peak under the pines. A most unlikely place to think of when you sit in an express train in Bombay!

Amongst mountaineers Marco

Pallis comes to mind when one mentions Kinnaur. He climbed Leo Pargial in 1933 and wrote a wonderful book, *Peaks and Lamas*. Several peaks here have attracted mountaineers—Jorkanden, Gang Chua and Rangrik Rang—highest of the Racho group. It was on the last peak that Chris Bonington celebrated the arrival of his sixtieth birthday. The Indian-British expedition was led by Chris and me. The peak was climbed in style with every one enjoying the effort. We played cricket at base camp. Needless to say we Indians defeated the English team at their game—for we had the porters fielding for us!

Spiti

To its north are the barren valleys of Spiti or the trans-Himalayan region. In 1983 and 1987 we explored the Lingti valley in eastern Spiti, one of the largest unvisited valleys at the time. Though several peaks were climbed by us, the elusive Gya could only be photographed.

Gya soon became a prized objective and built an aura around it towards end of this Millennium. Attempted from the Lingti valley

and from Chumar in the north, soon its North peak and Gyasumpa (third peak) were climbed. But the main peak suffered wrong claims and defied mountaineers. Finally a team from the Indian Mountaineering Foundation ascended it in 1999, and behold, found a piton and a flag on the summit! Despite poor reporting and poor photographs, the army climbers did reach the summit in 1998. Thus Gya was climbed twice over. But not without a price. A Bombay climber, trying to be 'first' had died on the lower peak around the same time. With different routes still unclimbed Gya is set to test climbers in the next Millennium too.

Spiti was brought to the knowledge of mountaineers by Jimmy Roberts and later by two expeditions of Sir Peter Holmes, in 1955 and 1956, to the western valleys of Ratang and Pin. It will give you an idea how remote these valleys are—the next persons to go to these valleys were of Kaivan and me in 1993.

Lahaul

Spiti is generally spoken of in the same breath as Lahaul, for administratively they are linked. They have a common district headquarters at Keylong in Lahaul. Lahaul is on the western side of Kunzum la. Its centrepiece is the Chandrabhaga region with several peaks above 6000 m and large valleys which are a climber's paradise. Trekkers visit Chandra tal often and now the Manali-Leh highway passes through Lahaul. It is a popular jeep-safari route. Western Lahaul has some interesting peaks like Mulkila and Phabrang before the range merges with Pir Panjal.

The Chandrabhaga flows into the Kishtwar and is thence called the Chenab. Kishtwar could have been India's answer to the Alps, though



Trekkers in the Indian Himalaya

the peaks here are much higher than of that famous range. Unfortunately for a decade now the region, like the other valleys of Kashmir, is in political turmoil and mountaineers are advised not to visit it.

Kullu

To the south of Rohtang lies Kullu valley, the most accessible of the Himalayan valleys. Since the days when General Charles Bruce passed from the Dhauladhar to Kullu and went across Rohtang, several climbers have visited these valleys. Bob Pettigrew is credited with several climbs and explorations in these ranges. After his climb of Papsura he fell and was carried for 13 days over passes to Manali for an operation. I exchanged notes with him, for we had both suffered the same type of injury—a dislocated hip—under parallel circumstances.

Zanskar

If Kullu valley is the most accessible, Zanskar remains the visited valley most by trekkers. Many throng to cross Shingo la, reach Padam and proceed ahead to Leh. En route is the jewel of the area—Phuktal monastery. Built

high up, almost inside a cave, it has a long history like many of the monasteries in this area. The Hungarian scholar, Csoma de Koros stayed here for many years. Visitors are proudly shown a stone carved in his memory.

Nun and Kun peaks were first eyed by the mountaineers in 1898. Kun was climbed in 1913 while the first ascent of Nun was made by Monsieur Bernard Pierre's team in 1953. Zanskaris are a hardy lot and brave the cruel winter there, although cut off from all sides. As the summer approaches they traditionally follow a route along the Zanskar river to Nimo. On this route, called 'Tchaddar' they are now sometimes joined by trekkers.

Ladakh

Leh is at the crossroads of Asia. Being the central place of Ladakh and on the trade route, caravans met here. Traders came from all directions: from Tibet in the east, Kullu in the south, Muslims from Balti valleys in west and caravans from Central Asia in the north. Today even with plane-loads of tourists landing here, it has not lost any of its charms. There are many

places in the valley for trekkers and mountaineers. The south-eastern valley of Rupshu has several peaks; the highest of them Lungser Kangri (6666 m) was climbed by us in 1995. Three of the other high peaks, Pologongka, Kula and Chhamser Kangri were climbed in quick succession by mountaineers of various nationalities. Still, many peaks, like Chakula and others are awaiting climbers. Wide barren valleys, blue waters of Tso Moriri lake, the attractive nomads (Changpas) and exploratory treks: that's what Rupshu offers.

East Karakoram

Behind the town of Leh runs the Khardung range, continuously from west to east. From the meeting point of the Shyok and Indus rivers and going eastwards this range meets the Pangong range. North of both these ranges lies the East Karakoram. Some of the highest peaks in the Indian Himalaya are in this region. A motorable road, one of the highest in the world, crosses Khardung la to enter the Shyok valley. From the pass, Saser Kangri II is seen to advantage. Its west peak was climbed by the Indo-Japanese team while the east peak, at the same height (of 7518 m) remains virgin. The Saser group was explored by Jimmy Roberts and its main peaks have all been climbed, except one. Saser Kangri I has had received ascents from both the eastern and western approaches and has a long record of climbs. Saser Kangri III was once climbed by an Indian team coming from the east. Peak 7287 m, which Roberts called 'Plateau Peak' is the major unclimbed feature here.

Going further north is the Central Asia Trade Route which cuts across the range to cross Saser

la. This historic pass whose moods vary with fickle weather conditions has killed many mules and some persons. One is likely to find bleached bones on this pass as well as on the trail ahead, hence the nickname: 'Skeleton Trail'. On the trail and its subsidiary routes stands Mamostong Kangri, first climbed in 1984 and Aq Tash, a stupendous rocky pyramid. I have crossed the Saser la twice and on the second trip we went to the unknown Chong Kumdan glacier on the Shyok. Three peaks of the group, including the main peak at 7071 m were climbed by us along with several others. Chong Kumdan is known for a dam it created several times in the past on the Shyok. The advancing Chong Kumdan glacier blocked the Shyok in the winter. With summer the river swelled up causing the dam to break, and it caused floods and havoc till many hundred kilometres downstream. The trail continues to the Karakoram Pas and finally leads to Central Asia.

Siachen Glacier

Back to Nubra valley and Sasoma from where the trail had originated. Further north is Siachen glacier. This is one of the longest glaciers in the world and a major climbing ground. It has a long history. Sir Francis Younghusband, Bullock Workmans and Tom Longstaff were early visitors who brought back knowledge about its length, location and mountains. Several peaks on its

western rim, like Salto Kangri I, K12, Sia Kangri and others were climbed by expeditions of different nationalities. In the 1970s several Japanese expeditions crossed over Bilafond la in the west to this glacier and made ascents of Teram Kangri I, Apsarasas and Singhi Kangri. These visits, from Pakistan, prompted the Indian army to take action and in 1984 they stationed themselves on its heights. This was the beginning of the 'Glacier War' which is still on. Before that, some Indian army expeditions had been climbing on the glacier

Most of the high peaks, including Everest, have now been climbed over a 100 times. Once the interest in them has waned, ranges such as those in India, will be the climber's playground hopefully!

repeating ascents of the above peaks, now approached from the Indian side.

Climb Allowed

Several teams were allowed to climb on the glacier and in the side valleys from the Indian side. The first joint expedition (Indo-British) in the side valley was to the Rimo peaks in 1985. The team led by me and Dave Wilkinson climbed Rimo III and narrowly missed climbing Rimo I, which was climbed by the Indo-Japanese team the following year. An Indo-American team climbed Sia Kangri at the head of the glacier and then for several years no climbers visited the upper glacier. Salto Kangri II at 7705 m remains one of the high unclimbed peaks in the world today. When things are quieter

there, a lot of climbing can be done in the area.

In 1998 I completed a dream while traversing the Siachen glacier to stand on the Indira Col at its head. It was a grand feeling to see the historical mountains and points of reference to historical aspects. Despite the present hostilities surrounding the glacier this is the range for the future.

The Indian Himalayan range stands on its own even though it does not contain high peaks of 8000 m for which leading mountaineers are queuing elsewhere. Most of the high peaks, including Everest, have now been climbed over a 100 times. Once the interest in them has waned, ranges such as those in India, will be the climber's playground hopefully!

