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Editor's Page

"**Our Earth-Our Future-Just Save it!**" has been the theme for this year's World Environment Day, which was celebrated on 5 June 1999. On this occasion, the UN Secretary General, Kofi A. Annan, issued an appeal asking each one of us "to renew our pledge to cherish and respect the planet that sustains us." "We must acknowledge our interdependency and recognize that in the long run, depletion of water resources, reduction of biodiversity, disruption of ecosystems and climate changes will have potentially disastrous consequences for us all, wherever we live,"he added. Global warming, climate change, depletion of ozone layer, loss of biodiversity, shrinking of water resources, excessive population and industrialisation and environmental pollution are some of the challenges facing us at the dawn of the new millennium. Protection of fragile ecosystems, biodiversity and resources has assumed urgency for sustaining economic stability and development. This is more true of the Himalaya which is the youngest, tallest, the most fragile and the most populated mountain system in the world. Environmental issues in the Himalayas are mainly concerned with its geological instability, increased human settlements, ceaseless deforestation, rampant construction, industrialisation, land degradation and pollution.

It is in this backdrop that this issue of ***Himalayan and Central Asian Studies*** has been devoted to the study of eco-systems, traditional water harvesting techniques and distinct eco-cultural heritage in the Indian Himalayas. We have also an exclusive report on the Aral Sea crisis which has been a source of many problems affecting the Central Asian Republics. Prof. B.K. Roy Burman in his paper on "Shared Ecology of the Himalayas," while highlighting the problems of new technologies and globalisation of social economy, calls for a fresh look at

the human interface in the mountainous tracts of Eurasia in order to work out the future by means of shared endeavour. Prof. Warikoo presents a perspective on indigenous eco-cultural heritage of Kashmir delineating the essential facets of *Kashmiriat*. Piyoosh Rautela has provided insight into the traditional water harvesting techniques as practiced in the Indian Himalayas, which assume relevance for cost-effective and sustainable solution of water scarcity problems in the area. The Aral Sea problem in Central Asia, which has adversely affected the environment, socio-economic situation and public health in that region has been discussed at length by A. Nurushev of Kazakhstan, Director of the Aral Sea Rehabilitation Fund.

These case studies show that environmental problems have had an adverse impact on public health and socio-economic development. It becomes, therefore, imperative for government and voluntary sector to evolve a coordinated and effective mechanism to deal with emergency situations-avalanches, earthquakes, landslides etc., which we have been witnessing in the Himalayas. Disaster prevention and emergency response depends upon field study of the problem areas, accurate forecasting, repeated weather warnings and coordination among concerned agencies. At the international level, there is need for redressal of global imbalance in terms of aggregate consumption and production, more particularly the energy consumption and toxic emissions by developed countries. Transfer of environmentally sound technology to developing and least developed countries is another area calling for urgent attention. The United Nations and particularly the UNEP and Commission on Sustainable Development need to evolve appropriate mechanisms in this direction. Besides, indigenous and traditional systems of agricultural practices, water harvesting and preservation of bio-diversity need to be put into practice wherever feasible.

SHARED ECOLOGY OF THE HIMALAYA

(An Appraisal of Himalaya eco-system and diverse facets of sharing cutting across political boundaries)

B.K. Roy Burman

In a restricted sense the Himalaya forms the northern mountain wall stretching from Baluchistan to Burma (Myanmar) through Pakistan, the states in the northern rim of India, Nepal, Bhutan, Myanmar, South-West China. The mountain wall further forms part of a system of fold ranges radiating from the Pamir mountain knot. Through small breaks one can trace links upto the Atlantic on the one hand and Pacific on the other. If one takes into consideration the lateral extension after the south west bend in the south and the north-east bend at the north one can trace links to the Indian ocean on the one hand and the North Sea on the other.

With emergence of new technologies of communication, discovery of new resources and with globalisation of social economy, the almost continuous montane and submontane physiographic system and the water-courses flowing out of them will assume many hitherto unthought of implications in the 21st century and thereafter. Politico-social, economic and cultural processes will move in several directions in a criss-cross manner. As a preparatory to meet the likely challenges of the future it is necessary not only to have a look at the current systems of nature-humans interface in the mountainous tracts of Eurasia, but also to look back to the shared experiences, so that the future can be designed in a desirable manner by shared endeavour. As it will be a Herculean task to deal with the mountainous tract of the whole Euro-Asian landmass. It is more prudent to start with the shared ecology of the Himalayan mountain system and the ranges closely linked up with the same.

INTERFACE OF HOMO-SAPIENS AND THEIR HOMINID PREDECESSORS AND THE HIMALAYAN ECO-SYSTEM

Scholars are increasingly inclined to believe that the foothills of the Himalayan range and their surrounding peaks make up one of the cradles

of human beings. Rama Pithecus or Rama Apes, first discovered in Punjab (Pakistan) is on the line of human ancestry. The fossils found during 1975-1980, in the Lufeng county of Yunnan province of China suggest that the Rama Apes lived in the region in the first half of the Pliocene epoch about 5 to 7 million years ago. In Kaiyuan county of the province, the fossils of an older version of the Lufeng Rama Apes have also been found. They existed probably in late Miocene epoch, more than seven million years ago, when the process of mountain formation around the Himalaya had more or less come to an end. Chinese archaeologists have discovered fossils in Guanaxi and Hubei provinces, which belong to the species of Australopithecus (the Austro Apes), different from Ramapithecus. The presence of the fossils of Rama Ape and Austro Ape in the same region reinforces the view that the Himalayan area is one of the early homes of hominid genus.

Since the turn of the present century the Siwalik sediments of Miocene and Pliocene age have yielded a number of hominid fossil materials. There are certain important aspects of palaeoecology of Siwalik hominids. In the late Miocene faunas of Potwar plateau in Pakistan three hominid species are recognised and are associated with about fifty other mammalian species. Whether they represent actual Miocene assemblages or only artificial accumulation remains an unresolved question.

In India fossil stone instruments of early human apes of Acheulian period, dated more than a million years ago, and even of Oldwan period of more than two million years ago have been found on the southern slope of the trans-Himalayan region. Unfortunately archaeologists have not yet found any skeleton fossil in India or Pakistan or Nepal or Bhutan of any early species of human ape who was the maker or user of these tools.

SHARED HERITAGE OF HUMAN COMMUNITIES LIVING IN COUNTRIES PARTLY OR WHOLLY LAPPING ON THE HIMALAYA

Until recently it was strongly believed that stone age humans never occupied the valleys in the trans-Himalayan region at a higher altitude in the Pleistocene period due to adverse climatic regime. Moreover, it was also believed that Ladakh valley was occupied very late, around 10th

century AD, when Buddhism was first introduced in the area. Recent evidences have, however, established the existence of stone age humans in Ladakh valley. This pre-conceived notion had an impact on the thinking of the scholars. The provenance of a solitary stone implement for Kargil terraces in 1934 was suspected by the discoverers themselves to have been carried and left by some travellers from the Kashmir valley.

The real interest for pre-historical investigation in trans-Himalayan belt was generated with the discovery of stone artifacts by Sankalia from Pahlegaon in Liddar valley in 1971. In 1985, a group of scientists from the Geological Survey of India reported presence of stone artifacts in stratified contexts in the Upper Indus system in Ladakh Himalaya around Kargil. These artifacts exhibit at least three phases of cultural manifestation associated with Indus Pleistocene conglomerate, the earliest phase of which represents lower Paleolithic culture. The artifacts belonging to the second phase comes from relatively younger horizons of the Indus Pleistocene conglomerate, whereas the artifacts of the last phase of cultural manifestation are associated with the later river terraces of Suru and Indus. The artifacts belonging to the last two phases relate to middle - Palaeolithic culture. On the basis of stratigraphic correlation, they apparently push back the antiquity of the earliest culture phase to lower pleistocene period. But in terms of tool types this remains an open question.

The Wadia Institute of Himalayan Geology, Dehra Dun, has played a pioneering role in collection of cultural evidence of post-Pleistocene period. In 1980, they found evidence of a hearth at a place 100 kms east of Leh. Apart from four plinters of unidentified bones, no other evidence was however found. It was therefore not possible to assign the same to any phase of known cultural succession. However, the radio-carbon date of the charcoal sample obtained from the hearth, marks it to 6710 ± 130 year B.P. Though tentative, this date postulates the hearth to be of Neolithic human's activity in the valley.

The Archaeological Survey of India located a stone age site on the left bank of Indus at the village Alchi in Ladakh. The artifacts comprise unifacial chopper, three bifacial hand axes, and a retouched worked block, fabricated on locally available material. Though on the basis of type

technology, the finds can be assigned to lower Paleolithic phase, the strratigraphic associations of these artifacts is not known.

In August 1989, investigation was carried out along the Upper Indus between the villages Gaik and Kiari where Indus flows through a narrow valley either along a gorge or cutting across its older terrace. A trial digging at Kiari, on the left bank of Indus has yielded evidence of a hearth, a good amount of faunal remains, a few pot-sherds, a burnt clay ball and stone objects comprising saddle quern, pestle and burnisher. Altogether four different fire activities in the form of hearths and ovens belonging to three successive phases were exposed during the excavation. From these hearths, a few potsherds and bones were recovered. Apart from these, a vast amount of charcoal have been collected both for radio-carbon dating and palaeo-botanical analysis.

The site at the village Gaik which lies on the right bank of Indus has yielded the evidence of a hearth, but no other evidence of cultural activity. The radio-carbon dates obtained from Kiari and Gaik keep the cultural phase within the time bracket of about 1700 B.C. to 900 B.C., suggesting the same to be a Neolithic cultural phase. The archaeologist who carried out the excavation is of the view that the concerned communities were nomadic and that their economy was mainly based on pastoralism and partly hunting and gathering. Their nomadic nature is evident from the temporary nature of hearths without remains of permanent settlement. The camping grounds were selected near the river banks, wherever suitable flat land was available, more or less like the present day pastoral nomads moving towards the high altitude do.

The literary records as well as some archaeological evidences show cultural links between Ladakh and Tibet-Central Asia since early historical times. The cultural links were established through a number of Himalayan passes between snow-clad mountain ranges. Now it is interesting to know that the practice goes back to the pre-historic times.

If pastoral economy in the specific context of Himalayan ecology facilitated such movement between Ladakh and Central Asia, it is to be examined what are the other areas where pastoral economy was a

possible way of life and whether similar trans-Himalayan movements took place in other segments of the Himalaya. Currently such communities are normally in symbiotic relation with settled cultivators, depending on the latter particularly, to obtain cereals. It is quite possible that during the Holocene period wild cereals and fruits and vegetables served their needs and symbiotic relation with settled cultivators, if any, were not necessary. A comparison of current practices in diverse micro-ecological niches may provide some insight.

Indus Civilization as a Shared Heritage

In 1992 excavations at Mohenjo-Daro (Mound of Dead) in Sind disclosed the existence of an urban and basically bronze age culture, not dissimilar to that of Sumeria in technical accomplishment. The earliest definitely Harappan remains can be fairly confidently dated to around 2500 B.C. and there is evidence of trading contacts with Sumeria about 2350-2100 B.C.

Fifty years ago the known area of this civilization was mainly confined to the lower Indus valley, with a few sites in Baluchistan, and Harappa standing out in isolation in Punjab. But as V.N. Misra in his review of current status of research on Harappa civilization has pointed out, the geographical distribution of the civilization covers an area of nearly a million square kms. extending from the Siwalik foothills in the north to the Narmada estuary in the south, and from the Iran-Baluchistan border on the west to the Ganga valley in the south. And sites like Shortugai in north Afghanistan and Ra's Al-Junayz in Oman extend the geographical spread of the civilization far beyond the borders of the Indo-Pak-Bangladesh subcontinent. Initially only two cities of the civilization, namely Mohanjo-Daro and Harappa were known. But three other new cities of comparable size (Ghanweriwala and Rakhigarhi on Ghaggar-Hakra course and Dholavira in Kutch) are recognised.

The exact number of Harappan sites is uncertain. Estimates vary from 1000 to 2500. Currently three phases of the civilization are recognised. These are pre or early Harappan, mature or urban Harappan and late or post urban Harappan. Baluchistan, Indus and Ghaggar valley,

Kutch and parts of Saurastra were colonised during early or mature Harappan times, whereas the upper course of the Sutlej along the Siwalik foothills, trans-Yamuna region of Uttar Pradesh and most of Saurashtra were colonised during late or post-urban Harappan times.

Ratnagar suggests that Indus civilization tended to avoid the Indus itself, as it is a destructive river in flood. Also she draws attention to another interesting fact. Most Harappan sites fall within rain deficit zone, even though the cereal staples were winter crops. Perhaps political factors or mineral resources were involved in the location of sites. She, however, is careful to mention that while the referent isohyet is based on modern rainfall figures, southward fluctuations of low pressure belts in the third millennium B.C. might have brought sufficient winter rain, particularly to sites like Kalibangan and Muthathal.

Another observation of Ratnagar deserves mention. After giving details of water harvesting system around Harappa and by referring to the fact that even in the early 20th century, many pastoral nomadic camps were scattered over the region she argues that the size of Harappa owes less to an agricultural hinterland than to its location at the junction of several river and land routes. In other words Harappa flourished more as a centre of barter and trade of goods of pastoral, agricultural and artisan economy and of regulation of the same. Misra confirms that in the late phase of the civilization, when the urban structure had broken down, the economic structure of Harappan society at least in some regions, might have been based largely on pastoralism. That the Indus civilization had extensive trading contacts with the contemporary Mesopotamian cities as well as less developed societies both within and outside the subcontinent has been known from the early days of Indus research. Based on the works of Possehl and Kennedy, Misra observes that Harappans also appear to have had exchange relationship with contemporary hunting-gathering communities.

For a long time the origin of the civilization seemed mysterious. It was generally believed that the inspiration if not the actual builders of the Harappan cities came from Mesopotamia. But latter excavations at Mehargarh in Baluchistan have shown that agriculture based settled

society had already emerged on the edge of Indus plain by the beginning of the sixth millennium B.C. By 3000 B.C. towns anticipating several Harappan features like surplus agricultural production, distinctive painted pottery, long distance trade, fortification, burnt brick structures and terra-cotta cakes had developed at Sarai Khola, Harappa and Jalilpur in north Punjab, Kot Daji and Amri in Sind and Kalibangan in Rajasthan. Misra concludes that it can "now therefore be stated with certainty that the origin and development of Harappan civilization was a purely indigenous phenomenon" of the subcontinent and owed little to outside inspiration.

Human skeleton material has been found from a large number of sites. Early studies were almost exclusively concerned with metrical analysis and classification of populations into racial categories. In recent years the emphasis has shifted to understanding the adaptation of individual populations to their natural and social environments and to learning about nutritional patterns and diseases. The Harappan society was clearly a stratified one. It comprised among others farmers, artisans, traders, administrators and workers. The religion of the Indus valley is thought to have centred around the mother goddess, a god believed to be the lord of the beasts and possibly *peepal* tree.

From the very beginning there has been considerable debate about the cause of the decline and disappearance of the civilization. Misra discusses five major theories or explanations as follows: (i) climatic change (ii) foreign invasion (iii) tectonic phenomena (iv) environmental degradation (v) hydrological changes.

In the early stages suggestions of Aurel Stein (1931) and Mashall (1931) that the climate of Baluchistan and Sind was wetter during the Harappan period was generally accepted. In 1971 Gurdeep Singh revived the explanation based on palynological data from the salt lakes of Rajasthan. Singh also claimed a causal relationship between increased rainfall and growth of civilization and its reversal, as well. But this remains a debatable proposition. Foreign invasion theory was first mooted by Mortimer Wheeler in 1947, but evidences in this regard are not enough to come to a definite conclusion. M.R. Sahni, a geologist and paleontologist linked the decline of the civilization to recurrent floods

in Indus river represented by several layers of silt caused by the obstruction of the flow of the river due to tectonic upliftment of the land and creation of a natural barrier. But Labrick and Possehl pointed out in 1967 that there was not enough evidence in support of the theory.

In 1952, Wheeler stressed environmental degradation caused by excessive exploitation of the natural resources like plants and soils,and inability of the population to cope with the increasingly frequent inundation caused by Indus floods as an important contributing factor. It seems that there is some tilt among scholars in favour of this view. But the latest trend is to relate the decline of the Indus civilization to the drying up of Ghaggar-Hakra course which was running parallel to Indus and was equal to if not mightier than the latter. The drying up of Ghaggar-Hakra, in its turn is linked up with the eastward shifts of Sutlej and Yamuna both of which were flowing into the Ghaggar-Hakra course during the Harappan times. But then this explanation is a pointer to the instability of Himalayan mountain system from where both Sutlej and Yamuna originate.

SHARED AGONY DUE TO INSTABILITY OF THE HIMALAYAN MOUNTAIN SYSTEM AND INTERCOUNTRY COOPERATION TO BUILD UP A SYSTEM OF DISASTER MANAGEMENT

On August 15, 1950, one of the most severe earthquakes in the world took place with Rema in Arunachal as the epicentre. It completely changed the landscape in some parts of eastern Himalaya. Ealier also several earthquakes took place in the region. In 1869, an earthquake took place in Cachar district of south-east Assam which caused devastation to an area covering 647 kms. The earthquake of 1918 with Srimangal of Bangladesh as epicentre affected 2,25,234sq. kms. The shock was felt all over Assam, Bengal and east Bihar including part of east Chotanagpur. The earthquake of 1930 with epicentre near Dhubri in north-west corner of Assam caused havoc to an area covering 9,06,115sq. kms. The earthquake of 1932 with epicenter in north-west Myanmar had its impact in Assam, Bengal and North Bihar. Another earthquake took place in 1941 with north Assam as epicentre whose impact was felt all over Assam and Bengal. Similarly an earthquake in October 1943 affected Assam, Bengal and Bihar. The Nepal-Bihar

earthquake of 1934 took a toll of more than 10,000 lives of which around 3000 were in Nepal.

In western Himalaya the earthquake of 1885 in Kashmir caused death of around 3000 persons, while the number of cattle and horses killed was very great. The earthquake of Kangra in 1905 is ranked as one of the most devastating to affect the region. Earthquake of mid-1930 caused large devastation at Quetta and the surrounding region. In recent years one after another severe earthquake in north east Nepal has become a matter of great international concern. The earthquake in Uttar Kashi only a few years ago did cause a massive devastation. There is a view among geologists that four earthquakes above eight richter scale will rock the mid and western Himalaya during the next one hundred years.

The effects of earthquake are manifold and embrace man-made structures as well as the earth's surface. Of particular significance are the effects in the hilly regions. For instance, in the rainy season the mantle of soil and loose rock on hillsides is sufficiently wet to be unstable. A slump occurs when a portion of the wet regolith on the hillside slips down a little, rotating somewhat on a horizontal axis parallel to the hillside. Slumps frequently occur without earthquakes also, but a large earthquake accelerates their formation and in a wet season their formation is a typical phenomenon. Huge masses of rocks and debris thus thrust into river valleys form artificial barriers to river courses. This creates temporary lakes which eventually overflow and flood the countryside. A similar effect is also produced in rivers by earth or mud flows caused by earthquakes. The severe shaking that underground water-bearing strata are subjected to and consequent displacements within them often cause water to be forced up through open fissures. Water so expelled may render the soil fluid, so that it flows as a liquid. Such flows occur at times of shock and do not recur. Large earthquakes also bring about changes in the general topography of the epicentral region, including the levels of river beds. These could result in changes in the course of rivers.