This is a brief personal outline of the history of events in the Indian Himalaya. There are many other aspects of the range apart from mountaineering. For any mountaineer interested in the range I have one suggestion. Normal Mailer is said to have once chided President John F. Kennedy after the Bay of Pigs fiasco. He said, 'you invaded a country without understanding its music'. I would similarly argue that a trip to the Indian Himalayan range can be more enjoyable if you appreciate its rich history and diverse culture. Though a lot has been done in the Indian Himalaya in the last Millennium, a lot remains to be done. After all what is a 100 years for the Nagadhiraj Himalaya, standing there for centuries. Today as we celebrate the International Year of Mountains we must pledge to know more about the range and protect it. □

Correction

In the July issue, on page 43, the word 'xanana' has made an unnecessary incursion. The headline of the item should be—A nation is Born—East Timor. The error is regretted.

Sustainable Mountain Development

Gopi N Ghosh

The problems confronting mountain areas and communities arise largely from a combination of the unique features of their environment. The overriding concern is to assimilate or integrate mountain communities with wider national economies as their perspective does not fit easily with concepts of open economies and globalization.

CHAPTER 13 of the United Nations Conference on Environment and Development (UNCED) Agenda 21 focuses on sustainable mountain development, highlighting the urgency of action and outlining two programme areas:

- Generating and strengthening knowledge of the ecology and sustainable development of mountain ecosystems;
- Promoting integrated watershed development and alternative livelihood opportunities (UN, 1992). The Food and Agriculture Organization of the United Nations (FAO) was appointed Task Manager of Chapter 13.

In the light of the rapidly growing awareness of importance of mountain areas, the UN declared 2002 as the International year of Mountains (IYM) in November 1998. FAO was chosen as the lead agency for the observance of the IYM, in collaboration with governments, NGOs, civil societies and other UN

organizations in particular UNEP, UNDP and UNESCO. FAO looks at IYM as an opportunity to raise public awareness about pertinent mountain issues and ensuring adequate political, institutional and financial commitment for concrete action towards implementing sustainable mountain development.

Mountain areas are important sources of water, energy and biological diversity while also providing resources such as agricultural and forestry products, minerals, and recreational sites. Mountains occupy one-quarter of earth's land surface while being home to 1 in 10 people, supplying 60 to 80% of fresh surface water, and nurturing 50% of biodiversity hotspots. Besides, mountains are the primary indicators of any climate change phenomena. Across the globe mountains have been recognized as the centres of culture, civilizations and knowledge.

Mountain environments are, however, immensely fragile ecosystems. Their steep slopes, and vertical dimensions make them

susceptible to soil erosion, landslides, and loss of habitats and biodiversity. Mountains also pose significant challenges to those who live among them. Poverty is endemic among mountain-dwellers because of the harsh physical environment, isolation, lack of communication, relative failures to transfer knowledge and technology to mountain communities, and the marginalization of ethnic minorities.

The principal objectives for sustainable mountain development (SMD) largely reflect those of broad sustainable development. The challenge is to perpetuate economic growth without compromising the environment or destroying prevailing social or cultural values. In mountainous areas, however, the challenge is accentuated by the inherent physical constraints that often exclude mountain communities from national, regional and global economic development thus rendering them susceptible to exploitation and marginalisation. The challenge for policy makers is to account for the

special circumstances of mountain areas, while enabling the smooth integration of mountain communities into the modern economy.

Issues & Challenges

A number of fundamental issues and priorities emerge as determinants of SMD. There are differing levels of concerns as well. For example, climate change, biodiversity conservation, freshwater resources, eco-tourism, cultural heritage etc are the concerns at the global level, while at the regional platform, trade, upland-lowland linkages, watershed management, migration, river basin management etc are the main planks. At the national level the engagement may be in the areas of policies, legislation, national strategies, planning & programme formulation for conservation & development. At the local grassroots level, however, people, gender, communities, local economy, livelihoods, culture, conservation, and development of natural resources may occupy the centrestage. Some of the important issues are identified and presented hereunder.

Environmental Issues

Fragile mountain ecosystems: The steep slopes coupled with severe climatic conditions susceptible to landslides, heavy nutrient loss and large-scale soil erosion make mountain ecosystems extremely delicate. In addition, rapid changes in altitude lead to distinct mountain habitats occurring in very narrow bands that can be easily disrupted or destroyed. The areas suitable for cultivation or other forms of resource exploitation for livelihood are usually limited, and this brings about over-exploitation.

Supporting multiple functions of mountain ecosystems: Mountain ecosystems play a critical role in the

water cycle by capturing moisture from air masses. In the arid, semi-arid areas of Asia, more than 90 percent of river flows originate in mountain watersheds. They are sources for hydroelectric power, wood for fuel and timber products, mineral and ores, and important repositories of biodiversity. Mountain ecosystems also provide an array of livelihoods for people who settle in the uplands.

It is crucial that SMD projects continue to support these multiple functions without being detrimental to the ecosystem. For example, mining has stripped the land of vegetation, left behind large areas of slag and tailings and polluted the waterways. Industrial forest harvesting and clearing for pasture and range lands have adversely affected biodiversity and exposed steep land to erosion.

Biodiversity conservation: Trans-frontier collaboration is necessary to manage the biodiversity to preserve large bioregions by building a network or mountain range corridors, as in case of the partnership between Nepal and China (Tibet Autonomous Region) to manage the Sagarmatha (Mount Everest) region. Participation of the local populace to protect and conserve biodiversity in mountain regions is indispensable. New farming technologies that blend in with traditional methods are being implemented to ensure sustainable ecosystem management—all with the notion of understanding, cooperation and peace for development and conservation around trans border mountain systems.

Economic Issues

Improving livelihood opportunities: Mountain dwellers are among the world's poorest people and hence

they require major development efforts to bring them into the mainstream of economic development. The terrain and inaccessibility of mountain areas dictate that economic activities only rarely achieve the scale and profitability of these areas. They lack exposure to external economies and are poorly equipped to compete in open markets. Improving livelihoods for mountain communities is dependent, at a micro-level, on identifying markets in which mountain products have a competitive advantage, and on enhancing human capital and strengthening infrastructure. There is an overriding need to furnish upland communities with the skills and facilities to enable them to raise their standard of living in a viable manner.

A key component of the International Centre for Integrated Mountain Development (ICIMOD) Regional Collaborative Programme for the Sustainable Development of the Hindu Kush Himalaya (1999-2002) is to reduce poverty and sustain the livelihoods of mountain people. Some of the proposed activities to improve living standards throughout mountain areas include on-farm soil-water-nutrient management for marginal small holdings and improvements in related technology and management options; high-value commodities and enterprises; diversification and expansion of income and employment opportunities; and balanced development of infrastructure and services.

Upland/lowland interdependencies : Understanding of the movement of resources between mountains and lowlands is crucial for improving mountain people's

economic opportunities to ensure that they receive a fair return from the exploitation of their resources and services. In general, resource and commodity outflows tend to heavily dominate inflows of goods and services. Of considerable significance is the export of exhaustible commodities such as mining ores and timber, which are likely to be extracted at a large-scale and with little compensation to the indigenous population. In contrast, imports are usually small and limited mainly to consumer goods, with the exception of investments in specific infrastructure and industrial development projects.

Upland-lowland economic linkages and interdependencies mainly arise from differences in respective natural resource endowments and the trade potential generated by these variations. The inter-relationships are affected by a range of infrastructural and institutional arrangements and by relative technological and human capacities. A predominant feature is the export from mountainous areas of mainly unprocessed goods at low prices. Upland people thus suffer from unfavourable terms of trade, while the major economic benefits derived from the large-scale exploitation of their resources often bypass mountain communities. A general theme is thus one where lowland communities gain most, while upland societies are left to bear the brunt of resulting environmental and social costs. This characteristic persists with natural resource flows such as the utilisation of freshwater for irrigation and human

consumption, the movement of alluvial sediments and nutrients, and other uncompensated environmental services.

Investment in mountain development and conservation: Such investment is generally scarce and, when available, often targets only highly specific capital-intensive projects. In net value terms, these are often of little benefit to mountain communities or their environments. Local communities are often excluded from planning and implementation, which rarely address issues of compensation for losses incurred, or the mitigation of environmental damage.

The development of upland areas is constrained by high risks, low investment absorption capacities, absence of strong mechanisms to match investments with opportunities, and scarcity of investment capital. Even when there is surplus available for investment, better opportunities exist in the lowlands. Capital thus tends to flow out of mountain areas, especially with the out-migration of people. A significant challenge is, therefore, to mobilise investment in mountain areas in ways that are inclusive of, and benefit, local people and that are environmentally friendly and sustainable.

Open economies and globalisation: Market-oriented regimes focus on short-term commercialization. This has often resulted in marginalisation of traditional cultures and social practices in many mountain areas. This disruption is exacerbated where traditional production opportunities are stifled, without the emergence of new prospects. New incentives, technologies, infrastructure and institutional support arising from market driven

economies may advance the intensive production of mountain goods in the lowlands and thereby undermine comparative advantages previously enjoyed by mountain communities. Granting of timber harvesting licences may preclude mountain people from utilising local forests to earn a living, while hydro-electric development may inundate their agricultural lands, and the creation of national parks, conservation reserves and tourist resorts in their domain deprive them of traditional sources of income. SMD aims to integrate upland economies into broader regional and national economic systems to capture an equitable share of the economic benefits and trade opportunities for mountain people.

Socio-economic Issues

Inaccessibility and isolation: Development of upland regions is hindered by their remoteness and difficult terrain. High transportation costs pose a major barrier to trade and the lengthy time taken to get perishable goods to markets may preclude their export. Similarly, inaccessibility hinders national or international programmes that are geared to deliver education and health services or rural extension to mountain population. It cuts them off from knowledge and new ideas, and constrains their ability to interact effectively with the outside world. Isolation therefore becomes a major factor perpetuating poverty.

Food security: Mountain communities are particularly vulnerable to poor nutrition and food insecurity, with women and children being most at risk. The limited availability of arable land, poor soil quality and harsh climates

often severely restrict food production in mountainous regions. Remoteness and high transportation costs also limit access to production inputs and technology and foods from other regions.

Harsh living conditions cause high extent of malnutrition and micronutrient deficiencies in the mountains. Available data reveal significant problems of underweight, stunting and wasting. Food is lacking, not only in quantity, but also in terms of optimal composition and quality. Poor access to general health care and immunization results in a high incidence of disease that in turn contribute to perpetual poor health. Specific nutritional problems in mountain areas include, prevalence of low birth weight, poor diet, infant mortality, iodine deficiency disorders, pre-and post-natal mortality, goitre and cretinism; and Vitamin A deficiency.

The 1996 World Food Summit in Rome made food security a top priority consideration for the global community. This implies that efforts towards SMD will become part and parcel of the world order to eradicate hunger and malnutrition, in line with overall objectives of enhanced food security and poverty alleviation.

Status of women and children : The problems experienced by women and children of mountainous regions are magnified by harsh geographical conditions. The focus of SMD encompasses the roles of women and youth in raising living standards and the management of resources for a better quality of life through rural extension and social services as health and education to the doorstep of their mountain communities.

Both seasonal and permanent outmigrations from the highlands

have impacted on youth and women as they are to manage subsistence farms and households, while men are away from home for long periods. Women have only limited access to deposit and loan facilities, agricultural extension, and other services. Outmigration may also require children to undertake additional responsibilities, for example, herding, and other domestic work, which compromise their educational opportunities.

Cultural Issues

Cultural integrity: Mountain communities have devised agricultural systems and land use structures that adapt well to the prevailing geographical conditions and, at the same time, can generate a sustainable livelihood for them. Over long periods of time and through migration these systems and structures have evolved into distinct upland ethnic cultures. An important challenge is to enable them to attain broader goals without destroying the unique fabric of their culture—native folklore, music, dance, customs and traditions. More recently, greater exposure to the outside world has raised the aspirations of such communities and driven them to seek changes. In general, this involves a revolutionary transformation of resource use, adoption of new products, and innovations in institutionalized structures and risk-sharing arrangements.

Protecting indigenous people's rights : The biggest challenge now is to protect ancient knowledge, practices, attitude and culture—most of which are retained in oral traditions. There is a need to recognize the rights of indigenous people and to empower them to benefit economically from their

ancestral lands, culture and traditions, specially through legislation as has been done in the Philippines in 1986. It ushered in a new era of concern for human rights including those of displaced indigenous peoples by using state administrative powers to recognize legitimate ancestral domain claims by individuals, families, and indigenous groups and to provide a framework for land management according to prevalent knowledge, practices, and culture.

Sacred mountains and holy rivers: Mountains are the repository of ancient knowledge and spiritual traditions of exceptional order. Several holy rivers originate and flow through the mountains with their distinct, historical, mythological and cultural significance. There is need to develop, preserve and promote such treasures and perhaps market them as unique products and services benefiting the local people.

Conflict in mountain areas: Most global conflicts are found in mountainous regions that also house a great number of the world's poorest and malnourished people. Warfare is the single greatest obstacle to achieving SMD and ensuring food security. In the absence of peace, there is little opportunity to reduce poverty, safeguard adequate food supplies or consider sustainable development. In 1999, 23 of the 27 major armed conflicts in the world were fought in mountain regions. Few Asia-Pacific countries are exempt from such turmoil, and in many instances, they involve upland ethnic groups. For example, the Himalayan Siachen Glacier is the venue for one of the world's longest running military battles. The most recent example can be seen in Afghanistan. Meanwhile, other

intermittent hostilities involving specific ethnic groups are occurring in a number of upland areas.

The problems confronting mountain areas and communities arise largely from a combination of the unique features of their environment. The overriding concern is to assimilate or integrate mountain communities with wider national economies as their perspective does not fit easily with concepts of open economies and globalization.

It is necessary for governments to create an economic climate conducive to upland growth. At the same time, research assistance is required to identify and develop competitive products (organic

produce, herbs, medicinal plants, honey, spices, livestock, handicrafts) and markets for them possibly through mountain product differentiation. Value-added processing of mountain products is another promising area, while appropriate marketing of tourism (nature exploration, adventure sports and spiritual sojourn) can create niche opportunities.

There should be technological interventions (biotechnology) to enhance the productivity of local resources (particularly in agriculture) and institutional intervention to develop favourable terms of trade. One of the most expedient means of assistance is in the building of transport and

service infrastructure. Community participation and decentralized planning may be adhered to. Remoteness is the greatest disadvantage encountered and the ability to overcome it constitutes a major achievement in the fight against poverty.

Policy makers also need to take steps to prevent the exploitation of mountain resources by external agents, who leave a legacy of environmental damage and/or fragmented social structure. Governments need to balance national economic goals with the demands and rights of local communities to ensure a more equitable distribution of income. □

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Mysticism, Romance and ...

P M Das

“Between the forests and the snow lies the most poetical of the mountain regions. There, when climbing upwards you first feel the bundle of earthly care rolls off your shoulders and that you have finally cleared the ‘slough of despond’. There in the early months, you walk knee-deep in flowers, every one of which is a bit of embodied poetry”.

I have often wondered what makes the climber take on the hard challenges of climbing year after year. Despite the well-meaning words of discouragement of near and dear ones, as to the danger of it all. The risk of a fall; of being trapped in an avalanche; of being hit by stone-fall; of an anchor coming loose on an abseil.

Let me narrate a feeling I had while on a traverse high up on the slopes of Mukut Parbat. A diagonal traverse below the last camp was peppered with falling rock and stones which whistled past you at tremendous speed during the daylight hours. Like bullets. I found myself on this traverse with a companion at eleven in the morning, a little behind others in our ascent. On seeing the rock bombardment, my companion wisely suggested we turn back, but my spirits egged me on, if only to see if I had understood their pattern and frequency. I danced and dodged the missiles and safely completed the traverse but turned back from completing the load ferry to the higher camp because it was late in the day and again exposed myself to the rock bombardment on the descent and rejoined my companions at the lower camp. Perhaps enjoying the flow of adrenalin in the process!

Why did I expose myself to this apparently senseless risk on this climb in the first place? On this traverse what had I achieved? Nothing tangible; not even a load delivered to the higher camp for future use. Yet there was this satisfaction that I had been able to move in harmony with dangerous elements of nature. Something the rational man would find difficult to comprehend. Yet it is a common streak in many climbers. It is this kind of urge which brings the serious mountaineer to take on high risk climbing, time and again, irrespective of the toll that these same environs may have taken on others of their ilk.