Severe earthquakes shaking alluvial bottom lands frequently cause a lunching of the earth, accompanied by the formation of cracks, usually

parallel to the streams. The Himalayan region comprising valleys and gorges is thus open to a variety of earthquake effects. Many of effects have in fact been observed and have been a cause of constant agony in the psyche of the inhabitants of the Himalaya. Apart from earthquakes, landslides particularly caused by inappropriate technology in construction of roads and changes in the courses of the rivers and waterways, there is avalanche rush on the higher altitude.

Perpetual erratic behaviour of the mighty Himalaya, which also represents the youngest mountain system of the earth calls for mutual cooperation not only at the people to people level, but at the inter-country level in an institutionalised manner. This problem sharply came out on the surface during the disaster in 1998, when a large number of pilgrims on their way to the Manas-sarovar were crushed to death or suffered severe injury and a good number were trapped without getting the relief so urgently required. It has been suggested by some investigators of the tragedy that had there existed some inter-country institutionalised arrangement between India and Nepal for rushing immediate relief through Nepal, some lives could have been saved. With best of good wishes on the part of Nepal, or on the part of local administration in India, lacuna in international protocol in respect of such eventualities was alleged to have been a retarding factor. It seems that the frame of inter-country cooperation for meeting such situations in the unstable mountain system of the Himalaya requires to be worked out on a priority basis. Besides the prudence of constructing large dams as a part of hydro-electric projects in the highly seismic region of the Himalayan mountain system requires careful examination on the part of all.

It should be noted that some attention has been given about suitable designs of dams in diverse ecological niche. Verghese notes that availability of suitable construction materials close to the project site, the nature of rock defects and potential geological hazards, including earthquakes often influence the choice of the type of dams. There are for instance high masonry or concrete gravity dams, and high earth and rock-fill dams with the loads being distributed over large areas. Seismic evaluation parameters and response spectra are also worked out.

However, a school of geologists think that while the technologies developed in this direction may make the dams stable even against earthquakes on high richter scale, the oscillation of the solid mass of the dams would cause more devastation in surrounding areas, than what would have happened in the absence of such dams. It is difficult to say that the issues have been really examined in depth from all angles. There is much scope for intensive dialogue involving the technologists, policy makers and informed social activists of all the countries lapping on the Himalaya and the linked mountain systems.

PEOPLES INHABITING THE HIMALAYA WITH SPECIAL REFERENCE TO DISADVANTAGED AND PROGRESSIVELY MARGINALISED SECTIONS

Before considering the problems of the progressively marginalised sections, particularly the pastoral nomads, a generalized picture of the peoples of the Himalaya, mainly based on Learmonth and Spate have been presented here.

In the ancient world where armies had rarely dared, Chinese pilgrims seeking the land of Buddha, Hindus eager to visit the source of Ganga and the hidden mountain of Kailash, had left the impress of their faith in shrines and temples. Here three mighty empires of the mind meet : Islam in the tangled valleys around the Indus and the vale, Hinduism in the vale and the sub-Himalayan borders, the Mahayana Buddhism of Tibet and Ladakh spilling down the glaciers to mingle with Hinduism in the interesting culture of Nepal with its syncretistic ethos. In Ladakh and Bhutan, the cultural landscape and prayerwheels have their distinctiveness; even the economy though agriculture based, is propped by trans-Himalayan trade and high development transhumant pastoralism. Polyandry prevailed in Ladakh, parts of Himachal, Jaunsar in Uttarkhand and Arunachal.

Gilgit, Chitral, Hunza and Kargil sectors in west and north-west Himalaya are Muslim. The *Dardi*, *Shina*, *Balti* have distinct dialects; besides an interesting sect *Nur Bakshiya* (whose affiliation to either Shia or Sunni fold is ambiguous) claims good number of followers particularly among the *Baltis*. Under the veneer of scriptural religions, local faiths and practices continue to hold ground all over the Himalaya. Learmonth

and Spate's categorisation of peoples as Hindu or Buddhist particularly is sometimes of questionable validity. For instance, in the upper reaches of Kinnaur in Himachal Pradesh though Hindu and Buddhist ritualistic practices prevail even in the same household, the influence of Buddhism is more marked.

The *Khasas* of Uttarakhand are conjectured to be of nomadic tribal origin who entered India through the north-west in ancient times. Now they are spread from east of Kashmir to Nepal. The *Bhotiyas* of Uttarakhand claim descent from those Rajputs who came from Kumaon or Garhwal and settled down in the upper valleys. The *Jadhs* of the Bhagirathi valley claim to have come from Kinnaur. The *Shokas* living in the fringe of eastern Bhotiya county claim connection with the *Joharis* of Chamoli from whom they broke away some time ago. There are also *Tolcha*, *Marcha* and *Jadhs* in Chamoli and Uttarkashi who are considered to be sections of *Bhotiyas*. The *Bhotiyas* of Pithoragarh in Uttarakhand are known as *Byansis*, *Chandansis* and *Dharmawals*, after the names of territorial segments with which they are mainly associated.

In Nepalese history and tradition, the *Kirats* are the earliest inhabitants of the country. References in *Mahabharata* connect them with the central region of Nepal and Brahmaputra valley of Assam. The *Limbus* and *Rais* of eastern Nepal collectively known as *Kirat* people are considered to represent the ancient *Kirat* race of the country. Many inscriptions of the *Lichavis* have Kirati place names in Bagmati valley and thus testify to their early settlement there. Driven away from central Nepal they settled in the eastern part of the country. *Chepang*, a nomadic forest tribe live near the confluence of Kali, Seti and Trisuli rivers. The *Tharus* who live in the swampy transborder Tarai strip between India and Nepal claim to have come from Rajasthan. Ram Rahul suggests that they might as well be original inhabitants of Tarai. The *Tamangs* and their cognates inhabit eastern Nepal between the southern and the northern groups. The *Newars* of Bagmati valley, also early settlers, claim that they first came to Nepal as soldiers from southern India under Noyadeva. The *Magars* who live in Magrat, west of Kali Gandaki river, have mild Mongoloid features. The *Gurungs* who traditionally live north

of the Magars claim to have come from Tibet. There are several clans of *Gurungs* and *Magars* but *Ghales* can be both *Gurung* and *Magar*. This phenomenon is not unique to these two ethnic groups only. Similar phenomenon perceptible among many other peoples of the region deserves analysis in political-sociological framework. The *Sherpas* who live in the uplands of eastern Nepal are migrants from Tibet. The non-Tibetan speaking Nepalese refer to the *Sherpas* along with the *Tamangs* and *Thakalis* as well as other nothern groups as *Bhotes*. The *Thakalis* sometimes call themselves *Tamang* though they have no recognised connection with the *Tamangs* of central and eastern Nepal.

Leaving out the bulk of the very recent migrants the population of Sikkim consists of *Lepcha, Bhotiya* and *Nepalese* including *Limbu*. The *Lepchas* are considered to be original inhabitants; the *Bhotiyas* are supposed to have come later. The bulk of the Nepalese migration in south-west Sikkim began in the second quarter of the 19th century in their search for agricultural land.

In a general way the physical features and cultural pattern of the people of eastern Bhutan are considered to be distinct as compared to the people of western Bhutan. The Pele La range is the dividing line. The Bhutanese who live in the area east of Pele La range have more similarities with the people of western Arunachal. The origin and history of minor tribes like the *Brokpas* spread all over the country, the *Sherchokpas* of north-eastern Bhutan along the border of Bhutan and Tawang in Arunachal are obscure. Then there are the legendary *Dayas*, whose chiefs are supposed to have ruled the south-eastern tract along the river *Torsa* for several hundred years. The ruins of Daya royal court are found at Derchuka.

Arunachal is the homeland of a large number of tribes of predominantly Mongoloid strain and most of them speak Tibeto-Burman branch of languages. Many of the tribes of Arunachal had their origin outside their present habitat. The *Khamtis* of Lohit district had migrated from the region between north-eastern limits of Assam and the Irrawady valley of Myanmar and belong to the same language group (*Tai*) as the *Ahoms*, who came to Assam in the 13th century and established their

rule till they were thrown out by the British during the third decade of the 19th century. The *Tai* identity not only persists but seems to have been reinvigorated during the last several decades. The *Singphos* (*Jingphos*) are found today in Myanmar, Yunnan province of China, upper Thailand and Laos. The *Mishmies*, another major tribe in Lohit district have also tradition of migration from Myanmar. Their counterparts are found in south-west China. Similarly the *Lisu*, a migrant people in Arunachal during the present century have their counterparts in south-west China and Thailand. The folklores of the *Adis* of Siang point to their origin in the north, but in many matters they and the *Mishmies* resemble each other more than any ethnic group in the north. The *Nishis*, the *Apa Tanis* and the *Bangnis* of Subansiri also claim to have come from Tibet, but memories of their elders do not go beyond the last stage of a population movement that might have changed its course more than once. The term *Memba*, one of the important tribes in Siang is close to the term *Monpa*, the most important tribe of Kameng district of Arunachal. In southern Kameng, *Sherdukpens* hold an important place, as a link with the *Bodos* and the plains peoples of lower Assam.

The *Tangsas* and *Wanchos* of Tirup district in Arunachal, some of *Naga* tribes of Nagaland and Manipur, the *Paite, Thadou* and some of the tribes of Kuki-Mizo constellation in Manipur and Mizoram have their counterparts in Myanmar and even beyond. Again some of the tribes of Kuki-Mizo constellations have their counterparts in Chittagong Hill Tract of Bangladesh. A spill over population of *Khasi* and *Jaintia* and of a related tiny tribe, *Pator* and also a good number of *Garo* and *Hajong* are found in Bangladesh in areas adjoining Meghalaya. Some *Chakma* displaced persons from Bangladesh have moved over to Arunachal and settled there, though the Arunachalese population in general are not happy about it.

Apart from the *Lisu*, about whom already mention has been made, there are tribes like *Lahu*, *Meo*, *Wani*, *Yao*, *Lole* inhabiting the rugged hilly tract of Yunnan province of China. Linguistically, culturally and socially these ethnoses are different from one another. But some of them have their counterparts in Myanmar, Thailand, Laos, Campucea and

Vietnam. Taking an over-all view it seems that the ethnic mosaic of the Himalaya and linked mountain tract cannot be neatly compartmentalised to coincide with territorial boundaries of country-states or nation states. In many cases these boundaries were the outcome of the accidents of colonial advance or of rivalry among the competing colonial powers, particularly the British and the French in South and South East Asia. The invisible strategic presence of the then Tsarist Russia on the west and the north was also a factor. Now without tampering with the state boundaries, social and cultural communication and to a certain extent economic cooperation among the transborder ethnoses is being facilitated by some of the states as a policy of democratic solution of a historical legacy. If all the concerned states pursue an enlightened democratic policy in this regard through mutual agreement and understanding, the historical legacy may as well turn into a common splendid heritage.

Mention has been made earlier of progressive marginalisation of the pastoral nomads. This is a global phenomenon. To the west of the valley inhabited by the *Jadhs* in Uttarkashi is the Bespa valley of Uttar Pradesh and to the east is the district of Chamoli. To the north is the international border of the Tibet autonomous region of China. The terrain is characterized by high mountain ranges and glacial valleys, making it impossible to depend exclusively on cultivation for livelihood. Traditionally they carried on trade in the mandis of Tibet and on pastoral economy. Each Jadh family owned 200 to 400 heads of sheep and goat. Now trade in Tibet has been disrupted and demand for wool and goat has gone up. But their traditional grazing lands beyond the border are no longer to their reach and much of the lands for camping in the south during winter have either been converted into agri-horticultural lands or are put to other use. Sedentary livestock raising has not been much of a success. They are thus faced with a blocked promise. The Gujjars of Dun area face problem of another type. Their grazing land has been notified to be included in Rajaji National Park. Their cause has been taken up by social activists, but the end of the tunnel is yet to be seen. Most of the pastoral nomads, all over the Himalaya, no matter whether the areas inhabited by them are in Pakistan, or India or Nepal or Bhutan

or China face problem of this order. Inter-country cooperation and comparison of experiences may turn the tide.

The Swidden cultivators (shifting cultivators) represent another segment of population who are also being systematically marginalised everywhere. The common charge against them is that their farming technology is highly destructive of the physical environment. While this is true for certain technologies of Swidden cultivation when carried on beyond 40^0 slope, it is not true for all technologies of Swidden cultivation. In fact Swidden cultivation represents a variety of technologies, each having distinct effect on environmental health and productivity. But the overzealous campaigners against Swidden cultivation are ignorant of the same or deliberately distort the ground truth. It is also to be noted that frequently the question of land rights are meshed up with Swidden cultivation. There is reason to believe that in many cases, it is not concern for environment but for appropriation of the Swidden cultivation land that influences the views of the policy-farmers. Here is a problem area which calls for dispassionate studies through inter-country cooperation in a holistic manner.

TRADITIONAL SYSTEMS OF TRANS-HIMALAYAN FLOW OF GOODS AND SERVICES ASSOCIATED WITH THE DIVERSIFIED ECOLOGY OF THE HIMALAYA

Before going into the specifics, trans-Himalayan flow of goods and services can be considered in a macro-perspective.

The Himalaya and the associated mountain ranges constitute the meeting points of South, South East, Central and West Asia. Traditionally the economy of South Asia, East Asia and South East Asia is essentially agricultural, supplemented by animal husbandry, crafts and some products of water bodies. The economy of Central Asia is essentially pastoral, supplemented by agriculture and crafts primarily as use goods and secondarily as commodity goods. In the economy of West Asia pastoral pursuits and agriculture contributed almost equally; horticulture also made substantial contribution. There was thus a complementarity of economies on a continental scale. Besides, the economies of mainland South East

Asia, Central Asia and West Asia were comparatively more vulnerable than those of South Asia and East Asia. Even now in mainland South East Asia almost two third of the land-mass is forest and one third constitutes the plains. Until recently in case of drought, the plains could not produce enough surplus to meet the core needs of the people of the plains and the hills together. The hill peoples, therefore, generally developed an agricultural technology of slash and burn cultivation which would provide enough food security. Migration of population from South East Asia to South Asia was, therefore, a continuous process. The fragile character of the economy of Central Asia is derived from several factors. Some scholars believed that with gradual rise of the Himalayan mountain system, there had been a process of drying up of Central Asia, but many do not agree to this theory. Large scale epidemic death of livestock and periodic failure of crop production in the oasis and their rims even on minor meteorological fluctuations, would cause havoc forcing many to migrate to East Asia, South Asia, West Asia and across West Asia even to Europe. The economy of West Asia also was less stable than that of South and South East Asia as a whole. Migratory movements, apart from exchange of goods were, therefore, common. In those days South and South East Asia had vast inhabited lands. Migrants, therefore, were not always a burden. They brought additional hands to extend the areas of agricultural production.

The moot question is, in these movements of goods and services, what was the role of the Himalaya and associated mountain ranges? In the pre-modern communication technology, more frequently they were perceived as massive barriers. But there were good number of passes caused by ancient water bodies and other factors. And there was no dearth of dauntless spirits to venture across them along with their wares or their personal manpower. The Himalaya and the associated ranges thus played a combined bridge and buffer role. Logically and empirically it can be projected that vicissitudes of socio-political organisations and cultural activities in and around the Himalaya were dependent on the balancing of these dual role. As it will require to delve into the multi-faceted history in great detail, it is not proposed to go beyond making a cryptic statement that gods and kingdoms played mutually

complementary roles in some parts and at some times in the Himalaya and a mutually unfazed surrogate role in some other parts and / or some other times in the same awesome and inviting creation of nature. Many of the institutions in the Himalaya interlacing the divine and the mundane can be explained in this framework. Keeping this macro-perspective at the back of the mind, some of the specifics would be presented.

North of Baluchistan, the ranges of Sulaiman and Bugti make southward loop and between them is the Sebi re-entrant through which the railway line and road to Quetta climb up near Bolan pass. South of this Zhob river cuts a transverse gorge in the Sulaiman range. Here it is joined by Gomal, leading to the Gomal pass, through which the road from Dera Ismail Khan goes to Ghazni. Further north are the Tochi and Khuram passes. Then comes the Khyber pass. The road to Kabul and the railway to the frontier at Landi Khan run along the Kabul valley through this famous pass. Then comes the Malakand pass connecting the Swat valley. Further north is the Yarkhun valley which ends at Pamir Knot, from where routes lead to forbidding passes linking up several countries: the Baroghil pass across the Hindu Kush range from Pakistan to Afghanistan, the Mintaka pass across which a new road has been built by the Chinese into Hunza and Gilgit. A caravan route follows Nubra and Shyok in north Ladak to cross over the Xinjiang in China over Karakoram pass which is perhaps the highest pass in the world.

As most of the major invasions and migrations to the subcontinent south of Himalaya took place through the passes in the north west, these have been indicated in some detail. But there are important passes in central and east Himalaya also. It is not proposed to list them here, but a bare outline of traditional exchange of goods and services will be provided.

Prior to 1949-50 the Ladakhis enjoyed almost a monopoly in west Himalaya in carrying out trade with Central Asia and Tibet. The main items of export were wool, pashmina, felt and borax to Punjab, Kashmir grains and dry fruit to Tibet and sugar and spices to Xinjiang. The main items of import were salt, tea and borax from Tibet and sugar, hardware, cotton textiles and household goods from Punjab and Kashmir.

The peoples of Lahaul and Spiti of Himachal Pradesh are mainly pastoralists and traders. They raise goat, sheep and yak mainly to provide themselves with food and clothing. But they also exchange goat, sheep and wool for household goods, grams and cotton textiles. Formerly the peoples of Kinnaur, Lahaul and Spiti used to visit western Tibet along with their flocks of goat and sheep during the summer months to get salt, borax and yak tails in exchange for grains, sugar and cotton textiles. They used to come down even to Amritsar during the winter months to sell Tibetan goods and buy whatever they felt had a market at home and elsewhere.

Trade in Tibet played a vital role in the economy of the *Bhotiyas* of Uttarakhand. There were specified trade marts in western Tibet for different *Bhotiya* groups. The principal export items used to be grains, household goods, cotton, jaggery and hardware. These used to be exchanged for wool, salt, borax and yak tails. The *Bhotiyas* used to move upwards to western Tibet with their merchandise during the summer months and downwards to the lowlands during the winter months.

Nepal has had trade relations with India and Tibet since long. The principal items of import from Tibet are wool, salt and borax and the principal exports are household goods, grains and dyes. The *Newars* and *Thankalis* have played a great part in the trade between Nepal and Tibet. The *Newars* have their business houses in Calcutta, Kalimpong and Lhasa.

The Sikkimese had trade relations with the Tibetans. The old trade from Gangtok, the capital of Sikkim to Phari in Tibet was via Nathu La pass. The other trade routes were via Jelep La in the north-east and via La Cheri in the north. Important among the items imported from Tibet were wool and salt. The items exported to Tibet were cardamom, rice and spices. Trade was carried out generally through barter.

Formerly there was a flourishing trade between India and Tibet through Bhutan, with Bhutanese as carrying agents. Three routes through Bhutan which connected Assam and Bengal on the one hand and Tibet on the other were (i) the Manas river valley (ii) Kariapara duar and (iii)

Paro valley. From Bengal (including Cooch Bihar) the Bhutanese used to collect dyes, endi or eri cloth, areca nut, tea and tobacco and exchanged them with the Tibetans for wool, salt, musk and silk. Apart from the main trad e routes, there were also ancillary trade routes. One of these was through Totopara in West Bengal by the side of the river Torsa. The commodities bartered were paddy and salt from Bengal and medicinal herbs, stones and orange from Bhutan. In Arunachal inter-village trade was often of a relay network of exchange connecting the plains of Assam with Tibet and to a lesser extent with upper Myanmar. The *Khantis* used to get from the plains salt, ornaments and household goods in exchange for rough cotton clothes and wild elephants. The *Singphos* and the *Mishings* used to get from the plains salt, cotton, tea and household goods in exchange for vegetables, chillies and spices. The *Taraons* traded with the *Zakhrings* woolen clothes for salt, ornaments, swords and other tools and implements. Tita (a midicinal poisonous herb) had always been an important item in the trade of the *Mishmies* with the peoples of the plains.

There were institutional arrangements to provide shelter and safety in distant lands and also to promote flow of goods as a symbol of social obligation. In Ladakh and in the adjoining areas of Tibet, Buddhist monasteries were generally located on the trade routes. While the monasteries gave shelter to the traders, some of them advanced loan for trade purpose; some even carried on trade themselves.

The *Bhotiyas* of Uttarakhand and in fact the trans-border partners in almost all segments of the Himalaya entered into ceremonial friendship with a high degree of mutual obligation. Such friendship is not merely one which evolves automatically from frequent contacts and business deals. It has to be ceremonially established and is then a form of bond similar to that between kinsmen by blood. The *Sherpas* of Nepal and Darjeeling in West Bengal believe that after death, ceremonial friends called *thowu*, meet in Devachen, the celestial region of gods provided that both have been meritorious enough to be born in that sphere. Thus they have mutual stake in the good behaviour of each other, not only in the sphere of trade, but in the totality of life situation. It is interesting to

note that neither parents and children, nor husbands and wives are expected to meet in the after-life. Thus ceremonial relation of the trade partners is a very special relation. It is not merely a relation of shared profit, but it is that of shared providence.

In addition to trade by individual traders certain monastic communities devote some of their assets to the pursuit of trading. While many of the great monasteries of Tibet used to engage in trade on a large scale, in Nepal this is done on a small scale. Usually one of the senior monks is elected for one year to be in charge of the community's business dealings. If these dealings are successful, the profit goes to the monastery; but if a loss occurs due to his fault, he may be asked to make up the loss out of his personal property.

Mention has been made earlier of trade between a part of East India and Bhutan, through Totopara inhabited by a small tribe, *Toto*, with a population of around 600 in West Bengal. For organisation of the trade, a sort of dual division prevails among the *Totos*. One of the divisions is called *Orangbei* (the northern group), the other is called *Wantengbei* (the southern group). While the head of the southern group is also considered as the head of the whole village, the head of the northern group is considered to be the village priest. After a ritual performance the *Wantengbei* under the leadership of its head and the association of the assistant of the northern group used to leave for the marts in the south. An official of the Bhutan kingdom joined them in the marts to purchase the commodities needed in Bhutan; they would carry the same to Totopara. The same were taken over by the head of the northern group, the *Orangbei* people after a big feast lasting for nine days and with sacrifice of a cow used to leave for Paro in Bhutan under the leadership of their head and with the assistant of the head of the southern group being associated with them. The *Orangbei* and *Wantengbei* consisted of distinct exogamous clans, but the collectivities were not exogamous. In language, dress and all aspects of life, they were identical, except for one aspect. While the *Wantengbei* ladies could take cooked food from the neighbouring tribes in the south, the *Orangbei* ladies could take cooked food only from the tribes of the north. They call themselves

as Hindu, but they are not served by Brahman priests, they avail of the services of Buddhist lamas from Bhutan. The dual division, with a very limited restriction for the ladies of one segment of the duality in having commensal relation with the tribes of the south and the other section not having any such restriction enabled the *Toto* to serve as carrying agents of commodities between Koch kingdom in the south and Bhutan kingdom in the north, even when the two kingdoms were at war. It was also the interest of both the dominant contact groups to preserve the distinct identity of the *Totos* so that their essential link function in the two way flow of commodities remained undisturbed.

This intricate arrangement at the micro-level of sharing goods and services undisturbed by political exigencies perhaps provides a model which can be appropriated by the countries lapping on the Himalaya even at the macro-level.

TRADITIONAL SYSTEMS OF RESOURCE MANAGEMENT, RESOURCE-SHARING, ECO-PRUDENCE AND ECO-ETHICS

In general land above 5000 metres in the Himalaya mainly consists of rock and ice, where the aspect is favourable, there are patches of grass; sheep, goat and cross-breed yaks, graze on these places during the summer. *Guggul,* the scented shrub grows wild and is collected to produce incense. Another shrub called *kuth* is cultivated in Lahaul and its roots are sent to Hongkong to produce medicine. There are great varieties of medicinal herbs and other plants whose use is known to the local people only. Researches are now being carried out about them. Between 4000 and 5000 metres, where the cold is too much for trees to grow, grasslands are found. Since these grasses are very nutritious flocks of sheep, goat, cattle and a few horses are stalled on such lands during the summer. Many semi-nomadic tribes such as the Gujjars of Kashmir are engaged in these activities.

Sheep reared at high level give very good quality wool, including the world famous *pashmina* wool of Kashmir. In most part of the Himalaya the semi-nomad pastoralists used to carry on trans-border movements as a matter of custom.

At an altitude of about 3500 metres an imaginary line may be drawn on the Himalaya between the grasslands and forests, called tree-line, above which trees do not grow. Near this line *rhododendrons* are found to grow, with their bright coloured flowers - the flames of the mountains. Tall dark green deodars, firs and junipers and many other varieties of conifers which supply huge quantities of timber are found below the tree line. At many places including in Nepal these have been over-exploited. But in Bhutan and Arunachal primal dense forests are still found, though of late a new type of threat is alleged to be operative in Bhutan.

In the lower altitudes, particularly between 1200 to 2200 metres, the most common conifer in western Himalaya is chir pine, mixed with oak and variety of beeches. Besides yielding timber, pines from Kashmir to Uttarakhand yield resin from which turpentine oil is obtained. It is believed that chir pine being a dominant species is growing at the expense of oak, which yield better timber and enriches the soil more. Pulp from pines is used for making paper. In Meghalaya a new kind of pine called *pinus khasia* grows extensively. It gives timber but does not yield resin.

Forests below 1000 metres are of tropical nature and are very different from the temperate forests. Sal, sisham and teak are some of the very important varieties in such tracts. They are sources of good quality hard-wood timber. Much bamboo also grow on such tract. In addition to great quantities of timber these forests also yield underwood, of domestic use, as well as of ritual and commercial value.

The structure and topography of the Himalaya are not conducive to the discovery and exploitation of minerals. The structure with its overfolds and thrust is so complex that it is extremely difficult to locate rich deposits of minerals. Coal is found in Riasi region in Kashmir, where it is being extracted for local use. Coal is also extracted near the foothills of Darjeeling close to Mal and Bagrakot, as well as in south Meghalaya and near Margherita in the extreme north-east corner of Brahmaputra valley. The occurrence of coal in the Himalaya is on the whole scrappy and of inferior quality. In J&K, the Buniyar lead-zinc deposits, the Baramulla graphite and gypsum, the Nichonam lignite, the Ramban limestone and gypsum, the Padar sapphire, the Ladakh borax, sulphur

and potash salts are some of the available minerals, besides the geothermal resource of Puga, for development. In Himachal Pradesh also limestone and slates are the only minerals available in adequate quantity for commercial extraction. In the U.P. Himalayas, the non-metalic minerals namely limestone, magnesite, phosphoriten, gypsum and clays can be developed broadly in two sectors, viz, Almora-Pithoragarh and Dehradun-Rishikesh. Soapstone occurs extensively in the Sarju valley in Almora district. Salt and borax are obtained from lakes in the trans-Himalayan areas of Ladakh and Rupsu. A kind of black sticky substance is obtained from high rocks which is called *Shilajeet*. It is supposed to be a very good tonic. A large number of huge deposits of gypsum, cement-grade limestone, dolomite and marble occur in various metamorphic and sedimentary rocks of the area. Important concentrations of graphite are also noted in some parts of Sikkim, Bhutan and Arunachal Pradesh. The huge B.F. grade dolomite deposit in Bhutan, the Tidding cement-grade limestone deposit in Lohit district, the Taliha flasky graphite body in Subansiri district are random samples of the non-metallic mineral resources of this terrain.

There are reports of gold in Kashmir and many gravel beds in north-east India. The Monsang (Darjeeling Himalaya) wolframite find in quartz veins cutting across phyllites give indication in some quarters of the continuation of the Burmese mineralization in the eastern and north-eastern Himalaya. Uranium deposit has been located in north Meghalaya. Liquid hydrocarbon deposit has been located in parts of Assam and Nagaland. While mining activities are picking up in different parts of the Himalaya, it is difficult to say that eco-management aspect has received adequate attention in all cases.

The Himalayan glaciers represent a large reservoir of renewable fresh water resources. The total number of glaciers in the Himalayas is about 15,000. Von Wissman has estimated that the glaciers represent an ice-cover of the order of 33000 km^2, representing nearly 1400 km^2 of ice. In an indirect way, the Himalaya plays an important role in replenishing the water resources of the countries including Bangladesh located to the south of this mountain system. This role is performed in

acting as a barrier range for the monsoon winds and thus enabling the precipitation of their moisture as snow and rain on the southern slopes. The resulting run-off not only feeds the Himalayan drainage system, but also recharges many of the aquifers lying in Terai-Bhabar and the plains down below. In the matter of water harvesting, the people have traditionally been displaying remarkable eco-prudence and eco-ethics. A rapid survey of the same has been done by the C.S.E. Delhi. A few illustrations by drawing upon the same are furnished here. Archaeological and historical records show that Indians were constructing dams, lakes and irrigation systems in the time of Chandragupta Maurya (321-297 B.C.).

There are mainly three types of traditional water havesting in India. (a) diversion channels leading directly to agricultural fields for example, *Kuhl* of western Himalaya (b) occasionally the channels first lead to storage structures and preserved for use during subsequent dry period (c) carrying water to a long distance by bamboo pipes in the North-East.

In Ladakh each village has a large network of canals and *Zings* (small tanks). To ensure equitous distribution, the villagers elect a water official known as *Churpani*. Outside urbanised places like Leh no activity that pollutes water, including washing of clothes in the distributory canals is allowed. Spiti's unique contribution to farming is *kuhl* irrigation (diversion channels) to carry water from glacier to the villages. The crucial portion of *kuhl* is its head-point adjoining the glacier which is to be tapped. The head must be kept free of debris, so the *kuhl* is lined with stones to prevent clogging and seepage. Water rights are owned exclusively by the members of the original settled family. It is the prerogative of this family to manage the distribution of water. Other families are required to buy water from this family. This seems to ensure a viable eco-management system but it is difficult to say how much eco-ethics and social equity are actually in practice in all the villages.

Construction and management of ponds is an act of folk wisdom for the people of *kandi* region in Jammu. They know through experience that desilting a pond beyond a particular depth has to be avoided as it would expose the highly porous soil strata of the *kandi* terrain and allow

seepage through the bottom of the pond. An indigenous system of drip irrigation was also in practice in Jammu. A pitcher with a hole at the bottom used to be buried in a trench adjacent to a fruit sapling. The pitcher would release water in a controlled manner keeping the soil moist near the roots of the plant to help it tide over the stress period in summer.

In Himachal Pradesh *Kuhls* are generally constructed and managed by the village communities under the leadership of hereditary functionaries called *Kohlis*. They are are paid by the villagers in kind. In the erstwhile Saket prince's kingdom however *kuhls* were constructed and managed by the state. In Almora district to ensure the equitable distribution of water progressively smaller boulders are placed at the inlet point of channel water diverted to each successive field. In some gram panchayats the distribution of water starts from upstream to downstream one year and in the reverse direction next year.

In Nagaland although slash and burn cultivation is practised, forest cover on hill slopes is preserved for conservation of water. Also some of the Naga tribes construct bench terraces. While constructing the terraces they adopt practices to make the ground soil compact so that percolation is minimised.

In Meghalaya bamboo drip irrigation is widely prevalent, 18-20 litres entering per minute and after transport of several hundred metres drips 20-80 drops per minute at the site of the plant. Normally the system is used to irrigate betel leaf or black pepper crops planted in areca-nut orchards or in mixed orchards. Bamboos of varying diameters are used for laying the channels. About a third of the outer cover in length and internode's of bamboo pieces have to be removed while fabricating the system. Later the bamboo channel is smoothened by using a local axe. Other components are small pipes and channels of varying sizes used for diversion and distribution of water from the main channel. About four or five stages of distribution are involved from the point of water diversion to the point of application in the field.

Apart from different techniques of water sharing, there are indigenous systems of conservation and sharing of other resources. There

are a large number of sacred groves and forests in the Himalaya and cutting of trees or extraction of the same for commercial pursposes from these groves is restricted by custom. In some areas if one plant is extracted, at least two saplings are planted for replenishment of stock. In most cases extraction of wood by side of rivulets or streams is restricted both by custom and by law. The Rongmei Nagas have a unique system of creating and maintaining tree rings around their settlements to protect the thatch or straw roofed houses from being burnt by floating shoots from slash and burning cultivation fields around.

Fishing rights are also traditionally demarcated among the communities. In some cases, while individuals catch on a small scale by lines and hooks or by bamboo traps, for large scale fishing permission of traditional village authority is needed. Again there are community fishing and community hunts. While the catch is equitably shared, some portions are kept out for the elders and widows living alone, who can not participate in the community enterprises.

While stones and boulders can be freely collected from the riverside by the members of a village community, frequently persons from a different village are to take permission of the traditional village authority of the village, where the resources are located.

There is sharing of a different order among the hill cultivators. Not only sunshine, but sometimes rainfall differs on different aspects of the hill slopes. Thus, while there may be heavy rainfall on the northern aspect of the hill, there may not be any rainfall on the southern aspect. Thus it happens that in some years there may be complete failure of crop in some hill villages while there is plenty in a village within a distance of a few kilometers. In those years by mutual agreement the village with plenty of rainfall allows the drought affected village to carry on cultivation on the land of the former on condition that when similar contingency arises the latter will reciprocate.

Sharing takes many other forms. For instance, even in case of shifting cultivation, in some tribes the person originally clearing a plot retains the prerogative to come back to the same plot at the repetition of the shifting

cultivation cycle. During the intervening period he ramains as the custodian of the plot and the co-villagers have the right to graze cattle, collect roots, tubers, leaves etc. from the plot. The co-villagers can also extract limited number of trees for housing purposes with permission of the custodian of the plot with or without any payment. But if the custodian himself makes large scale extraction of the growth like bamboo or wood or thatching grass for sale to contractors or at outside market, the village community is found to intervene in some cases. The argument is that the custodian or the person having the prerogative of first use, enjoys his right on consideration that he takes care of the plot during the end and the fresh beginning of shifting cultivation on the plot; but he does not have absolute ownership right of the plot. Large scale commercial exploitation not being a traditional system he can not invoke his traditional prerogative in support of his non-traditional enterprise. It is the village community as a whole which is to take decision and any income generated out of non-traditional use has to go to the village common fund.

The basic principle of sharing in such communities is that an individual has absolute right to a fair share, but does not have absolute right to a particular plot. If he enjoys some prerogatives in respect of that plot it is on consideration that he also serves as caretaker of the plot on behalf of the community. This principle comes in focus from the fact that whenever the village community requires a particular plot or segments of land for public purpose according to the norm or consensus of the community, the plot or segment can be taken over for the new purpose provided that a similar plot or segment of land is made available to the affected person. If the affected person has put in some visible labour, like construction of terraces or cutting a drainage or irrigation channel the co-villagers would help him to construct terraces or cut channel and so on, on the newly assigned plot.

Frequently the state officials and technocrats associated with NGOs fail to understand the finer nuances of the pattern of rights and intervene during the preparation of record of rights or planning new land use in a manner as to create tension and new vested interests, new centres of power. With the support of state power or exogenous money power and

sponsored vested interests within, facades of people's participation may be created but what actually takes place is alienation of communities, which in its turn, contributes to the degradation of the environment in the long run.

It is often that eco-prudence is sustained by ontological understanding and eco-ethics prevailing among the peoples. Zoller provides an example with reference to Bangan, situated in the north-west of Garhwal. He suggests that in Bangani thinking humans and animals are similar in so far as each of them has two souls, whereas plants have only one. The only difference between humans and animals is that humans actively control language. There is also similarity between humans and plants. This consists in the fact that human beings and animals possess roots like plants, although they are normally invisible. This seems to be on the one hand a rationalisation of geographical determination of human and animal behaviour, and on the other expression of a collective urge to extend human identity to cosmic unity.

In different cultures there would be different ontological ambiences. These do not always consciously influence individual behaviour. But these provide nissus at the deeper level of psyche tieing up individuals with their collective identities. An alienated community or a community in a state of anomie is hardly in a position to orient the socialisation process of individuals to accept the responsibility inherent in the ontological ambience informing the culture of the community. Clearly the ontological ambience of Bangani described by Zoller generates a sense of responsibility to the conservation of the environment. But if by purely techno-bureaucratic insensitive approach damage is caused to the foundation of the responsibility structure towards environment, the best that one can do is to forgive the techno-bureaucrats, for they do not know what they need to know.

CONSERVATION STRATEGIES AND SHARING PRINCIPLES ADOPTED BY STATES AND INTERNATIONAL REGULATORY FORUMS

There are international conventions and national laws related to resource sharing. These in so far as they are related to the different

countries of the Himalaya require to be analysed. As regards conservation the Stockholm Declaration of 1992, the Rio Declaration of 1992 and various conventions including Bio-Diversity Convention of 1992 require to be analysed in terms of their relevance, applicability and adequacy for the different countries lapping on the Himalaya.

About sharing of rivers and water bodies that pass through more than one country there are international legal instruments. In a people to people meet these may be discussed in a general way for a congenial social environment building. But concrete situational appraisal and analysis will require technical know-how of a special type and should be dealt with by different specialised forums in the context of an environment of goodwill generated through people to people meet. There are laws regulating the use of water of a river which passes through more than one state of a federal polity. A comparison of these laws only for awareness building is also useful.

There are policies and programmes about rehabilitation of individuals and collectives displaced by conservation projects like national parks, sanctuaries, biosphere reserves and also by hydro-electric projects, industrial projects, mining projects and so on. A comparison of the approaches in different countries is necessary to gain fresh insight and where necessary, to reformulate the policies and programmes of the different countries. In a general way the parameters of the policies and programmes may be stated as follows :

(a) displacement should be defined not only as physical displacement from habitat but also displacement from source of livelihood and from basic amenities and congenial physical and social environment

(b) when a displacement is made for other than natural disaster, the rationale for the cause and extent must be made transparent

(c) even in case of natural disaster the extent of responsibility of human intervention or failure of human intervention should be assessed and apart from rehabilitation package, compensation in appropriate form should be envisaged

(d) the extent of displacement and dislocation must be assessed not only in terms of de jure rights but also in terms of de facto rights

(e) conceptually rehabilitation is to be considered to be distinct from compensation

(f) rehabilitation, whatever may be the magnitude of compensation, should be at least at the same level as the pre-displacement standard and quality of life

(g) rehabilitation package should cover both the individual dimension and collective dimension; the minimal unit of the collective should be the family and the operative maximal unit should be decided taking the historical-ecological and political-economic context in view

(h) if the collective rights include jurisdictional rights apart from economic rights in respect of specific resources, the form of integration of the jurisdictional right in the structures of management and control of the resources or of the new use of the land including water course at the surface level and subsoil level should be separately decided

(i) when large scale change of land-use is tagged to profit generating purpose particularly of private concerns there should not be compulsory land acquisition under law; there should rather be purchase at negotiated price but at the same time there should be monitoring of the transactions by a body consisting of representatives of the state, the affected peoples and an activist organisation of the country selected by the latter

(j) when rehabilitation involves involuntary dislocation, not only the de jure rights but also the de facto rights of the host population in respect of the resources which will be affected by the induction of new population should be taken into consideration

(k) the historical socio-cultural relations of the relocated population and host population and the ecological, economic (including work

opportunity) aspects for both categories of population should also be assessed not only in terms of the current position but also in terms of projected position over a period of time

(l) rehabilitation should not mean only provision of livelihood and infrastructure and opportunities for the satisfaction of minimum needs but should also mean right to dignified life which should be eco-culture specific in the short run, moving towards a global standard for similarly affected population in the long run

(m) the concept of compensation should be progressively replaced by the concept of partnership of the dislocated population in the management of the development activities in their habitat from which they have been displaced and in sharing the incremental income is generated through the enterprise/enterprises introduced in their erstwhile habitat.