*Asceticism: Sir Arnold Lunn wrote about mountain mysticism and the mountaineer ‘in Alpine Mysticism and Cold Philosophy’: “He has chosen the ascetic way to mountain understanding, and among the hills, as elsewhere asceticism is the key to the higher forms of mystical experience. One need not question the sincerity of Ruskin’s condemnation of those who had transformed the mountain cathedrals into arenas for athletic feats, but I have sometimes suspected that the peculiar venom of his attack may have been due to the fact that the mountaineer provoked an uneasy and unformulated doubt of his own life, which was essentially non-ascetic and soft”. The hardships and privations undertaken by the Buddhist monk or the sadhu, suffering a cold winter in the heights of the Himalaya is often taken for granted. Is it because we have thousands of such ascetics? *Pari passu*, asceticism is part of Indian character and since this quality is a basic requirement of a serious climber, makes the Indian character temperamentally suited to take to mountaineering and the ascetic sports.*

Mountain Worship: Few mountaineers distinguish between worship of mountains and worship inspired by mountains. Do they perform a worship inspired by mountains? To Sir Arnold Lunn the latter makes sense but

Dr P M Das, IPS, Inspector General of Police, India Reserve Battalions, Punjab, is a veteran mountaineer.

the former appears ridiculous. The Himalaya are resplendent in mountains named after the Gods, as in Gaunshankar, Gurudongmar, Swargarohini, Kailash, Parabati Parbat, Shivaling and are steeped in religious lore. Not surprisingly gods, goddesses and deities of the hills are deeply rooted in the lives of the simple hill-folk of the Himalaya. Therefore, I have often wondered whether most Indian mountaineers too, in identifying themselves with these hill people, worshipped mountains.

What is definite is that the Himalaya is so steeped with religious worshipping, many mountaineers seem to have succumbed to the cant and ritual of it. The scare of the unknown and lack of confidence in the climber's own competence and ability to work in harmony with the mountain leads him to clutch at these straws.

In fact mountaineering is perhaps the only sport in which its devotees have attempted to find a substitute for religion. Sir Leslie Stephen who had been an Anglican priest before he wrote 'An Agnostic's Apology' was not the only mountaineer in whom mountains evoked something faintly like the sense of worship evoked by the religion he ceased to believe. In mountains he found "their voice is mystic and has found discordant interpreters: but to me at least it speaks in tones at once more tender and more awe-inspiring than that of any mortal teacher". Under the influence of Leslie Stephen, Arnold Lunn rejected Christianity while at school and explored materialism. He declares that he became a rationalist but by nineteen he became an agnostic if not an atheist by belief. Yet his experiences of moving mountain scenery convinced him that "no purely materialistic theory of evolution (as of Charles Darwin) offers the slightest clue to the origin of our sense of beauty".

Philo observes 'All nature is the language in which God expresses his thoughts but the thoughts are more important than the language'.

'Thus mountains may be symbols or images of some other reality' but the worship of images as if they were something more than images is a form of idolatry in the strict sense of the term' All those who profess to believe in the religion of the mountains must be prepared to defend themselves against the accusation of mountain idolatry. Thus do we believe, the mountain, Nanda Devi is a Goddess or the creation of God?

Carrying the argument a step further we may conclude that expression of mountain beauty must never be coloured by religion. There must be genuine mysticism in response to mountain beauty for the true mountaineer.

The Presence : How often the mountaineer feels as R.L.G. Irving wrote 'with each succeeding year grows an abiding conviction in the dependence of himself and his surroundings on the benevolence of some unseen power'. Is this the revelation which appeared before Willi Unsoeld as he set eyes on Nanda Devi for the first time before his traverse of Everest in 1963 that he came back for an ascent many years later along with his daughter whom he had named after the mountain?

Many climbers at high altitude, under stress have experienced the presense of a companion in accompaniment while perhaps there was none. There is no dearth of instances such as those recorded on the upper slopes of Everest. I recall my own experience after a disaster following an ascent of Bhagirathi-II (6150 metres), 18 years ago. On the descent from the summit one of my companions slipped on the rope and pulled me and another into a fall which we failed to arrest. The result was that I found myself having to sit out a night in the open at 20,000 feet, badly bruised, without an axe, crampons or clothing and beside one dead companion and another dying. Shivering and stamping my feet, I shouted out to the rescue party which failed to reach me. I prepared to concentrate on keeping up the spirits of my living friend and survival. Throughout the night and till I was found by the rescue party while descending an avalanche chute next morning, I felt the presence of a Being. This presence was around me and at times I talked to him and it urged me to concentrate on my survival, which I was doing. It was not a ghost-like apparition, but like a companion. A presence. Eventually, the Presence disappeared from my sphere of consciousness as I sighted the rescue party. I am not sure what this phenomenon was. Was it a hallucination conjured by a weary mind? If it was, it had a positive effect on me. Or was it more than that? Perhaps I made connection with another dimension, in an etheral space by a medium called stress...

... Call of Mountains

WHEN COLLEAGUES of the police force learnt I was launching the maiden mountaineering venture of the Punjab Police Adventure Sports Club which had been established a year ago and of which I was the Founder-President, some enquired anxiously as to whether I would be the only climber on the

lurking desire to get up it since I set eyes on its summit slopes 30 years ago. Even though the peak had seen repeated ascents since Jack Gibson's first ascent in 1955, the peak would provide sufficient stretching of novice climbers and was generally known to be a "safe" one-as far as euphemistically a Himalayan Peak can be called one-

allegory, "Pilgrim's Progress", calls the slough of Despond. I made it clear to the experienced porter-agent and to Vinod-who was essentially a non-climber but took on the mantle of manager-cum-deputy leader of the team-that they were not to bother me with logistical problems, but to let me and the climbing unit of five constables get our teeth into the climbing and walk up the numerous valleys around.

Jack Gibson's vista covered various ski valleys and even a 'tooth-ache' valley to the south of the Bandarpunch glacier, the crossing of the Jamnotri pass and in the north, the crossings of the Swargarohini spur into Harkidun-the latter two crossings which I myself had effected on earlier occasions. Then there was a great arc of peaks and passes from Swargarohini, inclusive of the Dhumdar Kandi Pass leading to Harsil, the inviting exploration of the West Bandarpunch glacier with a possible ascent of the White Peak or Bandarpunch West (6102m), which I had sighted in 1978 while climbing Bandarpunch (6316m) from the Northeast. The attraction of looking at the six Swargarohini peaks to the north of the Ruinsara Gad for a future go at virgin Swargarohini V (5984m/19633 ft.) and Swargarohini VI (5845m/19177ft.) also played around in my mind. However, what I put down as a must was to be left alone in a region best described by Sir Leslie Stephen in *The Play-ground of Europe*, 1870: "Between the forests and the snows lies the most poetical of the mountain regions. There, when climbing upwards you first feel the bundle of earthly care rolls off your shoulders and that you have finally cleared the 'slough



Approaching the summit of Kalanag in cloudy conditions

team. Their skepticism was understandable since the sport of climbing is yet to "take-off" among the police forces of India. However, the comment was met with withering scorn and they were informed that it was in fact the handful of constables whom I had encouraged to do the basic and advanced courses, who were responsible for cajoling, imploring and eventually pushing me to go about organizing a modest venture with scope of a smattering of opportunity in mountain education. I selected Kalanag in the Tons Valley for its easy accessibility from the Punjab where I am posted, and also a

despite its reputation of being crevasse-ridden (of which I later had an intimate experience!).

Having allowed myself to agree to the gentle persuasion of the mountain-bug-bitten constabulary and with time running short, court appearances of all to be rescheduled, etc, I launched into the familiar saga of preparation with the idiot-minded singleness-which is always needed at this stage of expeditioning-to get a team to depart from Chandigarh within a fortnight!

The team was at the road head at Sankri by 5 June 2001 having cleared, what John Bunyan in his

of despond'” (quoted from Bunyan). There in the early months, you walk knee-deep in flowers, every one of which is a bit of embodied poetry’.

In the event I found time to be by myself at Ruinsara Tal-another “From Heaven’s Lake” (Vikram Seth)-after the ascent of the Black Peak, amidst the acres and acres of white, violet and yellow anemones. There were other flowers too in colour which I identified with the assistance of Nari Dhami and which I must record: *Bistorta*, *Hackelia unicata*, *Primula involucrata*, *Primula macrophylla*, *Myrorotis alpestris* (alpine forget-me-not), *Allium humib* (spring onion), *geranium*, *cotton easter*, *thymus*, *Buttercup ranunculus*, *Pedicularis* (lousewort), *Lilium nanum*, *Ductylorhiza hatagivea*, *Lilium pentulum*, *Black pea*, *Thermopsis barbata*, *anemone*, *Himalayan peony*-*Paeneia emodi* (violet and white), *Briar thatch*.