CALL OF THE HIMALAYA

Through the ages many have moved to the Himalaya in their quest for the sublime - perhaps it is not fortuitous that the early socialisation of the Buddha was at Kapilavastu with the Himalaya, with its enigmatic majesty as the backdrop. It is also significant that Gandhi retreated to Kausani, in the heart of the Himalaya to write his tract on the Spirit of Detachment. The whole of Himalaya is dotted with many actual and legendary and mythical names of saints and holy persons of different faiths, who sought in the messages conveyed in the silent thunder of the Himalaya for the purpose of human existence in the cosmos. Many pilgrimage centers have come up attracting hundreds of thousands of pilgrims and curious onlookers every year.

And then there are the creative arts and crafts in the Himalaya. Goswami divides the arts of the Himalaya into two broad categories: the hieratic and the non-hieratic. The former category includes sculpture and painting which self-consciously served not only religious but clearly defined monastic ends. In the very high Himadri ranges, areas like Tibet or in the upper Himalayan areas like Ladakh, Lahaul, Spiti, Nepal and

Sikkim works of great intensity were once being done. For centuries together, in sculpture or murals, miniatures or ritual objects, it was religion which served almost exclusively as subject matter. There were some influences that came in from outside, impulses that were registered with varying degrees of understanding, such as the art of the Chinese or the Mongols, the styles of western Asia or India, and there was certain amount of interaction between different expressions. Geographic vicinity, however, rarely determined the style because the monastic studies entirely depended on models sometimes procured from distant centres of Buddhist learning and copied for hundreds of years.

In the non-hieratic category of art in the Himalaya, the issues are different. In the Pahari paintings one is able to sense a perceptible and quick degree of responsiveness to changes of various kinds; political, religious, social and economic. As Mulk Raj Anand observes: "The Pahari paintings were drawn by village craftsman, descended from hereditary families of artisans, who were often also carpenters, masons, silver smiths and workers of brass and cotton utensils. Even the most talented among them did not assume the airs of importance of modern western individualist artist who seeks to express his 'genius' by a self-conscious assertion of his high status above the craftsman".

There is also the tradition of art expression of human and nature interface. It is best represented in Roerich's paintings of Himalayan landscapes. Many of these representing the Himalaya as seen from the window of his house at Nagar capture the silent message of form, taking shape through the hide and seek game of light and shadow on the snow clad peaks of the Himalaya. There are engravings on wood in apparently phantasy forms and informed by semiologies derived from cultural ecology of the concerned peoples. There are geometric designs and non-geometric designs on bamboo tubes. Many of these are like visual music of harmony and form with or without any symbolic meaning. Perhaps some of them are abstract representations of flow of time or flow of life with ebbs and tides of pathos and poise. Floral and faunal designs or phantasy designs on cotton, silk and woolen textiles and carpets are

varied all over the Himalaya. Some of the shawl designs in eastern Himalaya and adjoining areas are like patents and identity markers; traditionally others are not allowed to imitate the same without provoking hostility. Combined wood and bell-metal works of Darjeeling hills are of great attraction for tourists.

Himachal lies in the high seismic zone. Agnihotri observes that the drystone masonry, which is held in courses supported by wooden members have proved to be an excellent earthquake proof structure. The notorious Kangra earthquakes could not do much damage to structures of this nature. The area abounds in good quality slate for roof covering, which when used as roofing is not only effective against the prevailing weather, but is very attractive in appearance, and harmonizes beautifully with the mountain backdrop. Travelling up the Kulu valley, seeing, the beautiful people with their settlements, water mills, rope bridges and fishing, the gorges, the river pushes through and the roads running beside it, one can not miss the complete harmony of the total environment. What Agnihotri observes for Kulu valley, will be reiterated by many others for different parts of the Himalaya with their distinct architectural materials and styles.

The oral and written literature of the people inhabiting different parts of the Himalaya reflect the challenges and the diverse pathways of the resolution of the same. While many collections of the folklores in different parts of the Himalaya are available in published form and in cassettes, the written literatures, except those relating to Buddhist philosophical tracts do not appear to have received enough attention.

It would be an inadequate appraisal of the gift of the Himalaya if the lores and songs, folk and classical, that the water courses emanating from the Himalaya have inspired many sensitive souls to remit to their compeers, are not mentioned. One can make a mention of Sheikh Banu, a petty trader who while plying along the river Meghna in Bangladesh composed songs linking the muse of the ripples of the waterway with the invitation of the cosmos, to expand the custodial responsibility of the humans towards the totality of the creation.

It is this mystic invitation that once impelled hundreds of persons with quietude in their heart to trudge difficult terrains, gorges and vales all across the Himalaya. They are still there in spite of highly commercialized tourism and technology supported mountaineering. What one sees today is a hybrid mix of the adventure of the soul and the adventitious solicitation of the market. But through the ages resurrection of the true spirit of the humans in the silent discourse with phenomenal world has taken place. There is no reason why it should not be the same in the future also.

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ECO-CULTURAL HERITAGE OF KASHMIR

K.Warikoo

The Himalaya is the embodiment of divinity, of nature in its splendour and of culture in the deepest sense of the word. The Himalaya has been inextricably interwoven with the life and culture of India since time immemorial. It has been the repository of rich biodiversity, source of main river systems and glaciers and the symbol of India's spiritual and national consciousness. Notwithstanding the wide diversity of cultural patterns, languages, races and religious practices prevalent in the Himalayan region, it has numerous common factors like geographical contiguity, ecological adaptation based on uniform environmental features and a distinct pattern of hill economy. The imposing mountain barriers did not prevent this region from being a complex of cultural interaction, racial movement, overland trade and communication. Kashmir served as the gateway from where ancient Indian culture including Mahayana Buddhism spread to different countries in Central Asia, East Asia and beyond. Due to its unique geographical location at the crossroads of India and Central Asia and its salubrious atmosphere, Kashmir was the meeting place of various cultures and became an important centre of art, culture and scholarship through its long and chequered history.

This paper seeks to present some perspectives on the traditional eco-cultural heritage of Kashmir, as it evolved as a result of harmonious blend of nature in its splendour manifested in snow-capped mountains, beautiful valleys and meadows, flowing cascades, streams, springs, lakes, rivers and rich and variegated flora and fauna on the one hand and the artistic, resalient and lively people. Such interaction between man and nature in Kashmir imparted its own characteristics to the region's heritage, social and cultural life which, however, continued to be part of the common social and cultural fabric of India.

Being enclosed by the Pamirs, Karakoram, Kuen Lun and Pir Panjal ranges, the geographical setting of Kashmir has had a strong influence

on its society and culture. Kashmiris evolved their own traditions, ontology and way of life which has been deeply enmeshed with the mountains and peaks, springs, waterfalls and rivers, meadows and gardens, flora and fauna, shrines and pilgrimages dotting the valley. Almost every spring (*nag*), mountain peak, cave and hill in Kashmir has been a holy place and centre of pilgrimage. Kalhana in his *Rajatarangini* describes the valley of Kashmir as a place "where there is not a space as large as a grain of sesamum without a *Tirtha*."[1]

The people have since time immemorial reverred the salubrious and enchanting valley as the secluded sanctuary of spiritual salvation and intellectual attainments. Powerful cultural movements developed in the valley and spread not only to other parts of India but even across the Himalayas into Central Asia, China and East Asia. For a long time, Kashmir alongwith Nalanda and Taxila shared fame as an important seat of learning and culture in India. Known as *Sharda Peeth*, its remains are still existing across the Line of Control inside Pak-occupied Kashmir.

Similarly, the Amarnath cave lying in the Kashmir Himalayas near the Amravati stream and at a height of about 13,000 ft. is a place of most fascinating spiritual experiences as well as an awe-inspiring spectacle. Among numerous shrines of Lord Shiva, Amarnath alongside its counterpart in the U.P. Himalayas-Kedar Nath, is the most important place of pilgrimage of Indians. It symbolises the spiritual importance of Kashmir since people from every corner of India from Kashmir to Kanyakumari throng the holy cave for their annual pilgrimage in August. There are very few natural caves in India which are as commodious and high as this one, (50 ft. long, 55 ft. wide and 45 ft. high in the middle). At the dead end of the cave droplets of water permeate down the limestone roof, which is further congealed into ice. This natural formation of ice takes the shape of lingam, the emblem of Lord Shiva. It waxes and wanes in size with the moon and attains its full dimension on the full moon (*Shrawan Purnima*), the main day of offering prayers and coinciding with the festival of *Rakshabandan*. Amarnath is one of those ancient institutions which have kept the fire of spirituality burning in the hearts of millions since ages. Its historical antiquity is testified by the references

made in *Rajatarangini*, *Brangish Samhita*, *Amarnath Mahatmya*, the ancient Sanskrit texts. However, it appears that this shrine was forgotten in medieval times and was discovered in not so distant past by a Muslim shepherd, who found an ice lingam inside the cave while searching his flock. The shepherd and his descendants now called as the Maliks became guides to the cave and retain to this day a share in the offerings made by the pilgrims. That about 200,000 devotees have been undertaking the pilgrimage successively for the past three years braving the hazards of this mountain trek and defying the declared threats by Pak-sponsored terrorist groups like *Lashkar-i-Toiba* and *Harkat-ul-Ansar*, testifies to the spiritual importance of Kashmir and its cultural heritage for millions of Indians. Herein lies the underlying integrating force of spiritual and civilisational unity of India from Kashmir to Kanyakumari.

Apart from this Amarnath cave, there are smaller Amarnath caves in Bandipora and Poonch, which are thronged by pilgrims from these places. Not only Hindu devotees and sadhus but Muslim seers and mystics of Kashmir have also taken the path of meditation for attaining individual salvation. Sheikh Noor-ud-Din, who founded the Rishi order in Kashmir, loathed orthodoxy and fanaticism laying stress on spiritual means. He meditated in caves and lived on wild vegetables and grass. Same is the case with other Muslim Rishis-Bat Mol, Rishi Mol, Baba Rishi etc. who followed the footsteps of Sheikh Noor-ud-Din. Annual festivals continue to be held at the shrines and tombs of these Muslim ascetics, which have been traditionally attended by both Kashmiri Hindus and Muslims. In fact, Kashmiri Muslims do not partake any non-vegetarian food during the annual Urs festival held at Batmaloo in Srinagar, even today.

Another unique example is the Hari Parvat hill, which has been the abode of the historic shrine of Chakreshwari (Goddess Sharika). Situated in the heart of Srinagar, it occupies a central position in the valley of Kashmir. The area in and around Hari Parbat is a rich repository of archeological and historico-cultural wealth of Kashmir. According to the legend and tradition pravelent among Kashmiri Hindus, the Hari Parvat hillock is the abode of three hundred thrity million gods which comprise

the Hindu pantheon. And every stone, large or small on this hill is reverred by the Kashmiri Hindus as sacred. On the north-western side of this hill, one such holy rock with the marking of mystical diagram *Sri Chakra* represents Shakti. The Chakreshwar temple has been erected at the site, and the rock has been worshipped as the symbol of Goddess Sharika. In fact the noted Kashmiri artist Ghulam Rasool Santosh (1927-1997) who distinguished himself in the search and expression of Kashmir Shaivite philosophy by painting the *tantra* and *yantra* symbol systems, had worked out a detailed theory regarding Hari Parvat and the pre-historic shrine of Sharika at Chakreshwari atop this hill. Santosh after spending innumerable days and nights studying and watching the iconic forms carved on the Hari Parvat hill, particularly during the full moon nights related these forms to the ritualistic sounds, pnemonic phonemes and to the indigenous Shaiva Shakti philosophy of Kashmir. There are also symbols of Lord Ganesha, Saptreshi, Kali, Sidha Laxmi etc. inside the Hari Parvat premises, where devotees would throng to offer prayers. However, after the forced displacement of Kashmiri Hindus from the valley by the terrorists in 1990 and after, this displaced community has tried to continue with their age old traditions and practices. An exact replica of Chakreshwar temple in Hari Parvat has been constructed on the Aravalli foothills in Faridabad by this community thereby displaying their continued and unabiding devotion to their indigenous habitat and the traditions and spiritual values associated with the Kashmir Himalaya.

Just above Lord Ganesha's shrine in the south-western corner of the Hari Parvat is the shrine of great Kashmiri saint Sheikh Hamzah Makhdoom who meditated and lived till the end of 15th century A.D. Hazrat Makhdoom Saheb is known for his teaching of religious tolerance and universal brotherhood. On the north-eastern side of the hillock is Gurdwara Chatti Padshahi, where the sixth Guru of Sikhs, Har Gobind Singh visited in the 17th century A.D. and spread the message of Guru Nanak. Thousands of devotees belonging to three religions - Hindu, Muslim and Sikh would leave their homes early morning and go on foot walking long distances breathing fresh air to offer prayers in the Hari Parvat complex. More often Hindu devotees would also pay obesience

to Hazrat Makhdoom Saheb shrine and also at Gurdwara Chatti Padshahi, thereby demonstrating true facets of Kashmiri ethos and liberalism in actual practice.

Hari Parvat hill is thus a living symbol of co-existence of different faiths and needs to be categorised as a World Heritage site, after restoring its historico-cultural sanctity and ecological ambience. The almond trees and other plantations which used to lend their unique charm to the foot hills of Hari Parvat and which have been felled by the encroachers, need to be recreated in their original grandeur. The hill being composed of basalt which favours the growth of almond trees, can once again be turned into almond orchards where the Kashmiris of all hues can once again celebrate the advent of spring when the almond trees are in blossom. It is worthwhile to record here, that even as late as seventees and eightees of this century, a popular Badamwari festival used to be held every spring at the foothills of Hari Parvat, where Kashmiris of all faiths enjoyed the full bloom of almond trees in the midst of singing, dancing and feasting. It is only during the past decade, that Kashmiris have been deprived of enjoying such traditional moorings and festivals. The habit of Kashmiris spending time in gardens and parks, lakes and springs and getting intimate to their natural surroundings for amusement and leisure is age old. Earliest mention of this tradition is made in *Nilmata Purana* (an ancient historical text of sixth or seventh century A.D.), which refers to the practice of "joyous dances performed at the arrival of spring and a few garden sports. Special meals taken in the gardens in the company of friends and family members were part of such garden sports."[2] The *Nilmata Purana* also refers to the women going to fruit gardens to worship the fruit-growing trees.[3]

Similarly, day of sowing of seeds and new snowfall day were celebrated as festive occasions.[4] The *Nilmata Purana* enjoins upon the householder to honour the ladies of the house on the new snowfall day.[5] This practice, which has come to be known as *Nov Sheen*, has been prevalent amongst both the Hindu and Muslim Kashmiris ever since. Snowfall, which is so essential for maintaining the ecological balance and feeding the water resources in Kashmir Himalayas, has been a welcome and auspicious occasion. Apart from the common *Nov Sheen*

tradition, Kashmiris-old and young, men and women all alike have been used to create idols and figures out of the snow accumulated in their households. More importantly, fresh snow used to form an essential ingredient of the offerings made by Kashmiri Hindus to Lord Shiva on the occasion of holy Shivratri festival. This alone testifies to the importance of snowfall in Kashmiri traditions and customs.

River Jhelum, which is known as *Vitasta* in Sanskrit texts and *Vyeth* by Kashmiris, has been of great religious and cultural significance for the people of Kashmir. Rigveda mentions *Vitasta* as one of the seven great Indian rivers. *Vitasta* has been personified as Goddess Uma in the *Nilmata Purana*.[6] Spiritual significance of this river has been highlighted as an important *Teerth-sthana* (place of pilgrimage) in *Bringesh Samhita* (Topography of Kashmir) and the *Vitasta Mahatmaya*-the ancient Kashmiri texts. A special festival *Vyeth truvah* was celebrated on 13th day of moon to commemorate the day on which the source of Jhelum was supposed to have been created by Lord Shiva near Verinag. Jhelum was illuminated with lamps on both its banks through the city and towns. Sultan Zainul Abidin and his successors down to Jahangir are also believed to have been participating in this popular festival which was celebrated by all people irrespective of their religion.[7] On this day the practice of making prayers on either bank of the river Jhelum by offering milk and flowers and by placing the earthen lit lamps on paddy grass rings on the river waters was observed by Kashmiri Hindus until their forced displacement during and after 1990 by the Islamist terrorists. The spectacle of lit lamps floating on river waters offered a magnificent sight. The river has been the lifeline of the people who built their townships and cities along the two river banks. Besides, all important temples and mosques are built along the river banks. As such, river Jhelum assumed an important place in the spiritual and cultural activities of Kashmiris, besides being an easy means of transport and habitation for the boatmen locally known as *Hanjis*. The Jhelum and various bridges connecting the two banks at various points in the Srinagar city and the typical dwellings along the river waterfront lent a unique architectural beauty to the city. Modernisation and other man-made calamities have destroyed the

grandeur and magnificence of the architecture of the Jhelum waterfront, which had emerged as a result of interaction between the physical landscape, climate and the traditional lifestyle of Kashmiris. Hundreds of buildings and houses along the Jhelum waterfront have been destroyed during the past few years.

Since due to the long distance and mountain barriers, Kashmiris could not visit the *tirthas* in other parts of India in early times, they discovered their own *tirthas*. So the confluence of *Vitasta* (Jhelum) and Sindhu near Shadipur has been treated as Prayag, where ashes of the dead were immersed. However, some affluent sections of society did go to Hardwar to perform this rite for their dead kith and kin. Similarly, Gangabal lake at the foothills of Harmukh was a popular centre of pilgrimage like Gangotri in the U.P. Himalayas. A stream at Ishbar, near Srinagar is known as Gupt Ganga, where a high centre of Shaivism came up under the guidance of late Swami Lakshman Ji.