In this riot of colour brought further alive with Beethoven music flowing from my Walkman, I stayed for a day and a night with only a broken interlude to play host at tea-time to two petite young ladies from Bombay, camping on the far side of the lake on their way up the Bali pass.

But to get on with the expedition: The route followed was up the Tons along its roller coaster track through mixed deciduous-coniferous forests of maple, oak, spruce and savouring moments under the apricot trees around Taluka. The delightful calls of elusive hill birds lifted the mind out of any sluggishness and one was rewarded by the sightings of the Himalayan Tree Pie, the woodpecker and the redstarts. The next halt was Oshla where the FRH still stands despite having been heavily used, after which was the walk through meadows and deodar



A view of Kalanag (6387m) from Base Camp

forests. Birds again played hide-and seek and we spotted the White-capped as well as the Plumbeous redstarts and the Whistling Thrush along the river. At Devsu Bugial is the confluence of the Tons and Ruinsara where we were rewarded with our first glimpse of the Black Peak with its prominent black portion of rock dropping off the western rampart of the mountain from the summit and the long ramp from the north leading to the summit cone resembling a snake’s head from where it gets the name Kalanag. It was 18 kms to our camp at the heavenly Ruinsara Tal which on the way up was too crowded with porters to enjoy in solitude but I was able to camp here on the way back without them as already narrated.

The base camp was set up at Kiarkoti by 8th June at an altitude of 4415 m, on a large meadow with running water from the slopes of Swargarohini I. The porters returned from here and we were afforded views of Kalanag, Swargarohini, Bandarpunch Glacier and the Dhumdhar Kandi Pass. The weather, though normal for Garhwal at this time of the year, delivered regular showers by the late afternoon and light snowfall in

the upper reaches. The walk up to base is memorable also for the colours of *Anemone obtusiloba*, *Primula denticulata*, *Primula involucrata*, *Iris kumaonensis* and *Rhododendron companulatum*, *Fritillaria oxypetalum*, etc.

With the radio forecast announcing the rapidly approaching monsoon- a week before normal-I was under pressure from the high altitude guide and, I suspect the homesickness of the trekking group, to drop the elaborate acclimatization plans chalked out and go for the main objective at the earliest.

The next day we ferried loads over grassy slopes, two nullahs, a tricky scree slope and established the Advanced Base Camp at 5050m (16,534 ft.) at Dharodhari grazing grounds. The reward of the day was the spotting of two herds of at least 15 bharal (The Himalayan Blue Sheep) each and I regretted having left my Asahi Pentax and the lens behind today. A roosting monal remonstrated volubly at being disturbed, but I think it would not have minded had it realized we were actually out to have a glimpse of her mate with brilliant metallic green head and crest, who we eventually saw fly out from a

hillside. Less noisy was the Rubythroat short of ABC.

On the 10th of June, the climbing team occupied ABC, moving up in brilliant weather and again encountered the loud 'gonk' of the monal who protested very loudly at being disturbed at its lair. Some of us again sighted one of the two large herds of bharal before the camp. From the camp we got a good view of all the peaks of the range and also the glacier swinging to our right below.

The next two days were spent in acclimatizing on the heights above the camp, glissading down and making a load ferry, onto the Kalanag glacier, dumping them on a snowfield at 5500m. The landmarks of Barasukha, Yellow Tooth, Chotanag and some of the Swaragarohini peaks could be seen.

The weather was unsettled and we had longer periods of snowfall, making climbing conditions quite difficult.

Camp I (our assault camp) at 5700m (18500ft) was eventually occupied on the 13th of June. It was located on a snow hump on the Kalanag icefall. However the weather fouled up thereafter and we were compelled to rough it out for 3 nights with diminishing supplies of food and sustenance. During this period I busied myself reading about how dogs and cats trigger asthmatic attacks, Aldous Huxley's, "The Brave New World" and of the sensuous heroine Lenina; writing letters and recording thoughts in my diary, sketching the views around and fighting a mild bout of diarrhoea. One almost felt that our rest was ordained.

On the 15th June the supplies had all but finished and we would have had to descend to base if the weather remained bad the next day, to the uncertainty of finding

enough rations there for another assault. My procrastination of the decision paid off as in the evening the weather improved and we were rewarded with a "window" in the bad spell of weather. The snow conditions seemed just about enough to give us a chance to get to the summit.

Summit Day

The preparations before an early departure commenced with a meal-the last of our rations of rice, dal and nutri-nuggets and a mug of Boost, piping hot. Shortly after midnight we were away: six climbing members namely: myself, Nari Dhami; the tough Uttaranchali girl, Kulwinder Kumar, Mohan Lal, Gurbachan Singh, Daulat Negi and two high altitude assistants: Bhagat Singh Rawat and Chandan Singh. It was not too cold, I recall and there was no wind but soon it began snowing lightly as the climbers moved over the ice-fall, torches illuminating our path, weaving between the crevasses towards the col between Garur and Kalanag. Nari, Kulwinder, Bhagat Singh and Chandan were on one rope while Mohan Lal, Gurbachan, Daulat and myself were on the second. Nari led her own rope and this incredible lady broke trail through the soft crust, almost the entire way to the top. On my rope, Mohan and I took turns at leading. I insisted that all climbers remain roped up throughout the climb.

As we made our way upwards, most of us were struck with a languorous feeling which I can only attribute to lassitude in the windless ice-fall. At sunrise my rope was almost on the col while Nari and the others had gone ahead. By now the wet snowfall had stopped and though we were enwrapped with clouds and in a white-out, there would be no

more snowfall during the rest of the climb. Snow conditions were poor and crampons "balled up" on the ascent making the going hard, until eventually I removed mine. At 19,500 ft we paused for a break and could see the northern slopes of Bandarpunch and its satellite West Peak, Swaragarohini, Chottanag and even our Kiarkoti base camp. There were frequent walkie-talkie conversations with those waiting anxiously at base. The climb now was by and large on a long and gentle 30 to 45 degrees gradient but because of the soft snow, very tiring. The final summit slopes seemed interminable. To compound my discomfort, at the base of the summit pyramid, I fell into a hidden crevasse. Without crampons, groping in the dark against rotten snow on all sides which was disintegrating at every impact with my shaken frame, I was thankful for my safety harness and the rope which the others had safely anchored below and above me and I was able to jumar out. I got my tiring frame on to the summit at 3.30 pm where all the others were awaiting us. It was a long climb, thanks to the poor snow conditions but all 8 of us reached the summit. Though there was cloud all around now, our photographs clearly show the summit base and the cornice on top. The traditional rituals were presided over by Nari. We spoke to the trekking-party at base and accepted their congratulatory messages before plunging downward. I walked into camp last, satisfied that all the others had returned safely, after a 16-hour day. Nari at one stage was worried when I hallucinated about the track before me and exclaimed that a PWD road making gang had descended before us!

(Contd. on page 65)

Need to Preserve Marine Ecology

Manohar Puri

If we want that our future generations should also enjoy the beauty of coral paradise, palm trees shaded islands fringed with smooth silvery sand stand edging the lagoons, the crystal clear water as an abode for abundant marine life and may be able to swim, sun tan or explore the islands, many walking trails and reefs—we must preserve their ecology with all our might and resources.

THERE IS a consistent demand to convert Andaman and Nicobar or any other island into a free port in order to earn more and more foreign exchange by the market forces. Equally powerful is the opposition from the environmentalists who want to maintain the natural beauty of these islands and are against such activities.

India has a long and beautiful sea line but the charm of its islands is splendid, unexplored and unexploited. On their beaches the occasional cry of a bird warning the slithering heavy crab and the crystal clear water parting to make way for the glass bottomed boat which gives a view into the coral kingdom of the sea in all its splendour and glory. The Archipelago of Andaman and Nicobar and Lakshadweep are just like pearls in Indian waters.

Floating in splendid isolation, east of Indian mainland is the archipelago of 572 emerald islands, islets and rocks—the Andaman and Nicobar Islands.

Andaman and Nicobar archipelago is spread over an area of 8,249 sq. kms. with tropical rain forest and beautiful beaches and creeks, endless variety of exotic flora and fauna, marine life and under water corals, is the dream destination of the environment friendly tourists. The golden sandy beaches on the edge of the meandering coastline are fringed mangrove swamps, sleepy lagoons, coconut-palm trees that sway to the rhythm of the sea. The Andaman and Nicobar Islands are like a chain of sparkling gems, scattered in the Bay of Bengal, shimmering in radiant sunshine. When the decision to partially open the Andaman and Nicobar islands for tourists was being considered it was not without the concerted opposition. The Directorate of Tourism while advertising for the eco-friendly tourists tried to highlight its beautiful scenery, sun kissed, unpolluted beaches and comfortable climate. It was mentioned that it is a heaven for nature lovers and peace seekers.

The climate here is tropical and humid. The humidity ranges between 70% to 90% with a gentle breeze blowing at all times. The weather is generally pleasant with minimum temperature of 23 and maximum 30 degree Celsius. May to October are the months which are not cordial to the tourists, being rainy season. The average rainfall here is 3180mm.

These undulating islands are full of myths, mysteries and hearsay. There is no authentic information as to how these islands came to be known as Andaman and Nicobar Islands. However, from certain written sources it is assumed that Nicobar was known to the people as early as 5th century B.C. and Andaman in 100 A.D. The names of these islands were casually mentioned in the travelogues of Marco Polo and others. It is believed that the name Andaman is derived from Malayan word Handuman and Nicobar from Nicavarum—the land of naked. The one who visits the area to see the topless tribes or primitive man gets only disappointment as

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they are cordoned off by the provision of the Special Primitive Tribal Reserve Area and so not open for the modern viewing.

Very Special

It is this atmosphere of splendid, unspoilt isolation which made Andaman very special. Tourists can have true leisure here because they are not disturbed by the inhabitants. Of the 274 islands in Andaman only sixteen are having habitation. Its 6340 sq. kms. stretch has 90% forest cover. With all facilities for the tourists, Andaman and Nicobar is a leisure destination. International luxury cruises often stop here on their way from Thailand or Indonesia. The authorities are determined to stop Andaman from becoming another Goa of the hippy era.

What is more remarkable about these islands is their history of suffering and sacrifice for the freedom of India. Many freedom fighters have passed time of hard labour on these islets. A vast ocean of blood and sweat, belonging to countless patriots, shipped here from as far back as 1789 up to early thirties of 20th century. While in Andaman and Nicobar a real homage to the heroes of freedom struggle is incomplete without visiting the infamous Cellular Jail, converted into a National Memorial.

Water sports facilities including safe water sports and adventure sports are available on some islands. In Port Blair, the unique complex, first of its kind in India, has arrangements for all possible aqua sports one can think of. One can enjoy the thrill of adventure into water by doing water skiing, wind surfing, running speed boats, water scooters, kayak etc. To view the under water marine life and rarest varieties of corals is an

experience in itself. Scuba diving is another attraction for the tourists who come here. Thousands of tourists come here to see Anthropological Museum, Marine Museum, Chatham Saw Mill, Zoological Garden, Mount Harriet, Chidya Tapu, Wandoor beach, Viper and Ros islands. One must also remember that transportation of corals, sea fans and sea shells and hunting of wild animals is prohibited until special permission is taken in advance from the authorities.

Lakshadweep is another tourist spot which is attracting more and more tourists these days. The people of Lakshadweep are very conscious about the ecology of their islands. In the year 1996-97, the Lakshadweep Administration won the "most eco-friendly organisation" award of the Union Ministry of Tourism. This award was in recognition of the administration's policies and projects that helped preserve the environment of the islands and creating an awareness while promoting tourism.

Volcanic Formation

Built on ancient volcanic formation are the Lakshadweep or a "hundred thousand" islands is the smallest Union Territory of India. It consists of 12 atolls, three reefs and five submerged banks. People believe that it has derived this name from having been a "Laksha" landmark for ancient mariners sailing between Africa, Arabia and Malabar.

There are thirty six small islands and inlets lying scattered in the Arabian Sea, 200 to 400 kms. off the South West Coast of mainland between 8° and 12° 30 latitude north and 71° and 74° longitude (east) from the Lakshadweep group of islands. Of these only ten

are inhabited and the rest remain uninhabited ones. Formerly known as Laccadive, Minicoy and Amindivi Islands these were brought under a Union Territory in November 1956. The present name Lakshadweep was given to these islands in November 1973. The famous European traveller Marco Polo in his travelogue made a reference to Minicoy as "the islands of females" perhaps due to majority of its inhabitants being females and their predominant role in every walk of life.

Exotic Beauty

The climate of Lakshadweep is like that of Kerala. The average annual rainfall is 1600mm. Rainy months are from June to September. Average temperature ranges between 24.31° & 31.2° C. The air remains humid throughout the year. Relative humidity being 70 to 75%. Very little is known about this land which is having a population of about 60,000. Almost all inhabitants are Muslims. They speak Malayalam. Mahl is also spoken in the area bordering Maldives. It has an area of 28.4 sq. kms, out of this 2.3 sq. kms. is uninhabited. These islands are only three to four metres above the sea level. All the islands are wide in the north and taper off towards the south. All these islands are resplendent with exotic natural beauty. It looks like a necklace of green emeralds lying in the deep blue Arabian Sea. Palm gardens on the islands washed by enchanting lagoons, lakes in the middle of the ocean are a unique phenomenon of nature. In the middle of these lakes with crystal clear translucent emerald waters are the islands. The lagoons and the ocean are separated by a natural boundary wall—coral reef.

Lakshadweep is India's only

coral atoll. The Islands have coral reef formation on their western sides which are separated from the respective shores by a shallow lagoon. These islands are said to be the geological continuation of the Aravalli system of rocks of Rajasthan on which the corals have encrusted through millenia. The sea bottom around the islands is rocky. The bottom of the lagoon is filled with sands and sediments. The lagoon, bounded and pervaded by innumerable varieties of beautiful living and dead corals of countless shapes and forms is strikingly placed in appearance in great contrast to the blue waters immediately adjacent to it.

Generous

On one hand nature has been so abundantly generous to Lakshadweep and on the other hand there are a number of hazards here that make living conditions very harsh. There is total absence of any source of potable water except the rain water which seeps down through porous coral sandy soil during four months of monsoon. It forms a layer underground above the sea level, being lighter than the sea water. The water is drawn from wells and used for drinking purposes but it is highly saline and contaminated. Besides nothing grows in the island except coconut. Every single item of food and essentials of daily life has to be shipped from the mainland. That too is not an easy task.

Diu and Daman are also attracting more and more tourists and thus marching on the path of degradation. As far as their ecology is concerned, Daman lies on the Gujarat coast 193kms. north of Mumbai, while Diu is an islet on the southern fringe of Kathiawar peninsula. Daman & Diu were

separated from Goa to become an independent union territory when Goa was accorded full statehood on May 30, 1987. All three different land blocks on the west coast of India had come to form one political unit after liberation from Portuguese rule in 1961.

Daman is bounded on north by the Kolak River, on east by Gujarat, on south by Kolai River and on west by the Gulf of Cambay. Daman with its enticing beaches, fort and churches with their imprint of European architecture still carries haunting memories of a tumultuous bygone era which has also witnessed the colonial rule. Devika beach in Daman is a great tourist attraction. Jampore Beach, Irrigation Pond-cum-Lake in Kachigam, Nani Daman, Jetty Garden, Hilsa Fish Aquarium receive a good number of visitors throughout the year. Moti Daman Beach, being near a densely populated area, is not very clean whereas Nani Daman is much more soothing and peaceful, being far from the crowd.

Tiny Dot

Diu is a charming little rather tiny dot on the map of India. It is an island off the Saurashtra coast, 111kms. from Verajval. It is connected by two bridges with the mainland. This tiny island is spread over about 40sq. kms with less than 50,000 inhabitants. Diu is bounded by Junagadh and Amreli districts of Gujarat in the north and by the Arabian Sea from three sides. It is a small islet unspoiled by the modern civilization. Diu is an islet of breeze and beauty—a beautiful blend of sun, sand and sea which offers an undisturbed silent dialogue with nature. Its golden beaches and historical monuments provide for hours of quiet serenity and yet it is one of India's less known tourist

destination. Diu has been well known since Puranic period and the Pandavas are believed to have spent some time here. The Gangeshwar temple of Fudan is having five Shivlingas, one for each Pandav which are every day bathed twice by the tidal waves of the sea. It was a vital link with rest of India for overseas traders.

Fairyland

Diu gives a fairyland impression at night when lit. Diu Fort which is surrounded by water on three sides, occupies a prominent position. From here one can have a wonderful view of the sea in all its grandeur. With a coastline of about 21kms, Diu has some of the best of beaches in the world. The Nagou Beach which is about 9 kms. from the town, is a major attraction for tourists, being a lovely spot and outing place. This horseshoe shaped beach provides water sports facilities and is completely safe for swimming.