Kashmir has been endowed with holy sites and objects of pilgrimages. There is hardly any village which has had not its sacred spring or grove for the Hindu and its *Ziarat* for the Muslim. To quote Stein, "the most frequent objects of such ancient local worship are the springs or *Naga*, sacred streams and rivers, and the *savyambhu* or images of gods in various natural formations".[8] For instance, the springs of Khirbhavani, Mattan, Anantnag, Martand, Umanagri, Verinag, Narannag, Sheshnag and other places are associated with the sacred Hindu shrines at these places. Interestingly, there is believed to be a spring inside the Shah Hamadan mosque in Srinagar and the water flowing out from this shrine into Jhelum river is considered to have healing properties of removing skin diseases. Similarly, a number of Muslim mosques and shrines are situated alongside water courses. This is explained by the reverence attached by the people of Kashmir, both Hindus and Muslim, to natural water bodies, springs, streams and lakes. This is illustrated further by the fact that even the Muslims do not catch or eat fish from these holy springs,[9] as fishing is prohibited by tradition in these springs. These springs not only provide pure water to the people, but in some springs like Gandhaknag (Sulphur spring at Nagbal in

Anantnag) people with skin diseases take a bath to get cured. That the people of Kashmir, both Hindu and Muslim continue with their age old practice of naga worship is amply clear by the practice existing among people in Anantnag district to make offerings at the Vasuk Naga, during the days of water scarcity or excess rainfall.

Whereas the aquatic ecosystem in Kashmir Himalaya has influenced the social and religious life of the people, the role of locally grown plants has been no less. Various plants and flowers, wild or grown, have been used by Kashmiris in performing their religious rituals. *Darba* (Desmostachya Cynosuroides) is the primary requirement for Kashmiri Hindus for all their rituals and religious ceremonies-birthday, yagnopavit, marriage, entry into a new house, death etc. Peganum harmala (*Isband*) seed has been universally used as an incense on important social functions and auspicious occasions. This author has witnessed similar usage of this incense seed in Xinjiang region of China and Central Asian Republics. Similarly, mulberry twigs have been used in various religious ceremonies. It is not a mere coincidence, that mulberry and chinar trees are reverred. The forest laws prevalent in Jammu and Kashmir prohibit the felling of mulberry, chinar and walnut trees. Kashmirs used to employ till lately local herbs and plant materials for preparing dyes, which proved to be more permanent than the synthetic dyes. Pomegranate flowers, pomegranate skin, walnut skin were used for making dark red, light brown and dark brown colours respectively. *Pambachalan* (wild rhubarb) was used to prepare orange die. There are a number of such instances. Kashmir became an important production centre of hand made paper which was made out of hemp grown so wild and abundantly. Birch bark was also used as writing material. Walnut and lotus seeds have held the place of importance in religious ceremonies and social customs practised by Kashmiri Hindus since ages. No religious ceremony like yagnopavit, Shivratri, yagya etc. are complete without the usage of dry walnut and lotus fruits. Kashmiri Hindus even followed the practice of planting dry walnut fruit alongwith the first haircut of their child at holy shrines like Kheer Bhawani, Mattan etc., thereby ensuring the continued luxuriant growth of walnut trees at various shrines in the valley. In this manner

Kashmiris not only maintained the ecological balance but also created a viable horticulture industry in Kashmir. Needless to mention, dry walnut fruit exports earn an annual revenue of around two thousand five hundred million rupees. This is over and above the huge revenue accrued from the sale and export of world famous Kashmiri wood carving items of furniture and decoration made out of walnut wood.

Similarly, abundance of stone and rocks provided the Kashmir artisans the base materials to build magnificent temples carved in stone. Availability of soft stone of different types facilitated the production of stone vessels, jewellery and other objects. Abundance of timber of different kinds enabled Kashmiri artisans to create ornate motifs in the wooden ceilings, pillars, windows and doors of various houses, mosques and shrines.

It becomes clear that the people of Kashmir had a harmonious relationship with their natural surroundings, thereby creating a unique eco-cultural system which provided a fertile ground for meditation, study, agriculture and production of handicrafts. This composite cultural heritage and traditional liberal ethos of co-existence and harmony is the essence of what we call *Kashmiriat*. By reverring nature, water bodies, rivers and springs, or by following a practice of planting saplings of poplars, willows, chinars or fruit trees every spring, the Kashmiris used to maintain the precarious ecological balance, which in turn sustained the huge handicrafts industry thereby providing gainful employment to hundreds of thousands. The past decade of terrorism and militancy has not only wrought havoc on the traditional heritage and practice of co-existence, but has even destroyed the ecosystem. Thousands of walnut, almond and fruit orchards, besides hundreds of thousands of poplars, willows and other trees, belonging particularly to the displaced Kashmiri Hindu community have been felled and sold as timber. To quote the State Forest Minister, Mohammed Ramzan "an estimated three lakh conifer, deodar and kail trees have been felled and smuggled from the forests in Jammu and Kashmir by the terrorists during this period."[10] There has been punder of wildlife too. Holy springs and shrines have been defiled and cases of earth filling of springs in order to encroach the

land have also been reported. Wanton and unplanned construction of concrete buildings across the valley through ill gotten money and bypassing the Building Bye-laws and regulations, has made a mockery of planned development.

If we are serious about restoring the spirit of *Kashmiriat*, it is high time that concerted steps are initiated to :

a) Identify, demarcate and preserve various aquatic bodies, especially the springs and lakes and restore their spiritual and social importance by removing all encroachments and reconstructing those structures which have either been destroyed or are lying in ruins.

b) Evolve appropriate sewage disposal system to stop the flow of sewage into the aquatic bodies including the Dal Lake and river Jhelum.

c) Rid the Jhelum river of filth and garbage and make it a healthy and easy medium of water transport, recreate the buildings and houses on the waterfront and restore their original glory with their ornately carved eaves, projected bay windows (*dubs*) and screens (*panjras*) etc.

d) Restore the important temples and shrines in their original eco-cultural landscape and architectural setting and turn them into popular places of pilgrimage and spots of eco-cultural tourism.

e) Identify, document and promote the cultivation of indigenous flora and fauna besides undertaking a popular afforestation movement in the valley. This assumes urgency in view of massive felling of the forest wealth, orchards of walnuts, almonds, apples and other fruits besides poplars, willows etc. by the terrorists and other criminal elements particularly during the past decade or so.

f) To take all steps to restore the historico-cultural sanctity and ecological ambience of the Hari Parvat complex to its original grandeur by removing all the encroachments and relocating them to other places; and by creating a safe settlement zone in Srinagar

along the seven bridges for displaced Kashmiri Hindus. Subsequently efforts can be made to declare the entire Hari Parvat complex as a World Heritage site.

This is a challenge worth taking by the people and government of Jammu and Kashmir. What is needed is to create appropriate and integrated insfrastructure in terms of land, buildings, reconstruction of burnt houses, temple and shrine complexes, beautification of both the banks of river Jhelum, besides creating an atmosphere of peace, security, just social and political order and equitable distribution of state resources among all communities and ethnic groups, to replace the existing ruins of displaced Kashmiri Hindu houses and shrines along the seven rivers of Jhelum in Srinagar and elsewhere in the valley. The key to lasting peace in Kashmir lies in the restoration of the traditional composite cultural and liberal ethos.

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CRISIS OF THE ARAL SEA

A. Nurushev

Deserts cover more than three quarters of the territory of Central Asia. The Aral Sea is situated in the large lowlands of Turan, in the Karakum and Kyzylkum deserts. The Aral Sea basin includes rivers : the Syrdarya, the Amudarya, the Tendjen, the Murgab, small rivers springing down from the western Tian Shan and Kopetdag, the Karakum canal, and waterless areas between these rivers.

In terms of administration the Aral region fully includes Uzbekistan, Tajikistan, south-western part of Kazakhstan, part of Kyrgyzstan, Turkmenistan, and also northern Afghanistan and north-eastern Iran. The Aral region occupies more than 700,000 sq. kms. This is a kingdom of high mountains, dry steppes, semi-deserts and deserts. The features of geographical situation of the Basin are following: centre of vast mainland, large distance from oceans. This stipulates sharply continental climate and monotonous landscapes connected to high degree of their arid properties.

The region is surrounded by huge mountainous systems. Normally, in summer the temperature here reaches upto 40 degrees centigrade and in winter it falls down to -20 degrees centigrade, while precipitation remains minimal. The main volume of surface waters is consisted of thaw water from high glaciers, feeding the two largest rivers of the region : the Syrdarya and the Amudarya, which enter into the Aral Sea from the north and the south correspondingly.

The territory between these two rivers was populated about3,500 years ago. In ancient times the Aral region due to its geographical position was a crossing point of important historical routes. Khiva, Samarkand and the Fergana valley were parts of the Great Silk Road, which connected Europe and Asia. Archeological excavations indicate that prior to 1000 BC on the territory of Uzbekistan there were irrigation systems, which allowed settled agriculture to develop here.

Since time immemorial this region was an oasis, where active lives of thousands of working people prospered : they were farmers and stock-breeders, fishermen and hunters, craftsmen and great masters, traders and merchants. The Aral Sea has been uniting and feeding numerous nations of the region.

Countless lagoons and shallow and narrow straits between islands were the main characteristics of the Aral landscape. More than 1,100 islands had made the name of the sea. In Kazakh language the word "Aral" stands for "island". Vast lake systems of the deltas (about 300,000 sq. kms.) played a great role in reproduction of fish sources and in fishery. In 1970-1980s the fishing catch made more than 40,000 tons, half of that was from the part within Kazakhstan.

Natural potential and high yield of food and industrial production allowed the Aral region to contribute 1/4 of its gas extraction, 40% of rice and 90% of cotton to the former USSR. The Aral Sea Basin is still rich in natural resources such as, iron ore, non-ferrous metals, oil and gas, large deposits of coal, copper, lead, tin, tungsten, molybdenum, flourite, lithium, gold, silver, antimony and mercury.

However, the economy of Central Asia which was traditionally based on stock-breeding, plant-growing and large scale fishery, is experiencing hard times. It is mainly due to drying up of the Aral Sea which began in early 1960s as a result of intensive pioneering of deserts without considering the ecological and sea preservation issues.

Poor water management has also contributed a lot to the region being in a sorry state. Here traditional irrigation had thousands of years of experience and where population always knew the price of irrigating water: "use little water for land and you will obtain small yield, but the land will be safe; use much water and you will obtain small yield too, but the land will die because surplus water is poison and it results in secondary salinization". Eternal rules of the ancient Babylon King, Hammurabi who lived in 1970 BC were forgotten. He said that a neighbour living at upper streams should think about the one living at lower streams and provide the possiblities for his life.

One of the main aspects of the Aral crisis is that the water-management catastrophe (the drying up of the Aral Sea) is a result and consequence of short-sighted management activities in very droughty climate areas. Conversion of Central Asia into a cotton base of the USSR and extensive development of irrigated areas overstepped a critical level of reasonable management activity of man. Negative processes changed the productive potential and landscape of the region.

Once fourth largest lake of our planet - the Aral Sea - has been drying up during four decades. By 1995 the Sea had lost 3/4 th of its water volume, surface area shrank by half and water level fell by 19 meters. The Sea run off its shores by 100-150 kms and exposed more than 33 sq. kms. of its seabed, from where more than 100 million tons of salty dust are being carried out far away annually. The dust consists of grains in the form of aerosol with inputs of poisonous agricultural wastes, fertilizers, and other harmful industrial and household drains. Waters from rivers do not reach the Sea because they gradually disappear in desert sands.

Due to the impact of desertification, degradation of ecosystem, worsening water-salt balance and changing regional and global climate, the Aral region has entered into qualitatively a new phase that has already been started. The environment of the region has sharply worsened due to polluted atmosphere, drinking water and soil.

The Grounded Ship at Aral

The process of drying up of the Aral Sea has a negative impact on climate of the Aral region. Earlier, the Aral Sea played a role of some sort of regulator in the region : it softened cold Siberian winds in winters and acted as a conditioner for reducing heat in summer months. Worsening climate in the region is being felt in dryer and shorter summers, as well as in longer and colder winter. Vegetative season shortened down to 170 days. On shore territories of the Aral Sea, precipitation temperatures decreased by + 2 to 3 degrees centigrade. Productivity of pasture grounds shrank twice. Destruction of vegetation of the lands adjoining riverbeds decreased the productivity of these lands ten times.

Hundreds of thousands of hetares of fertile lands have now been found unsuitable for agricultural process. This happened due to excessive watering which led to rise of ground waters and the lands in turn suffered from secondary salinization. Now these lands are constantly boggy or covered with thin crust of salt. Previously, arid soils of the Aral region had automorphous regime of feeding and moistening but now they are transformed into meadow-marsh soils with hydromorphous regime. Therefore, in order to support this regime artificially, it is necessary to supply water not at biologically necessary level but two or three times higher for withstanding the process of secondary salinization by "fuse" effect (rising of deep ancient resources of salt waters). Bad agricultural cycle has been applied in the region when strongly bogged lands are being abandoned and new lands are being introduced in the production process, then the cycle is repeated.

Locally collected drainage waters saturated with poisonous chemicals are being thrown down into numerous landscape in the form of returnable drains which consequently deteriorate agricultural conditions of irrigated lands of Central Asia (lakes of Sarykamysh, Arnasai, Kattashor, Terrenkara and others). These reservoirs are real disasters for surrounding lands as they cause secondary salinization. After drying up, the poisonous bottom deposits make their way to irrigated lands, destroy them and pollute the atmosphere of surrounding areas. The effectiveness of irrigation in the region is low: only 40 to 50% of water taken reaches the agricultural plants.

The result of such process is that the water resources of the region have been wasted and surface and ground waters mixed with agricultural, industrial and municipal wastes are entering the Syrdarya and Amudarya rivers making them unsuitable for drinking and fisheries. Furthermore, in the Aral region there is a shortage of water. A rural inhabitant receives only 15 litres instead of normal 125 litres, and an urban one receives 40 litres while in the country the average rate is 550 litres. In the crisis zone people fail to receive water, at times, during several days.

There has also been a process of double desertification in the Aral Sea Basin. While the first desertificiation is caused by drying up of the Aral Sea, the second is by artificial bogging of irrigated lands. As a result, new desert has appeared in the center of the belt of large deserts-the Aralkum. The danger it poses is that the monotonous saline land consisting of small-dispersion sea deposits and residues of mineral deposits have already washed away the irrigated fields. In the past, the seabed served a vast water collecting basin as natural desalinization "factory" due to live activities of rich aquatic biological world of the sea. But now it is like an artificial volcano, which is throwing large quantities of salt and small-dispersion dust into the atmosphere. The effect of pollution is aggravated by the fact that the Aral Sea is situated on the "highway" where strong currents of air are blowing from the west to the east. This promotes carrying up of aerosols to higher layers of atmosphere and further spreading them around the earth. That is why pesticides from the Aral region are found in the blood of penguins living in the Antarctic continent. Besides, the distinctive Aral dust is falling on remote areas thousands of kilometers away from Central Asia such as the glaciers of Greenland, forests of Norway and the fields of Belorussia.

Other dangerous consequence of desiccation of the Aral Sea is the continuing degradation of mountain glaciers of the Himalayas, the Pamirs, the Tian Shan and the Altais, which feed the Syrdarya and the Amudarya rivers with moisture. Increasing dust on the surface of glaciers and mineralization of precipitation are promoting their melting. This is thought to be a dangerous process for arid region because mountain glaciers of Central Asia are the only ancient reserves of water and the main place

for condensation of atmospheric moisture in the region. If the "cover" of sedimentation is further accrued, the glaciers will not be condensers of moisture any more and therefore, draining of rivers will start taking place.

There are approved evidences that catastrophic degradation of the ozone layer is also connected to sharp increase of atmospheric content of hard continental aerosols, especially of chloride salts from the Aral Sea and Kara-Bagoz-Gola (Caspian Gulf). So, the essential changes in the earth climate in Central Asia especially in the region of Kazakhstan, are mainly caused by the desiccation process of the Aral Sea. Such climatic changes in the history of the earth are known to the mankind but they were caused by volcano eruptions accompanied by carrying out of continental aerosols into atmosphere. These processes have been developed in conformity with natural laws and according to geological time scale, i.e. the process of climate changing has been continuing for over hundreds and thousands of years. This has allowed the environment, the flora and fauna to adapt to new conditions. However, the danger of the Aral crisis is that the process is taking place under artificial factor and in real time scale, so the changes are rapid and human activities and biological system of the earth are under threat of distraction.

Lowering of water inflow to the Aral Sea has caused irreversible changes in hydrological and hydrochemical regimes of the sea and its ecosystems. Moreover, changes in salt balance have tripled the salinity of the sea, thereby turning it into a biological desert. Once prospered ecosystem of the sea had supported 24 commercial species of fish. They include mainly carp, perch, sturgeon, salmon, and also sheatfish and pike species. But currently, these species are dying. In fact changes in salt content of the Aral Sea and loss of the biota have led to complete crash of fishery and processing industries which also resulted in unemployment of 60,000 people connected with sea jobs. In 1996 only 547 tons of fish were caught in the destroyed deltas of the Syrdarya and Amudarya rivers and 100 tons of this amount were plaices. The high percentage of pesticides is found in fish tissue. Besides, high rates of strong cancerous substances are contained in reeds, rice, millet, and wheat, which are growing up around.

In the past, unique isolation of the Aral Sea basin promoted the development of rich and diversified biota, which could be compared to that in Africa. The Aral region occupied one-sixth part of the former Soviet Union and had almost half of all biological species existing on the territory of the Union. Most of those species have now either disappeared or are under threat of disappearance. In all, the region possessed 500 species of birds, 200 species of mammals and 100 species of fishes living in fresh, slightly saline or saline water. Insects and invertebrates were countless. Besides, flora of the region was also impressing. There were 1,200 species of flower-covered plants and 560 species of plants of tugai forests, including 29 endemic species of Central Asia.

The area covering 23,000 kms (3% of Central Asian territory) of biologically active environment was marked as a preserved land in the past. But after the disintegration of the USSR, one third of that territory lost its protected status, and the rest is not being supported duly because of the lack of funds. In recent years, uncontrolled hunting and poaching have also resulted in decreasing population of wild animals. There are now no more big predators in the region. But local inhabitants still remember Turan tigers who disturbed them often.

The process of degradation of nature in the Aral region has led to the socio-economic crisis. The first victims of this crisis are vulnerable strata of population : children, women, poor urban and rural people. The region has witnessed the highest rate of children mortality in the former Soviet Union (75 for 1,000 births) and also a high rate of maternal mortality (about 120 for 10,000 confinements). Diseases of destitution both infectious and parasitic ones, such as typhus, paratyphus, hepatitis, and tuberculosis have spread all over the region. Since illnesses have tendency to increase, in the epicentre of the ecological disaster one finds wide spread anemia. Medical studies confirm that development of such diseases is directly related to the ecological catastrophe.

Children Hospital in Nukus

Socially uncontrolled use of natural environment in the Aral Sea basin has now stepped over the critical level of its self-defense, and thus exceeded the rate of self-recovery of the geosphere.

Having realized the necessity of pioneering and developing new lands in conformity with laws of the nature and considering its potentials, both the government and the people of newly independent states (the Republic of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan) have developed a program of urgent measures to save the Aral Sea. In 1994, these countries established the International Aral Sea Rehabilitation Fund, which is coordinating the financial support of the inter-regional program aimed at tackling the problems of the Aral Sea and sustainable management of environment.

The program of the Aral Sea Basin is included in the national programs of the Central Asian States covering the period till the year 2015 and it has following global objectives :

a) stabilization and improvement of management of the Aral Sea Basin's environment;

b) rehabilitation of disaster zones, surrounding the Aral Sea;

c) improvement in the management of scarce water resources in the region;

d) capacity building of local and state institutions on planning and implementation of regional programs.

Experts estimate the possible expenses for rehabilitation of the region by billions of dollars, though the process will continue further for decades. Infact, the program of support to the Aral Sea is a long-lasting process because of numerous interlaced problems. But final objective is the sustainable management of environment. To maintain such a process it is necessary to have coordination among all local, national and inter-regional institutions as well as the world community.