Ghoghla, Chankrathirth and Jallandhar beach are equally worth visiting. The Samudra Beach Resort at Ahmedpur Mandir, on the Diu-Gujarat border, offers an idyllic holiday with swimming, surfing, strolling and water sports facilities. Diu offers holidays with a difference, with a feel of the former Portuguese rulers, slow pace of life, fairyland atmosphere, friendly people. Many people come to the famous sunset point to enjoy the beauty of sunset. For awe inspiring sight people stay here till all shining of gold had vanished and the sky had put on its mantle of inky black. In comparison to Diu the beaches in Daman are grey, drab, dirty and dismal and thus needs more attention of the administration for compensating the nature.

Unfortunately many people are

visiting Daman & Diu not because of the beauty nature has bestowed here but being a wet area. The markets of Daman & Diu are full of bars as the adjoining state Gujarat is the only the dry state in India.

Tucked away between Gujarat and Maharashtra is the quaint little Union Territory Dadra & Nagar Haveli, situated near the western coast of India. Till 1954 it was ruled by the Portuguese. In 1961 Dadra & Nagar Haveli was merged with Indian Union. Dadra & Nagar Haveli are spread over 491 kms.. Its capital Silvassa is about 180 kms. away from Mumbai. The nearest railway station is Vapi in Gujarat which is lying only 18kms away from its capital whereas Valsad is 28 kms. away. The climate is moderate and walking along coconut line provides a rare freshness to the body. Unpolluted air gives a soothing feeling to the mind.

Vangoga Garden at Dadra and Vandhara Garden at Silvassa with boating facilities are some of the most pleasant tourist attractions. For peace seekers the cool reservoir park has a lot to deliver. It is becoming a popular picnic spot for the families. Here one can enjoy the music of gurgling water while overlooking and enjoying the vast expanse of Damanganga. In Silvassa, a museum depicting the lifestyle of the tribals is a great tourist attraction. Housed in a structure it appears like a cottage which tribes use as their dwelling unit. The museum has life size models of tribal people busy in their day to day routine. Trekkers can trek around the hills and forests. Vast stretches of unpolluted green forests and surrounding environment full of natural

beauty with undulating and rugged topography have all the ingredients for becoming a trekkers' paradise.

It is disheartening to know



A quiet walk on the beach

that the environment of the islands is not being cared properly. The woods of forests on these islands are being consumed as firewood. The marine life is being disturbed for physical gains. The beautiful lagoons are now fast degenerating. Ironically, man who is endowed with the maximum facilities to enjoy the environment is causing its wholesale destruction. The indiscriminate lifting of corals and coral rocks for construction work, besides causing large scale decay of the lagoon fauna, paves the way for intensive erosion. In fact, in almost all lagoons vast area of corals are now getting dead, suffocated under layers of eroding sand, with long standing repercussions. In the absence of food many forms are slowly dying out never to be recovered. If this suicidal situation is allowed to

continue it may not be long before many a useful animal is totally wiped out of existence and finally the islands themselves become uninhabitable for human beings.

Unfortunately the common man is basically ignorant of the varieties of animals and plants in the lagoon which are important for preserving the ecology. For this the common man has to be educated. Keeping this in view a museum and a marine aquarium were started in Kavaratti, where marine organisms of diverse habitats are kept alive so that the people can know about their natural associations. Plans are under way to set up national marine parks and declare some of the uninhabited islands as sanctuaries for marine life.

In short, if we want that our future generations should also enjoy the beauty of corals paradise, palm trees shaded islands fringed with smooth silvery sand, stand edging the lagoons, the crystal clear water as an abode for abundant marine life and may be able to swim, sun tan or explore the islands, many walking trails and reefs—we must preserve its ecology with all our might and resources. In this regard all future developments of tourist facilities must be based on enhancing and enjoying the richness of marine life and coastal resources. This delicate ecology has to be preserved at all costs. Its very delicacy is the source of enjoyment and observation. This ecological resources has, therefore, to be disturbed to the minimum and enjoyed to the maximum. The golden rule of mountaineering should also be applied on the islands which says, do not take any thing but photographs and do not leave there any thing except your foot prints. □

Pleasure of Trekking

K L Noatay

Trekking is a matter of pleasure as well as pride, especially for the youth. The dense green vegetative cover of trees and plants, especially pines, shrubs and herbs make the terrain the right place to rest a while. No wonder people from plains consider the hills worth visiting leisurely, time and again, away from noisy humdrum of the metropolis.

THE HILLS are a unique gift of nature to man. Trekking therein is a matter of pleasure as well as pride, especially for the youth. The dense green vegetative cover of trees and plants, especially pines, shrubs and herbs make the terrain the right place to rest a while. No wonder the people from plains consider the hill worth visiting leisurely, time and again and with abandon — away from noisy humdrum of the metropolis. As such a trip to the Shivaliks can be extremely refreshing and enjoyable, especially in summer.

The people living in mountains are fortunate in a way. The environment there is free from modern day pollution prevailing in most of the urban areas. No wonder people living in big cities long to go out to hills, may be for a short break, to fill their lungs with fresh air of the hills. Trekking in such hills has a lot of charm as well as difficulties. Therefore, with a view to introducing the youth, the school going children, especially Scouts and NCC cadets, it is desirable to take them on initial excursion to low hills like Shivaliks of the type in between Nangal dam and Deotsidh Baba Balaknath. This, about 50 km

long stretch, is an excellent track as an initial excursion for the first lesson in mountain trekking for the young.

Bhakra : Bhakra dam is one of the very important milestones of civil engineering achieved by India after attaining independence. Pandit Jawahar Lal Nehru, the then Prime Minister, used to say, "This 740-feet high dam is not only a reservoir of water but also a temple for the modern secular India." It is difficult to exactly picturise the exquisite beauty of this structure in words. The curious ones, especially the students should, therefore, see it with their own eyes for correct and proper appraisal.

Bhakra dam is easily approachable from Delhi via Nangal dam. There is a direct train, Shivalik Express, from Delhi every day. It starts at 8-30 pm and arrives at Nangal dam at 8-00 am next morning. The distance is 356 km. In addition the two stations are also connected by good highways. Direct day and night buses keep plying from and to Chandigarh, Ambala, Amritsar, Shimla, Dehradun etc., in addition to the ones originating from the union capital. Bhakra dam is at 13 km further north-east from

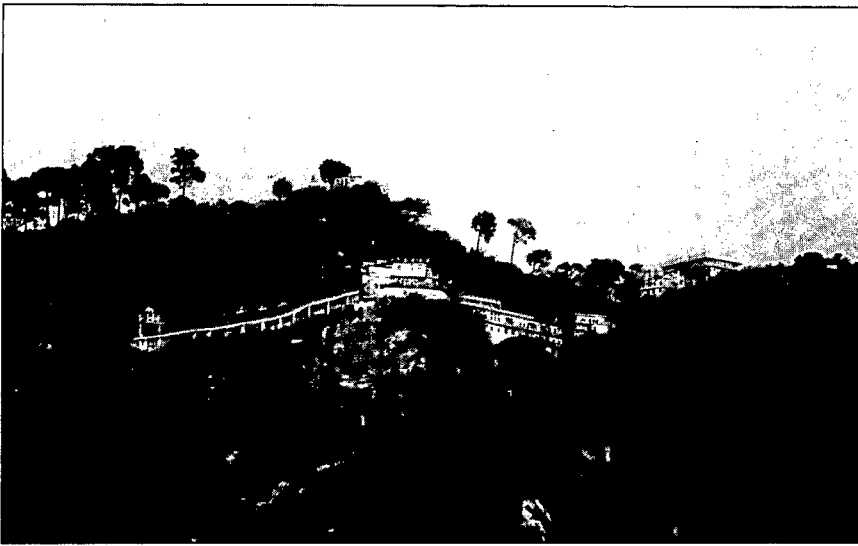
Nangal dam. There is a beautiful double lane highway with a smooth driving surface between the two points. A number of buses and taxis keep plying on this stretch at a good frequency.

The visitors wishing to see the interior structure of the dam are required to obtain a permit for the purpose from Public Relation Officer of the Bhakra Beas Management Board stationed at Nangal dam itself. Photography of and around the dam proper is, however, prohibited.

Gobind Sagar : The water body behind the Bhakra dam named as Gobind Sagar after the revered tenth Sikh Guru, Gobind Singh, is approximately 80 km long and 1 to 5 km wide. The spread of this crescent shaped lake is approximately 166 sq. km. It is located partly in Bilaspur district and partly in Una district of Himachal Pradesh. The Sagar is flanked by Solahsinghi dhar (hill range) in the north and Naina Devi dhar and Peer Nagah dhar in the south. The area is dotted with habitation all along the lake. The tract has quite a bit of greenery all around.

The Shivaliks surrounding the lake also is abound in wild life like

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Deotsidh Baba Balaknath

panthers, leopards, hyenas, jackals, deer, wild boars, peacocks, partridges, jungle fowls etc. Hunting is prohibited. Shooting with camera is, however, the in thing. The right spot for sighting the animals is along the lake, where they invariably come for taking water during less disturbed hours of dawn and dusk.

Bachhertu: Bachhertu is a small sleepy village on Solahsinghi dhar, about 10 km north east from Bhakra dam proper, as the crow flies. Of this distance the width of the water body of the lake is nearly 6 km. Thus, after getting down from the bus near Bhakra dam one has to walk about 1 km to get to the ferry for crossing the lake. The boat ferries the visitor from Bhakra side to the far end viz. village Jai Devi, covering the 6 km width of the lake in about half an hour. From Jai Devi ferry point one has to trek about 4 km, all uphill rising from nearly 1500 to 2500 feet above mean sea level to reach Bachhertu, which is otherwise connected with good all weather motorable roads from Una, Hamirpur, Bilaspur, etc.

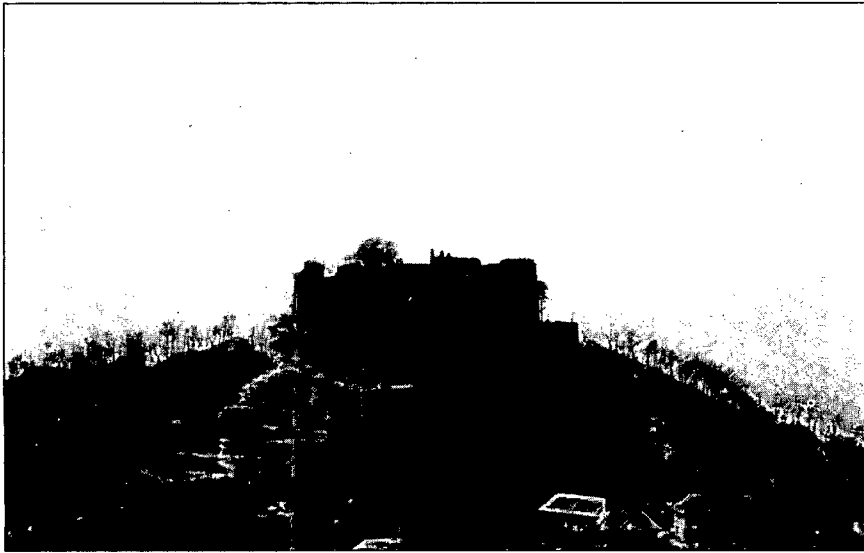
Bachhertu is famous for a fresh water spring. It is considered a God-gift to local people because of being in the middle of otherwise dry hill.

A legend about the origin of this holy spring is that in medieval era a Mahatma happened to be passing by the village called Gharbasra. The time of his movement was a summer noon. Moving up hill the Mahatma felt extremely thirsty and requested an elderly village woman for drinking water. She allowed the Mahatma to parttake of the elixir from her only pitcher. The Mahatma being very thirsty had gulped the whole contents. The old woman felt dismayed over Mahatma's emptying her pitcher completely. She expressed her unhappiness to the Mahatma for this. The Mahatma undertook a samadhi then and there to propitiate mother Ganges to compensate his host's loss of water. Mother Ganges was pleased with the hermit's propitiation and implorings and accordingly, it is said, blessed the spot with a perpetual and bountiful spring of fresh water. The people then realised that the hermit was none other than Lord Shiva himself. They had accordingly built a beautiful Shiv temple near the holy water spring. It is further said that during 18th century, Raja Bir Chand, the king of Bilaspur, had renovated and enlarged the Bachhertu temple to its present day shape—a worth-seeing

monument. It is a treat to bathe in the fresh water of this holy spring. An annual fair assemble at Bachhertu when hundreds and thousands of pilgrims converge here for the holy bath and paying obeisance to Lord Shiva on Baisakhi day, i.e. 13th of April every year. The tradition of religious gathering of people from entire north India on the occasion of Baisakhi continues from time immemorial. With the present day revolution in communications in the country the number of devotees visiting Bachhertu has increased many-fold. In fact people are now visiting the shrine from almost all the corners of India, not only on Baisakhi day but throughout the year.

Kharak Singh Fort: The Solahsinghi dhar has a lofty mound close to the Bachhertu spring which commands a very good view, not only of the valley below, or the hill range opposite, but even the plains beyond. It is said that Raja Kharak Singh of Bilaspur had during 14th century made use of this mountain top for strategic purpose and constructed a castle therein. It is located just above the present day Gharbasra village. The legend further has that the troops of Maharaja Ranjit Singh had also inhabited this fort for some time. Though the castle is in a dilapidated state yet it is a centre of attraction for the people visiting Bachhertu. The intellectuals among visitors generally opine that the Archaeological Department should take over this fort for maintenance, which in turn will also promote tourism.

Deotsidh: Deotsidh is a famous shrine of Lord Shiva. It was established by Baba Balaknath. The exact locale falls in Chhakmoh dhar in Hamirpur district of Himachal Pradesh. It is about 10 km from Bachhertu by a metalled road. Whereas frequent taxis and buses



Kharak Singh Fort near Bacchertu

keep plying on this stretch, it can also be trekked on foot by those keen. The march along the short foot track may not take longer than about one and a half hour.

It is said that during medieval era a youth prodigy hailing from Junagarh area of Gujarat-Kathaiwar, in south-western India, was an ardent worshipper of Lord Shiva. He was wandering from place to place in pursuit of salvation and had landed at a place called Talai, a village about 4 km south-west of the present day shrine Deotsidh. This village is a fertile valley on the banks

of Khawajedi khad in between two Shivalik ranges. The youth had taken shelter with one elderly woman of the village named Ma Ratno. The young worshipper had certain prophetic qualities. He used to tend the cattle of his host, while simultaneously worshipping and propitiating the Lord. In due course he had attained salvation. The miracles performed by the Baba had convinced the people that he was not only a worshipper of Lord Shiva but his incarnation too. The Lord (Shiva) appears to have ordained that the prodigy should

CALL OF MOUNTAIN...

(Contd. from page 58)

It must be mentioned here that the average age of the climbing members was only 31, and so at 48, I was entitled to take my time climbing downhill, if only in consideration of the knees. Moreover the climb to the summit was long enough with 2260 feet of vertical height to be covered which, normally is not an easy day for a lady.

The 17th of June saw all the climbers tired out, without food and rations. Moreover, the gas had

run out at the assault camp and so, there was no option but to go down as early as possible. The camp was cleared up and we descended to ABC for our first proper meal in 39 hours. This camp was also broken up and the team descended to base the same evening where we found that the trekking group of Vinod, Ramesh and Premi had left for a walk into Harkidun to complete our active exertions for the season.

In retrospect it must be mentioned that this area, particularly the Bandarpunch glacier and Ruinsara surroundings

remain a child forever. That is how he was addressed as Baba Balaknath. The place is called Shah Talai. After salvation the Baba has shifted to a nearby cave—the present day shrine named as 'Deotsidh'.

Direct approach to Deotsidh:

Deotsidh is easily approachable by motor roads from Hamirpur (55 km), Bilaspur (60 km), Nangal (100 km) or Bhakra dam, exclusively by bus via Raipur-Bangana circuit (80 km) or by ferry-cum-trekking-cum-bus combined.

Night stay : For night stay of the visitors there are P.W.D and forest rest houses at Shah Talai, Deotsidh and nearby sub-divisional headquarters at Barsar. A few modest private hotels also exist at Shah Talai. The government Circuit House, rest houses, tourist bungalows and or hotels existing at Nangal dam or Naya Nangal can also be made use of.

A one-way trekking to Deotsidh Baba Balaknath via Nangal-Bhakra-Bachhretu and Shah Talai on foot and return by bus can be an excellent excursion-cum-first lesson in mountain trekking for the youth, especially the Scouts and NCC cadets. □

is an excellent nursery for Himalayan climbers. Apart from the academic and practical studies of natural history that can be conducted, the valleys and gullies on either side of the Ruinsara Gad are good ski and rock-climbing grounds which have been utilized so since Jack Gibson, the legendary school master, pioneered them half a century ago. I have also had occasion to see cadets of the Indian Military Academy being put through their paces here before attempting the Black Peak. After all how many such easily accessible regions for the youth do we have anyway in the Himalaya? □

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