By now, Phase I (preparatory) of the Program has already been finished by the five Central Asian states in collaboration with the World Bank, the UN, and states-donors. After evaluation of the initial phase of the program, Phase II will soon be started. Besides, a number of projects are being carried out in the Aral Sea region by international organizations for creating water supply systems, solving the problem of hygiene, sanitation and healthcare issues, and also for the creation of new jobs and development of business.

There have been many conferences on the problems of the Aral Sea basin and also hundreds of studies have been carried out. All these have provided enough evidences to inform the world community on ecological catastrophe of planetary scale in Central Asia. However, the main obstacle in resolving these problems is that majority of proposed projects on the improvement of effectiveness and water management sustainability in Central Asia require concerted international efforts in terms of infrastructure investments in areas such as, irrigation system, drainage, sustainable development of agriculture, and afforestation. In an extra ordinary Central Asian summit on the Aral Sea held in February 1997 in Almaty, the President of Kazakhstan, Nursultan Nazarbaev, highly appreciated the attention and participation of international community. But correspondence of committed and allocated funds to really needed investments is a subject of serious consideration, constant control, and further implementation.

TRADITION OF WATER HARVESTING IN CHANGAR

Piyoosh Rautela

India has a long and outstanding tradition of systematic exploration and development of the water resources. The science of hydrological exploration was advanced in the past and *Vrihatsamhita* of Varamihira gives detailed account of the various techniques empolyed. With the disruption of the traditional system of education most of this knowledge is, however, lost. Archeological excavations at various places have brought forth well developed water management systems and these strengthen the premise that the ancient Indians knew elements of hydrology. Many villages in the remote hilly regions still use the age old system of water harvesting and the utility of these systems upto the present times reflects upon the sound knowledge base backing these structures.

The present study was undertaken in Khundia tehsil of Kangra district ($31^0 40'$ - $32^0 25'$ N & $75^0 35'$ -$77^0 5'$ E) in Himachal Pradesh. Lying in the vicinity of the famous Hindu shrine of *Jwalaji* at Jwalamukhi, this region is locally referred to as *Changar*. Though not recorded in any of the political maps the boundaries of *Changar* are well engraved in the minds of the local populace. The very definition of *Changar* does vary from place to place; some say *Changar* is rocky, for some it is an ill civilised land that is referred to as threat to set right the defaulting girls, for still others *Changar* is a water straved land, but for me as an impartial observer this is the land of innovative, practical, hardworking, friendly and cooperative people who have through centuries of experimentation, imaginativeness and scientific temperament evolved means of overcoming their physiographic handicap. *Changar* may be defined as a part of Kangra district that lacks irrigation, is hilly and where agriculture is still backward. This area comprises of 427 sq. kms. and lies in the basin of Beas river and encompasses 99 panchayats and 570 villages.

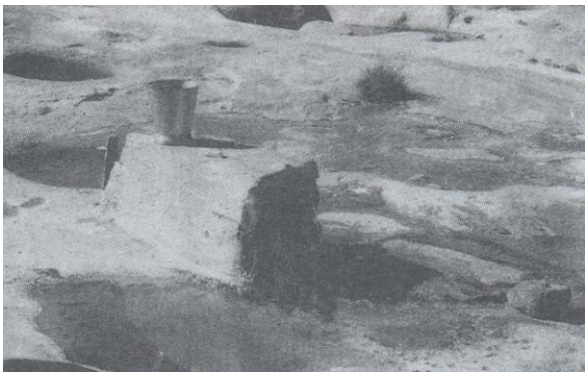
Changar falls in the sub tropical climatic zone. The summers over here are hot and dry, winters cool and dry, while the rains are heavy.

Though the average annual rainfall in this region is around 1200 mm, it is not well distributed around the year and majority of it is confined to the rainy season. These extremes in climate often enhance the rates of erosion in this region.

The soil profile in *Changar* is generally shallow and erosion by the forces of nature often exposes the hard bedrock (sandstone), referred to as *sappar.* The rocks of the region generally fall under the Siwalik Group and the rock types encountered are sandstone and pebbly sandstone with minor clays, mudstone and siltstone. The sandstone is generally coarse grained, gray to reddish gray in colour, has good porosity and is capable of holding vast volumes of water. Harder varieties of sandstone are also encountered along with minor clays. Both confined and unconfined aquifers are encountered in this region (an artisan well is observed at Sapralu on the river bed; Fig.1).

The availability of water has always affected the settlement pattern. In *Changar,* the northern slopes are well habitated while the southern slopes are sparsely populated. When people first habitated this region some sources of water would have been existing in the vicinity. These sources were subsequently tapped and developed, while others were designed through long experimentation. The tools, implements and the techniques used by these people are lost with the passage of time but the structures developed by them clearly show that the people had a well developed hydrology discipline that guided them to set forth the roots of the sound traditional system of water harvesting in *Changar*. May be through intuition, but those people could very well locate the sites for these structures. The efficacy of their deep knowledge is testified by the very fact that even after the introduction of tap water through the Department of Irrigation and Public Health (IPH) a major part of the drinking water requirements are still fulfilled by these age old structures. No doubt in many circumstances these are unable to feed the people; specially during the summers. But then this can be atrributed to the neglect of these structures over the years and indiscriminate tapping of resources by the IPH at higher locations that has ultimately resulted in the lower yields of the downstream structures. None has really cared to undertake

scientific study of these traditional means of water harvesting and accessing their efficacy in the present scenario. An attempt in this direction would have provided water to the masses in a cost effective manner. It is indeed an irony that even after fifty long years of independence and pumping of huge national resources, the situation in the water sector is far from satisfactory and even then the traditional genius is not being recognised as a potential alternative. The need of the hour is to review the situation and pay due attention to the traditional water harvesting systems. Scenario is the same everywhere in Himalaya and mammoth schemes are being incepted to supply water to the masses. Lengthy pipelines are not suited to the fragile terrain of Himalaya and moreover, recurring costs of maintenance and pumping have posed a question mark on the economic viability of many a schemes of this region.



Artisan well at Sapralu on the bed of Tall Khad showing discharge of 28 liters per minute

Everywhere the people develop some innovative practices that can rightly be termed as the tool of adaptation. In *Changar* the topography is rugged, the northern slopes thought gentle are largely *sappar,* the southern slopes are steeper with some grasslands and vegetal cover. The climate, durinal temperature fluctuations and topography of the region favour high rates of erosion and evaporation. Through centuries of experimentation and hard work the people of *Changar* have devised methods for water harvesting for various uses; the ones that are well suited to the ground realities of the area.

TRADITIONAL GENIUS OF *CHANGARITES*

Drinking and household purposes

Bawari : *Bawari (Fig. 2)* is the main source of drinking water in *Changar*. This is a generally a square structure with flights of stairs on all the sides (Fig. 3) There is a natural seepage of water within the structure. The source is generally roofed and a wall is erected around it to ward off the animals and also to prevent used water from polluting the water source. This structure is observed almost everywhere in the hills, e.g., *naula* of Kumaun. Smaller and larger variations of *bawari* are called *bouru* and *naurh*. Provision is made for washing of clothes in the vicinity. Peepal tree regarded as purifying and some sort of worship stones are often observed to be associated with *Bawari* and this is the *Changarian* example of nature-man-spirit complex. Those worshipped are *nag devata* and the ancestors.

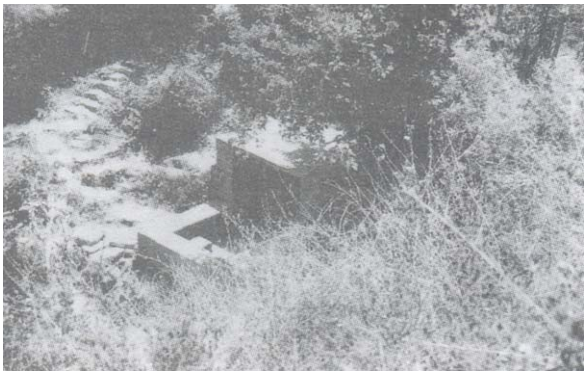


Fig.2 : A *bawari*

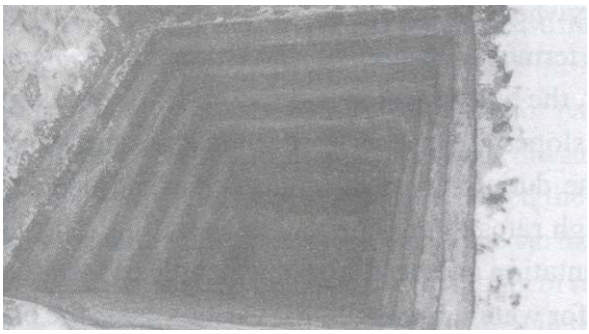


Fig.3 : Traditional stepped architecture of a *bawari*

With the passage of time the social system of maintenance of these structures has been disrupted and consequently many have silted (Fig.4), covered with vegetation and consequently the discharge has gone down considerably.

Fig.4 : Prolonged neglect has taken its toll and the *bawari* at Ghadda lies silted up

The traditional method of locating the *bawari* site is lost and despite hard probe nothing can be commented upon this aspect. The people, however, attribute it to the guess work and experience of the local masons that dictated the selection procedure. The *bawaris* actually observed in the field were found to have noticeable discharge even during the mid of May. The data on the discharge of some of the *bawaris* is given in Table 1 that indicates that on an average a daily discharge of 14, 400 liters can be expected from each *bawari*. This data raises high hopes towards making the community self-reliant, considering the number of *bawaris* each village of the region does have (Table 2).

Table 1:Data on the discharge of some *bawaris* measured in the field

Location	Discharge per minute (in liters)	Discharge per day (in liters)
Chillag	3	4320
Bal	4	5760
Salihar	15	21600
Gal	18	25920

Khatri : With depleting water resources rain water harvesting is gaining ground everywhere at present. Rain water harvesting structures are, however, not very common in the Himalayan terrain. Generally fractured and foliated strata of this region does not favour this practice. *Changar* is, however, an exception and rain water harvesting is well developed in this region. *Khatri* is the traditional rain water harvesting structure of *Changar* and is carved out in the massive, hard sandstone (Fig. 5), but those constructed in pebbly sandstone are also observed. The rock types chosen for hosting these structures are free of structural weaknesses and is less permeable. This helps in water storage for prolonged periods. Evaporation losses in *Changar* type of climate are extremely high and it is a must to devise some means for countering these for successful storage of water. The best suited answer to this problem could be subsurface storage and this is what is widely practiced in *Changar*. *Khatri* is a subsurface structure with a small opening on the surface. Stairs are carved out in bedrock and these lead to the underground storage space, a cube of 10 feet. The stairs are generally ten in number and each is one foot high. Water percolates to *Khatri* by seepages in the overlying strata as well as from the surface opening, during the rains and is subsequently used for household purposes. Most *Khatris* observed were designed to collect water from seepages in order to retard siltation and also to ensure water quality. *Khatri* water is not generally used for drinking. These structures are also called *talai* and *kufri*.

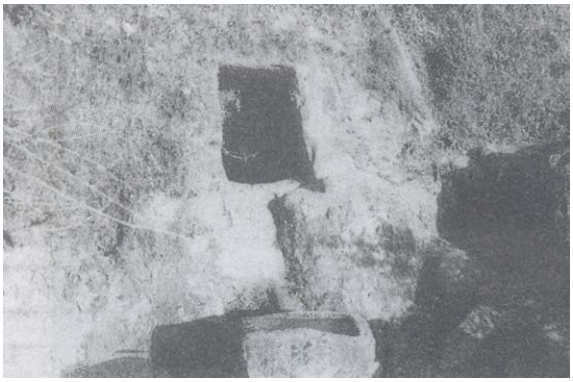


Fig.5 : *Kbatri* in hard sandstone

Table 2 : Account of the water sources in some villages of *Changar*

Village	Number of families	Bawaris	Khatris	Taps
Fareha	14	1	3	NA
Rihari	15	4	2	3
Bamdiara	20	1	2	1
Thatti	14	NA	NA	1
Bahalan Kurd	22	1	5	3
Bahalan Kala	5	1	2	2
Lihas	12	1	NA	NA
Daklehad	24	3	1	NA
Kwali	27	2	4	3
Karal	13	1	NA	NA
Rihari	9	5	NA	1
Fulwari	8	2	3	2
Jol	9	NA	4	NA
Upper Mora	8	3	NA	2
Tiala	16	NA	4	4
Badog Lahad	26	2	4	2
Sudra Lahad	20	1	NA	2
Silah	13	2	NA	3
Ambada	67	4	NA	4
Average per village	18	1.8~2	1.8~2	1.7~2

***Source* :** ERA, Khundia

On an average the *khatri* has a storage capacity of around 30,000 to 1,00,000 literes. The evaporation losses from these are minimal and the water is stored for long durations and is replenished by occasional rains. These serve the household requirements of the masses and are the lifeline of *Changar*.

The number of the drinking water sources in the villages whose data could be accessed are given in Table 2. From this data it is clear that considering the average size of the family to be around 7, the average population of the village is around 126. Considering the average water requirements to be around 40 liters, the daily water requirements of the villages fall in the tune of 5,040 liters, that can be made available easily from the surrounding *bawaris and khatri.*

Irrigation Purposes

Chappri : These are small depressions in the hill side (Fig.6) generally at the slope break. Water collects in these during the rains and is used for feeding the animals and irrigation later on. Besides providing water, *chappri* enhances recharge of goundwater, retards quick runoff and thus erosion. Disruption of *chappri* has led to the depletion in the yields of the downstream *bawaris*. These structures are also observed in Garhwal Himalaya, where these are termed as *chaal*. These are generally clay lined; *pukki chappri* is also observed in *sappar* (Fig.7). While enhancing the storage capacity of the *chappri* care should be taken to ensure that the clays at the base of these do not get disturbed which may lead to leakage of water.

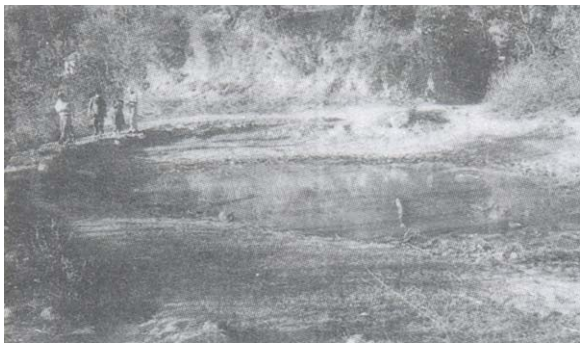


Fig.6 : *Chappri* near Mor village in Khundia

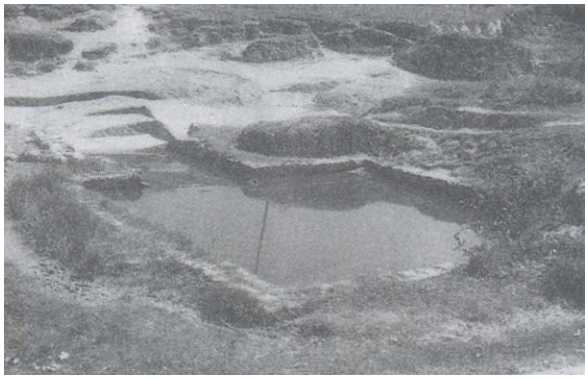


Fig.7 : *Pukki chappri* on a *sappar* near Thill

Khu : At many places in the *Changar* the water table is relatively shallow. It is at these places the subsurface water is utilised for irrigational purposes by digging out wells at specific locations. Water is generally lifted from these wells by load and bucket method. *Khu* are generally stone lined, while the undeveloped wells are called *dungali* (Fig.8). These are traditional dugwells of *Changar*. The traditional genius utilised for locating the depth of the water table could not be traced. In some incidents the water was reportedly struck accidentally and these sites were later developed into *khu* or *dungali*.

Fig.8 : Dungali at Koke-Baggi with load & bucket arrangement to lift the water (The depth of water is 1.8 meters from the surface)

Fig.9 : Bundh to harvest rainwater near Balera

Tank : Tanks are used for harvesting the rainwater and also for storing the diverted water at appropriate locations so it that could be conveniently used for irrigation. These are generally stone and cement lined. At present many farmers are found to use them for storing the water lifted from the nearby channels.

Bundhs : These are generally constructed at the slopebreak in seasonal *nalas* for storing the rainwater for the lean periods (Fig.9). The storage capacity of these structures soon diminishes due to siltation and lack of proper management strategy. Construction of a series of *bundhs* along the slope could store huge amount of water besides enhancing the recharge of the springs in the downstream area.

SOME MORE OPTIONS

In the changed scenario the village community is exposed to many new options that were not known before. There are taps that provide water but the social acceptability of taps in the rural areas is relatively low. People that have access to tap water were observed to collect drinking water from the nearby *bawari* whose water is considered pure. With the growth of technology handpumps are being installed almost everywhere. The water from the handpump is considered pure and is used for drinking purposes. LDPE tanks are also being used to harvest water during the rains. The shallow soil profile and the rocky substratum, however, create problems in the construction of these tanks. Due care should be taken to reduce the evaporation rates from the tanks. Locally available bamboo can be used for this purpose.

On an average there are two *bawaris* and *khatris* in every village. Daily drinking water requirements of the village come around 5040 liters. The two *bawaris* alone can supply 28,800 liters of water daily. Average rainfall in the region is 1200 mm and there are around 18 houses in every village. On an average the covered area of each house is estimated around 40 sq m. If the rainwater on the roofs is harvested with the help of bamboo pipes and collected, it augments the daily supply of water by another 2367 liters. These data show that the villages of *Changar* have a substantial

daily surplus of water that comes to 26,000 liters. There would still be a huge surplus water for routine household needs even after satisfying the animal population of the village. We have not yet added to this surplus the water from other sources like *khatri*, *khu* and others. This excess water can be used for irrigating the nearby fields. This data shows that the ancestors in *Changar* devised a technique that can sustain the entire population without any problem. The problems have been created by the enhanced dependence upon the tap water, breakdown of the social mechanism for the maintainence of the traditional structures and failure to make innovations in the management of the available resources. For a sustainable solution of the water related problems of *Changar* in a cost effective manner the traditional water harvesting structures have to be incorporated in the routine preview of IPH.

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UN SUB-COMMISSION ON PREVENTION OF DISCRIMINATION AND PROTECTION OF MINORITIES (50TH SESSION) : A REPORT

Sharad K. Soni

The UN Sub-Commission on Prevention of Discrimination and Protection of Minorities held its 50th session at the Palais des Nations in Geneva from August 3 to August 28, 1998 to discuss the human rights situation all over the world. The Sub-Commission which was created in 1947 by the Commission on Human Rights comprises of 26 independent experts representing countries from the five regional groups. In accordance with their mandate, the experts are involved in undertaking studies concerning the prevention of discrimination, the protection of national or ethnic, religious and linguistic minorities as well as various other issues related to the protection of human rights and fundamental freedoms. On the basis of its studies, the Sub-Commission futher makes recommendations to the Commission on Human Rights for taking necessary action on the concerned issues. El-Hadji Guisse, expert from Senegal was elected as the Chairman of this session. David Weissbrodt, expert from the United States; Fan Guoxiang, expert from China; and Mignel Alfonso Martinez, expert from Cuba were chosen as new Chairpersons. Ioan Maxim, expert from Romania was assigned to perform the job of Rapporteur.

Opening the meeting, the outgoing Chairman Jose Bengoa, expert from Chile said that processes of globalisation were affecting human rights and the Sub-Commission had to find effective ways to respond. "The Sub-Commission had to look at the central issues that affected the poor and marginalized; it had to devise new mechanisms and open new debates related to global forces and it had to study the progress of democracy and its effect on human rights," he said. He also called upon the panel of the Sub-Commission to continue to review its agenda and to improve the quality of its debates. The Chairman of the 50th session

El-Hadji Guisse in his address stated that peace, economic development and human rights all worked together and depended integrally on each other. He said, "there could not be human rights without peace, and vice-versa, and human rights could not be enjoyed without the benefits of economic development. Meanwhile, economic development could not occur without a situation of peace and respect for human rights." He stressed that the Sub-Commission must strive to make its work practical and effective. This session was also addressed by Ms. Mary Robinson, High Commissioner for Human Rights, who exhorted all to advance the dissemination of the 50 years old Universal Declaration of Human Rights. She said that her office had conducted a study on existing language versions of the Universal Declaration, and as of August 1998, more than 210 national and local language versions and more than 60 audiovisual, pictorial and other versions had been developed. "On 10 December 1998, the office of the High Commissioner for Human Rights would launch a new website, containing more than 250 language versions," she added.

Various issues deliberated at the 50th session of the Sub-Commission included the Realisation of Economic, Social and Cultural Rights and Right to Development; Rights of the Indigenous Peoples; Prevention of Discrimination against and Protection of Minorities; Freedom of Movement including Population Displacement and the Right to seek asylum from Persecution; Elimination of all forms of Intolerance and Discrimination based on Religion or Belief; Promotion, Protection and Restoration of Human Rights at national, regional and international levels; Encouragement of Universal acceptance of Human Rights Instruments; Elimination of Racial Discrimination including the situation of migrant workers and their families; Rights of Women; Rights of Children and Youth; Contemporary forms of Slavery; Adverse consequences of the transfer of arms on the enjoyment of human rights etc. Besides, the Sub-Commission considered communications from governments, non-governmental organisations and other sources dealing with allegations of human rights violations.

Question of the violation of human rights and fundamental freedoms, including policies of racial discrimination and segregation, in all countries, with particular reference to colonial and other dependent countries and territories

This item was among the Sub-Commission's most contentious issues debated at the 50th session. Several Sub-Commission experts as well as representatives and observers from national delegations pondered over the challenges posed to human rights by government efforts to battle terrorist insurgencies.

Sub-Commission expert Soli J. Sorabjee said that terrorism could be a worthy subject of Sub-Commission attention when the panel was making its delicate decisions on what country situations to consider. He said that terrorism caused gross violations of human rights, was brutally damaging to innocent people, and was complex in practice and theory and posed difficult challenges for governments. "Terrorism must not be combatted by counter-terrorism by the State or by brutal suppression of human rights in pursuance of an official policy. Yet it had to be accepted that terrorism did pose special problems for countries," he added.

A number of NGOs also spoke before the Commission alleging maltreatment of minorities. While discrimination aganist several minorities in Pakistan was charged by the Afro-Asian People's Solidarity Organization, the situation of the people in Pakistan occupied northern areas of Gilgit and Baltistan was highlighted by the European Union of Public Relations. Addressing discrimination against the traditional inhabitants of these Northern Areas, the representative of the European Union of Public Relations urged the Sub-Commission and the World Community to force Pakistan to give the Kashmiris of the areas of Gilgit and Baltistan their freedom.

Another NGO, the World Federation of Trade Unions expressed concern that Pakistan had a policy marked by a dictatorial regime and the denial of basic freedoms. Its representative Genei Shinoi said that "the legal and constitutional structures of Pakistan provided for systematic discrimination against minorities. The blasphemy law was internationally

reviled as discriminatory, and under *Hudood* laws, women were treated as second class citizens". He also stated that since 1947, Pakistan had actively engaged in sponsoring terrorism and insurgency and had sought to engender an Afghanistan like movement in Jammu and Kashmir. "A solution to the dispute over Jammu and Kashmir did not lie in rewriting history, nor in changing borders. Rather, to resolve the situation in Jammu and Kashmir, the people of the areas, as well as India and Pakistan, had to recognise the de facto international border that separated them, and had to transform it into a recognized international border," he said.

Thematic Issues Relating to the Elimination of Racial Discrimination

While considering this agenda item, the Sub-Commission had before it a joint working paper (E/CN.4/Sub.2/1998/4) on Article 7 of the International Convention on the Elimination of All Forms of Racial Discrimination (CERD). The working paper was prepared by Jose Bengoa and Mustafa Mehedi, members of the Sub-Commission, and Ivan Garvalov and Shanti Sadiq Ali, members of the CERD. The Convention's Article 7 deals with efforts by States parties to carry out efforts in the fields of teaching, education, culture and information in a campaign to combat prejudices. Reviewing Article 7, the working paper says that while many States parties are aware of their obligations under the article, full compliance has yet to be achieved. It concludes, among other things, that the curricula of public elementary and secondary schools should include elements to develop school children's awareness of basic human rights and their understanding of the basic principles of equality. States parties should put into effect an action-oriented national plan for education and that all levels of society, including national, ethnic, linguistic and religious minorities should also have access to education.

The Sub-Commission had also before it another working paper (E/CN.4/Sub.2/1998/5) on the concept of affirmative action prepared by the Sub-Commission expert Marc Bossuyet. The working paper concluded, among other things, that a Special Rapporteur on affirmative action could be appointed and empowered to request the High Commissioner for Human Rights to contact Member States, international

organisations and NGOs requesting them to send all relevant national documentation on the subject. It also proposed three more questions to be considered, i.e., the relationship between the ban on discrimination and affirmative action; the limitations of affirmative action, and any differences arising in affirmative action according to criteria such as race, sex, language which might differentiate between groups benefitting from such action.

During the discussion on this item, several speakers called for greater respect for the rights of migrant workers and steps to prevent alleged systematic discrimination against them in various parts of the world. A representative of the International Confederation of Free Trade Unions asserted that to break a vicious circle of exploitation and declining wages and working conditions of migrant workers, there must be solidarity among workers and respect for international labour standards. While International Educational Development claimed that racism and xenophobia were behind the United States-backed economic embargoes against Iraq and Cuba, Interfaith International pointed to the incredible massacres in Kashmir and noted with sadness the forced exodus due to persecution of the Pandit community as well as the general rise of religious intolerance in Kashmir.

The **Himalayan Research and Cultural Foundation** (HRCF) too presented its view before the Sub-Commission on this issue. Its representative Firdous Syed stated that despite widespread ratification of the relevant Conventions, xenophobia remained widespread and was a grave threat to human rights. He highlighted that neither the United Nations nor the Commission on Human Rights seemed to be aware of or to care about new forms fostering xenophobia, one of which was the so called *Jehad* on the part of some so-called Muslim *Mujahideen* in some parts of the world. "The *Jehad* had no religious sanctity and was not approved under Islamic tenets, yet divisions were created under it and massacres were carried out in its name," he said. "In Jammu and Kashmir, a *Jehad* was being imposed by Pakistan-groups were being sent there to indulge in looting and massacres of the non-Muslim population; even Muslims who did not agree with these activities were

massacred. The new policy created by Pakistan obviously was aimed at creating xenophobia in the minds of one religious community against another," he added. He stressed that the Sub-Commission must pressurise Pakistan to stop this dangerous trend.

The Realization of Economic, Social and Cultural Rights

As the Sub-Commission took up its annual review of economic, social and cultural rights, it had before it a working document (E/CN.4/Sub.2/1998/6) on the impact of the activities of transnational corporations on the realization of economic, social and cultural rights prepared by the Sub-Commission Chairman and expert, El-Hadji Guisse. Presenting his report Guisse remarked that by operating in several countries such firms [transnational corporations] created conflicts of jurisdiction and state responsibility, caused difficulties with bribery and corruption, and frequently made it hard to decide if the problems created were national or international in a legal sense. He asked how national sovereignty was to be safeguarded in such circumstances, especially in developing countries. The report proposed that transnational corporations should work with States to ensure respect for collective and individual rights and that all mechanisms and practices leading to violations of economic, social and cultural rights should be made punishable offenses with the right of compensation. Guisse also introduced a paper on the right of access of everyone to drinking water supply and sanitation services (E/CN.4/Sub.2/1998/7). The report recommended that a preliminary report be presented to the Sub-Commission in 1999 on the relationship between the enjoyment of economic, social and cultural rights and the right to development, and the question of access to drinking water and sanitation.

The Sub-Commission had also considered an addendum to the final report on the relationship between the enjoyment of human rights, in particular economic, social and cultural rights, and income distribution (E/CN.4/Sub.2/1998/8) prepared by Jose Bengoa. It concluded, among other things, that the growth in the world economy since the end of the cold war has been accompanied by a marked negative distribution of income at both the national and international level, resulting in a concentration of wealth and social exclusion, threatening explosive social

consequences. The study proposed that a social forum be established with the participation of States, international financial institutions, particularly the World Bank and the IMF, international development and cooperation agencies, NGOs devoted to development and action to reduce income discrepancies, especially in the Third World.

There was also a working paper on the realization of the Right to Education (E/CN.4/Sub.2/1998/10) presented by the Sub-Commission expert, Mustapha Mehdi. The paper summarized the current debate between scholars over whether the right to education should be classified as a social right, a cultural right, or whether it is also "linked to the protection of individual freedom." It stated that classifying the right to education as a cultural right does not clarify the issue as "cultural rights are at present in a state of limbo," and "clarifying the notion of cultural right entails a complete re-interpretation of the indivisibility of rights" which in itself poses several logical hurdles. The paper discussed the economic dimension of the right to education and contended that a State monopoly in education is "incompatible with the freedom dimension of the right to education." It recommended that international humanitarian law should be taught simultaneously with civic education.

During discussion on this agenda item, allegations about the predations of transnational corporations (TNCs) and the negative consequences of widening gaps in income distribution were voiced again. Several NGOs charged that the activities of TNCs often violated human rights and, therefore, they called for greater regulation of these firms. The Sub-Commission expert Francoise Jane Hampson contended that States were under an obligation to protect the rights of people within their jurisdictions from violations at the hands of third parties, including transnational corporations and that there could be no effective protection without strong and accountable States which secured a balance between market forces and safeguarding of human rights. She said that States had an obligation to regulate.

Meanwhile, a number of speakers objected to what they said was a lack of attention to development and economic issues as compared to civil and political rights. Prof. Riyaz Punjabi of the **Himalayan Research**

and Cultural Foundation (HRCF) said that the evaluation mechanisms designed by the United Nations to monitor implementation of the right to development were flawed. They were economically specific and by and large ignored the relevance of monitoring conditions that allowed human rights and economic development. Stating that they were also silent about social and political forces which hampered development and ignored the role of mercenaries and marauders who were responsible for economic devastation, Prof. Punjabi pointed to the situation in Afghanistan. Another case was the large-scale violence sponsored by Pakistan for more than eight years in Jammu and Kashmir. "This violence had caused large-scale economic destruction, and it would take decades to rebuild the economy of the region," he said. "Now that political and economic order had been restored to Kashmir, Pakistan was sending mercenaries to disrupt it. These mercenaries carried out massacres almost routinely," he added. He stressed that the Sub-Commission and the international community must bring pressure to bear on Pakistan to stop this infiltration of mercenaries.

The Implementation of Human Rights with Regard to Women

While taking up this agenda item, the Sub-Commission considered a second follow-up report on the situation regarding the elimination of traditional practices affecting the health of women and the girl child (E/CN.4/Sub.2/1998/11), prepared by the Sub-Commission expert Halima Embarek Warzazi. The report noted with regret the lack of replies to a questionaire from Governments, particularly from those most concerned by harmful practices. It called for national and international determination and generosity as the price to be paid for the elimination of traditional discriminatory practices.

During discussion on the topic, the Sub-Commission alternate expert Gay McDougall stated that human rights abuses involving trafficking in women were numerous and extensive around the globe and problems did not end when victims were brought to the attention of authorities, as they often were subjected to further abuse and re-victimization by corrupt officials, or were treated as criminals or illegal migrants. She said that

trafficking had to be battled with a multi-dimensional approach that recognized that the most frequent root cause was poverty. "The primary goal of efforts should be protection of victims' human rights-border control and crime prevention efforts should be augmented with social welfare and victim assistance programmes," she added. Alphonse Macdonald of the United Nations Population Fund (UNFPA) said that within the context of its mandate, UNFPA was supporting concrete actions against specific violations of human rights, and assisted women to stand up for their rights and make better use of existing instruments. Ngozi Ada Maduakoh of the United Nations High Commissioner for Refugees (UNHCR) said that women represented over 80 per cent of beneficiaries of UNHCR programmes and the agency had long recognized that the refugee situation affected men and women differently. He said that UNHCR battled against maltreatment of women in their vulnerable positions as refugees and it also sought to protect them from sexual violence and forced prostitution.

Meanwhile, several NGOs alleged violations of women's rights around the world. Carin Benninger-Budel of the World Organization Against Torture said that violations of women's rights historically had been neglected by international bodies; the Committee against Torture, for example, tended to ignore matters of fundamental concern to women, often because of lack of a gender-sensitive approach. The Taliban was also criticised by several NGOs. Geneva Berryman Arif of Interfaith International said that the Taliban Government of Afghanistan flaunted all 30 articles of the 1979 Convention on the Elimination of all Forms of Discrimination Against Women in their mistreatment of women. "The Taliban gave false theological reasons for imposing what they called strict Islamic law, however whatever religious support was given to such treatment, the basic problem was the protection of the human rights of the female population of Afghanistan. There was no theological foundation for such mistreatment," she said. Urging all governments that were committed to the Universal Declaration of Human Rights and the Convention on the Elimination of All Forms of Discrimination Against Women she said that they should insist that the Taliban change its

policy, and should impose sanction against outside assistance and supply of arms.

Helga Jurt of the European Union of Public Relations stated that growth and development had in many cases created more hurdles than opportunities for women. She said that religion had also played a major role in some countries in preventing women from realizing their full potential as partners in the development process. Noting that the treatment of women in many developing countries was marked by infanticide, dowry death and denial of education, she stressed that awareness was the key to freedom but awareness came from education and exposure to the world and its diversity. "It was this awareness that the Taliban wished to deny women, and it was essential that the women of the world band together to raise their voice against those who sustained the Taliban," she added.

Contemporary Forms of Slavery

As the Sub-Commission began considering this agenda item, it had before it a report of the Secretary-General on the implementation of the Programme of Action for the Elimination of the Exploitation of Child Labour, submitted pursuant to Sub-Commission resolution 1997/22 (E/CN.4/Sub.2/1998/12). The report contained replies received from three Governments on the steps they had taken to implement the Programme of Action. Another report was that of the Working Group on Contemporary Forms of Slavery (E/CN.4/Sub.2/1998/14). Introducing this report, the Chairperson-Rapporteur, Halima Embarek Warzazi remarked that official corruption and widespread use of the Internet for trafficking and sale of children were major obstacles to combatting slavery. The report concluded, among other things that slavery in its various forms is a crime against humanity, and a State that acquiesces to such practices, irrespective of whether it has acceded to the conventions on slavery or any other relevant consideration, was violating human rights. In its recommendations, the Working Group encouraged the General Assembly to consider proclaiming 2nd December as the day for the abolition of slavery in all its forms.

The Sub-Commission also heard the presentation of a report on the contemporary forms of slavery : systematic rape, sexual slavery and slavery like practices during armed conflict (E/CN.4/Sub.2/1998/13) prepared by Special Rapporteur and Sub-Commission alternate expert Gay McDougall. The report noted that ending the cycle of impunity which exists for acts of sexual violence and sexual slavery during armed conflict requires political will and concerted action by the whole international community. Among others, the report specifically recommended that states enact special legislation incorporating international criminal law into their municipal legal systems; that legal systems be capable of adjudicating international crimes and administering justice without gender bias; that victims be protected from intimidation; and that the office of the High Commissioner for Human Rights take the lead in documenting sexual violence in conflict situations.

During the debate, the Sub-Commission registered comments by several of its members that all those responsible for such crimes should be prosecuted – not only direct perpetrators, but also those who created climates or policies that allowed the abuses to occur. A number of NGOs too alleged that slavery still existed in several countries.

Human Rights of Indigenous Peoples

Before opening up a general debate on this agenda item, the Sub-Commission had before it the report of the Working Group on Indigenous Populations (E/CN.4/Sub.2/1998/16), presented by Chairman–Rapporteur, Erica-Irene Daes. The report reviewed the developments pertaining to the promotion and protection of human rights and fundamental freedoms of indigenous people besides examining among other things, standard-setting activities, the evolution of standards concerning the rights of indigenous peoples, and indigenous peoples and their relationship to land. It also considered the establishment of a permanent forum for indigenous peoples and analysed the resources available to the office of the High Commissioner on Human Rights to carry out the work related to indigenous peoples. Introducing this report, Ms. Daes said that this year, the Working Group had chosen to focus

for the first time on the principle theme : "Indigenous peoples, education and language," and it was clear that education and the protection of language were of paramount importance to all indigenous peoples.

A progress report on indigenous people and their relationship to land (E/CN.4/Sub.2/1998/15) which also was prepared by Erica-Irene Daes, was introduced to the Sub-Commission. Ms. Daes stated that the paper was intended to examine the problems linked to indigenous land issues with the aim of contributing to increased understanding between indigenous peoples and States. The report noted that few States responded with comments or other recommendations on the subject, perhaps because of lack of time. However, there had been significant development since the preliminary working paper.

Several non-governmental organizations (NGOs) spoke before the Sub-Commission and urged action against what they said were systematic abuses of the rights and property of indigenous populations around the world. Dambar Bir Thapa of the European Union of Public Relations charged that indigenous languages and cultures were in danger of disappearing in Nepal. He also pointed to the case of Kashmiri Pandits as to how an entire culture was threatened. He said that in this case the threat came because the Pandit community had to flee its native land because of terrorism. "The current Government of Jammu and Kashmir was trying to curb terrorism and allow the Pandits to return, but whenever some did return the terrorists stepped up their activities", he said. "Protecting indigenous peoples required conflict resolution and efforts by Governments and NGOs to preserve peace, stability and tolerance," he added.

Prevention of Discrimination against and Protection of Minorities

While considering this agenda item the Sub-Commission had before it a report of the Working Group on Minorities (E/CN.4/Sub.2/1998/18) on the prevention of discrimination against and the protection of minorities, prepared by the Sub-Commission expert and Chairman-Rapporteur, Asbjorn Eide. Reviewing the promotion and practical

realisation of the Declaration on the Rights of Persons Belonging to National or Ethnic, Religious and Linguistic Minorities at the national, bilateral, regional and global levels, the report examined possible solutions to problems involving minorities, including the promotion of mutual understanding between and among minorities and governments. It recommended among other things, that a pocket edition of Declaration on Human Rights be prepared in the national as well as minority languages. Introducing the report, Mr. Eide stressed that it was not sufficient for minorities to be "allowed" to exercise their rights; they also should be able to "assert" their rights. He opined that the protection and promotion of the rights of minorities would contribute to the political and social stability of States. Later, while addressing the Sub-Commission, Mr. Eide said that it was very important to note that the right to self-determination in UN practice had never been construed as the right of an ethnic group to self-determination. "It was the right of a people to self-determination- it was not an ethnic right, democracy not ethnocracy was the subject," he said and added, "if the right was taken from the point of ethnicity, this would be a tragedy."

Soli J. Sorabjee, Sub-Commission expert pointed out that one of the main causes of human rights violations involving minorities was the persistence and maintenance of certain negative stereotypes about certain minorities. He said that these prejudices were transmitted to the young, sown in the minds of the children, sometimes by parents and sometimes later on by teachers. "The most important thing was that children were brought up in a spirit of understanding, tolerance, friendship among peoples, and respect for freedom of religion or belief of others, as the relevant international instrument said," he stressed. "Although the schools and governments had responsibilities here, the media also had an important role to play."

It was during the Sub-Commission's annual review of the rights of minorities that questions were raised on such issues as how to grant such groups the "right to self-determination" while preserving the territorial integrity of existing States. Several speakers levelled charges of maltreatment of minorities in a number of regions and countries. The

NGOs alleged that a number of countries had violated rights of religious and other minorities and called for action to halt discrimination against minorities around the world. Rene Wadlow of the Association for World Education, charged that blasphemy laws in Pakistan, which could result in death sentences, were being used to control and frighten minority Christians and Muslim reform groups such as Ahmedias. Tatiana Shaumian of International Institute for Peace, regretted that the rights of minorities were not protected everywhere to the extent required by the Universal Declaration of Human Rights. She pointed to an essential political problem that needed to be faced now was how to reconcile two opposite demands: the right to ethnic sovereignty and the insistence on territorial integrity. Paul Beersmans of the International Movement for Fraternal Union Among Races and People, expressed deep concern over the situation of minorities in Jammu and Kashmir. He stated that hundreds of thousands of Pandits had fled because they had become targets of religious cleansing and they were still living in inhuman conditions in camps. He pointed to a new problem that foreign mercenaries had begun a campaign of annihilation of Hindus. "Hundreds had been killed as the mercenaries considered that being Hindu was a crime," he said. "Both the Pandits and Hindus were Kashmiri minorities of long-standing." He urged the Sub-Commission that it must act to stop this discrimination by foreign mercenaries against the minorities of Kashmir.

Meanwhile, Ashok Bhan of the **Himalayan Research and Cultural Foundation** (HRCF) stated that the Indian subcontinent with its vast resources and manpower had been wrecked by intolerance, usually based on religion. "The world was well aware of Pakistan's policies of discrimination and intolerance against Ahmedias, Christians and other minorities," he said. "The blasphemy law was regularly mis-used against minorities; members of minority communities were second-class citizens." He said that it was high time the international community put pressure on Pakistan to introduce laws of modern civilized society and adopt a general policy of tolerance and participation to give minorities a better deal. He further charged that Pakistan also was nakedly indulging in trans-border terrorism and putting pan-Islamic terrorists into the Indian state of Jammu and Kashmir; so far this year hundreds of minority group members in

Kashmir had been killed by these terrorists. "All States must dismantle legal and constitutional strictures that promoted violence and discrimination against minorities," he added.

The Administration of Justice and Human Rights

Under the item on the administration of justice and human rights of detainees, the Sub-Commission had before it a draft International Convention on the Protection of All Persons from Forced Disappearances (E/CN.4/Sub.2/1998/WG.1/CRP.2/Rev.1), prepared by the working group on the Administration of Justice. The draft Convention stated among other things, that the systematic or massive practice of forced disappearance constitutes a crime against humanity. It proposed the establishment of a Committee against Forced Disappearances, composed of 10 independent experts, elected at a biennial meeting of States parties convened by the Secretary General of the United Nations. The States parties shall submit to the Committee through the Secretary General reports on the measures they have taken to give effect to their undertakings under this Convention.

The Sub-Commission also heard its expert and Chairman of the Working Group on the Administration of Justice, Louis Joinet who introduced the report of the Working Group. He was asked to prepare a draft resolution to transmit the Working Group's draft Convention on protection from Enforced Disappearances to the Commission on Human Rights. Later, praising the draft Convention on disappearances as a major achievement, the Sub-Commission expert Asbjorn Eide stated that there were weaknesses in domestic law related to disappearances and something had to be done to release the relatives of disappeared persons from the living hell they endured. He hoped that the Commission on Human Rights would give the draft declaration top priority and that it soon would be adopted. He also stressed that the Sub-Commission should furthermore keep a close eye on the administration of justice as developed by the new International Criminal Court.

Meanwhile, during the debate several speakers called on all countries, who had not yet done so, to ratify the statute of the International

Criminal Court. A number of NGOs alleged serious violations in the administration of justice and violations of the rights of prisoners in several countries. However, they welcomed the draft Convention on Forced Disappearances.

Prof. Kashinath Pandita of Interfaith International, in his statement said that while there was no generally accepted list of international crimes, there was a general agreement on what types of violations of international law could be considered as international crimes. "Crimes against humanity also had to be considered in the light of crimes against peace; the most general name for such crimes would be crimes against the peace and security of mankind," he said. "Some States patronised or even inspired non-government entities and terrorist groups, and many of these entities wore a veneer of religion to find social legitimacy for the international crimes that they committed." He mentioned Central and South Asia as being among the regions where human rights violations were a direct result of international crimes such as genocide and ethno-religious cleansing of targeted groups. "The situation in Tajikistan had arisen owing to frequent incursions made by armed non-government entities," he said. "Similarly in Jammu and Kashmir, externally sponsored non-government entities were perpetrating genocide of the small religious minority community of the Pandits of Kashmir," he added. "A mechanism needed to be evolved to strengthen the mandate of relevant agencies like the International Law Commission and the UN bodies to deal with this menace."

The **Himalayan Research and Cultural Foundation** (HRCF) too put its view on this agenda item before the Sub-Commission. Ashok Bhan of the HRCF highlighted the fact that there was a new breed of violence and crime against humanity-"terrorism" and the fostering of alarm and terror. He stated that the acts of terrorist groups had become a grave concern of the world and the UN, but very little reaction was discernable from the international community in the case of violence, killing, and abuse of human rights of people in various parts of the globe and in particular in various parts of Jammu and Kashmir in India, where Pakistani - sponsored terrorist groups killed innocent people and committed massive violations of human rights. "The terrorists were trained

and funded by Pakistan," he said. "Pakistan deserved to be declared as a terrorist state, and the Sub-Commission was humbly urged to declare so," he added. "Countries must be condemned and censured when they sponsored and encouraged terrorism overtly and covertly."

Freedom of Movement

Under this agenda item, the Sub-Commission had before it a letter (E/CN.4/Sub.2/1998/35) dated 3 August 1998 from the Permanent Representative of Azerbaijan to the United Nations office at Geneva, addressed to the Secretariat of the Sub-Commission. The letter contained information concerning refugees and internally displaced persons in the Republic of Azerbaijan.

Before opening the general discussion on this item, the Sub-Commission in a Chairman's statement on ethnic Nepalese refugees from Bhutan, called for the status and origin of many of the people involved, who had been living within UNHCR - administered camps in eastern Nepal for as long as seven years, to be sorted out by an appropriate verification procedure. For this purpose, the Governments of Bhutan and Nepal were urged to negotiate in good faith towards a peaceful solution consistent with international human rights standards. The statement suggested that the governments involved avail themselves of technical assistance from office of the High Commissioner for Human Rights and the office of the High Commissioner for Refugees so as to facilitate a fair and lasting resolution taking into account representations on behalf of the displaced population and the principles of international law relating to non-discrimination; the right to return, the right not to be arbitrarily deprived of one's nationality; the reduction of statelessness and the fulfilment of economic, social and cultural rights.

The representative of Bhutan, Kinga Singye stated that a lasting solution could be found in dialogue with the Government of Nepal. However, he said that "given its small population, Bhutan was a preferred destination for many migrants from Nepal. It had absorbed many of them but could take in no more." He regretted that the Government's legal attempts to check this illegal immigration had been presented as a violation

of human rights. "Both Nepal and Bhutan wished to resolve the problem through a bilateral dialogue, and Bhutan sought the international community's support for this process," he added.

While Miguel Alfonso Martinez, the Sub-Commission expert felt that standards of human rights as well as international legal standards must be taken into account in dealing with such circumstances, Soli J. Sorabjee, Sub-Commission expert, stressed that the proposal was very constructive and a commendable effort. Praising Bhutan that it had taken positive steps, Sorabjee stated that credit had to be given to that country and Sub-Commission expert Asbjorn Eide. "If such solutions could be found to other situations, it would be good for everyone," he said. The Sub-Commission expert Asbjorn Eide while addressing the meeting stated that the alleged right to unilateral secession usually resulted in population displacement. "Ethnically 'pure' States were a direct violation of human rights and States should recognize the value of ethnic pluralism," he said. Ada Ngozi Maduakoh of the office of the UNHCR said that in a geo-political climate where many refugees were finding it difficult even to reach a country of asylum, it was imperative that the right to seek and enjoy asylum remain the paramount principle for those at risk. He further added that return of refugees was unrealistic unless there were guarantees of their safety and their right to re-establish shattered lives and communities. Sub-Commission expert, David Weissbrodt welcomed the Chairman's statement adopted on the situation of Bhutanese refugees as a positive development and congratulated the Bhutanese Government for the cooperation it had offered in developing the statement. However, reminding that this was the third consecutive year when the situation had been raised before the Sub-Commission, he hoped that a real achievement in the area would remove consideration of the matter from the agenda of the Sub-Commission in future sessions.

During discussions on this item, several NGOs made allegations concerning violations of the freedom of movement in a number of countries. They described human rights difficulties which led to population displacement. Addressing the topic was also the **Himalayan Research and Cultural Foundation** (HRCF). In his intervention, the Secretary-

General of the HRCF, Prof. K. Warikoo urged the Sub-Commission to initiate appropriate steps to examine the role of religious extremism, mercenaries and terrorists in causing forced displacements in parts of South and Central Asia. He drew attention of the Sub-Commission to the devastating consequences of terrorism and religious extremism on the socio-psychological, physical, health and demographic profile of 400,000 displaced Kashmiri Hindu minority. He said that "the extremist and terrorist organisations launched a religious crusade against this ethnic minority and have been publicly taking pride for 'Killing Hindus' in the name of *Jehad*. About 1,500 members of this indigenous minority have been brutally murdered and more that 12,000 displaced Kashmiri Pandits have died due to unnatural cricumstances, mainly due to physical and psychological disorders, after their forced displacement from their homes in Kashmir." This ethnic-religious minority who has been hounded out by the Islamist extremists and terrorists from Kashmir, has long-term implications for the composite socio-cultural set up and secular polity in Kashmir, he added. "Not content with the cleansing of almost entire Hindu minority, the terrorists and mercenaries have even resorted to targetted killings of the few remnants of Kashmiri Pandits who stayed back in the valley despite the terrorist threat looming large." Prof. Warikoo brought it to the notice of the Sub-Commission that just as the Kashmiri Hindus were cleansed out of the valley in early nineties, the Hindu minorities are now being intimidated, threatened and killed in the hilly areas of Jammu region in Rajouri, Doda and Udhampur. "The renewed killings have led to a renewed exodus of additional few thousand people from these mountain areas of Jammu," he said. "All these [and other] spine chilling Sangrampura, Wandhama, Prankote, Chapnari and Doda carnages have been perpetrated by the Islamist terrorists and mercenaries supported by Pakistan, with a clear objective of ensuring that the Indian State of Jammu and Kashmir is cleansed of non-Muslim minorities and the State is not allowed to restore its secular and composite socio-cultural set up, even after the democratic order has been restored there." He stressed that it is high time that the Sub-Commission takes serious notice of such atrocious activities and takes appropriate steps to ensure that States aiding and abetting such activities are taken to task.

Situation Regarding the Promotion, full Realisation and Protection of the Rights of Children and Youth

The Sub-Commission on Prevention of Discrimination and Protection of Minorities heard the Sub-Commission expert Miguel Alfonso Martinez who said that the protection of the rights of children and young people should be kept on the agenda as problems affecting that issue were likely to continue. He underlined that the Working Group on contemporary forms of slavery had considered in its recommendations the link between poverty and ignorance as the essential causes of the contemporary forms of slavery; but the important link between growing economic disparity and contemporary forms of slavery with regard to children and adolescents could not be emphasized enough. He hoped that the Working Group would make recommendations as to how to truly protect and promote the rights of children and young people.

During the general debate on this agenda item, a series of NGOs called for greater efforts to end child prostitution, abusive forms of child labour, and the widespread suffering of children caused by poverty and armed conflict. John Quigley of Franciscans International called for debt relief for developing countries, stating that the heavy payments were exacting a severe toll on the children of poor countries, especially girls who often were pulled from school because their parents could no longer afford even modest educational expenses. Another speaker, A. Kamarotos representing Children of the World Human Rights while drawing the attention of the Sub-Commission on the situation in Afghanistan said that girl children were being denied access to hospital treatment and to education. He regretted that the recent expulsion of humanitarian organisations by the Afghan government would only worsen the situation.

Meanwhile, Dr. Sharad K. Soni of the **Himalayan Research and Cultural Foundation** stated that there were rampant abuses of rights of child in South Asia at the hands of religious extremists, armed terrorists and mercenaries in Jammu and Kashmir. "In blatant violation of the Convention on the Rights of Child and various other legal norms in both human rights and humanitarian law, the armed terrorists and mercenaries sponsored by Pakistan have forced children and youth to enrol themselve

as messengers and conduits for carrying arms and explosives," he said. Youths have been lured and forced to learn to kill by bearing and using arms including several types of automatic weapons. The female children suffer even more in terms of gender violence, sexual abuse and exploitation." Dr. Soni highlighted the fact that Pakistani sponsored terrorist attacks had claimed thousands of lives. This year alone about 200 had been killed, many of them children. Unfortunately not even schools were safe from terrorists and mercenaries, hundreds had been burnt and destroyed and the intent was to force children to attend fundamentalist schools. "The plight of displaced Kashmiri Hindu children and youth, who have been living a life of agony in camps in Jammu and other parts of India, is even worse," he said. "Not only have these children been deprived of their homes and habitat, but also have been segregated from their kith and kin; thousands of them have been orphaned due to brutal murder of their parents by terrorists and mercenaries," he added. He appealed to the Sub-Commission to mount pressure on Pakistan to stop such terrorist activities in Jammu and Kashmir in order to protect and promote the rights of children and youth there.

Review of Further Developments in Fields with which the Sub-Commission has been or may be concerned

Under this agenda item, a number of sub-items were discussed such as Elimination of all forms of Intolerance and of Discrimination based on Religion and Belief; Human rights and Terrorism; Adverse consequences of the transfer of arms and illicit trafficking in arms on the enjoyment of human rights etc.

Sub-Commission alternate expert, Kalliopi Koufa said that insufficient time, the lateness of her appointment by the Commission on Human Rights and a lack of assistance had made preparation of a thorough report on human rights and terrorism in time for the Sub-Commission meeting impossible. However, she offered a few preliminary remarks. She noted that there was still no firm definition of the terms "terrorism" or "act of terrorism" and still no common ground on whether such crimes carried out by armed groups acting outside State control were properly characterized as human rights violations. "Today terrorism was not one

terrorism but many terrorisms," Ms. Koufa said and hoped to grapple with the issue in depth in a substantive preliminary report to be presented next year.

While Sub-Commission expert, Soli J. Sorabjee emphasized that States must avoid indulging in terrorism themselves in the course of battle against terrorist acts, expert Mustapha Mehdi called for international cooperation to combat rising global terrorism. Another expert Asbjorn Eide highlighted the importance of the rule of law in opposing terrorist insurgencies. Francoise Jane Hampson said that rule of law required that those responsible for terrorist attacks needed to be identified, sought out and brought to justice.

Freedom of religion and international terrorism were the main focus of discussions under this agenda item. Several NGOs addressed the issues concerned and put their views before the Sub-Commission. Prof. Kashinath Pandita of the African Commission of Health and Human Rights Promoters said that terrorists had upgraded their tactics and terrorism had spread from one place to another. "Was it not time to move beyond resolutions and take considered measures to combat the menace," he asked. "A major difficulty in the way of an accepted definition was about the wars of national liberation," he added. "Perception had now converged that a struggle leading to disintegration of a State, or challenging its territorial integrity would not be accepted as a struggle for the right of self-determination."

Digamber Bir Thapa of the European Union of Public Relations stated that between 1989 and 1998, nearly 20,000 people had been killed in terrorist-infested Indian State of Jammu and Kashmir, and the killings were the result of support by Pakistan of a group called Lashkar. "The Lashkar mercenaries exulted after they killed innocent people in Jammu and Kashmir and the plight of the Kashmiri Pandits driven from their homes and forced to live like refugees was proof of the effectiveness of this terrorism," he stated. He urged the Sub-Commission and the world community to try the authorities of Pakistan.

Karen Talbot of the World Federation of Trade Unions said that adequate focus on the impact of terrorism on human rights had been

absent because the media and international human rights community had dwelt almost exclusively on the activities of states and had treated terrorists as non-State players. "Romaticism had made the human rights community slow to censure the contemporary terrorists", she remarked. "*The Lashkar-e-Taiba* and the *Harkat-ul-Ansar* would do to Jammu and Kashmir what the Taliban had done to Afghanistan," she added. She stressed that the Sub-Commission should press on international donors of economic assistance to stop giving funds to countries until terrorists groups were disbanded, camps closed and terrorists arrested.

Sybille Rupprecht of the International Institute for Peace emphasized that terrorism assumed a much more dangerous dimension when it became an instrument of state policy used to fulfil political or territorial objectives. She pointed out that today many incidents of this nature could be traced back to one country, Pakistan, which had coveted the Indian State of Jammu and Kashmir since the partition of the Indian subcontinent. "It had used terrorism and insurgency as a policy instrument; the objective of the massacres by the *Lashkar-e-Taiba* was to cleanse the State of Jammu and Kashmir of minority communities so that the terrorists trained and indoctrinated in Pakistan could fulfil their ambition of installing an alien extremist polity in the Indian State," she said. "Pakistan should be called upon to dismantle the terrorist bases and cadres whose existence was a blot on the face of the world."

Keith Bennet of Afro-Asian People's Solidarity Organization drew the attention of the Sub-Commission that terrorists treated the whole world as a killing ground. "It was, therefore, not strange that the *Lashkar-e-Taiba* based in Pakistan called for a *Jehad* against Hindus, Jews and democracy and all things western," Keith said. "The laws of civilized societies were ill-equipped to battle such groups; a new opus of laws was essential to deal with such threats," Keith added. "All had to be careful that the international human rights agenda was not hijacked by terrorist violence."

In his second intervention the Secretary-General of the **Himalayan Research and Cultural Foundation**, Prof. K. Warikoo speaking on the sub-item "Elimination of all forms of intolerance and discrimination

based on religion and belief" emphasized the need for the Special Rapporteur to take note of the social processes which promoted intolerance and encouraged discrimination on the basis of religion or faith. "There are instances where the governments, overtly as well as covertly, promote intolerance and unleash social processes which result not only in discrimination on the basis of religion or faith, but place the very lives of minorities in danger," he said. He pointed to Pakistan where the Blasphemy Laws had given a free hand to the extremists to target the minorities; and the government had refused to repeal the laws despite voices of concern being expressed by the Human Rights groups about the misuse of the laws against the minority groups. "It is a matter of grave concern that ministers and government officials in Pakistan are visiting the *Madrassahs* (the religious seminaries) and bless the managers in their activities," he said. "It is well known that these institutions are the industries to promote religious intolerance and manufacturing the packages of religious extremism; the services of the pupils from these institutions are later utilised to promote religious intolerance and religious extremism not only within Pakistan but also in other countries of South Asia". Prof. Warikoo called upon the international community to put pressure on Pakistan to reverse the process and save the humanity from the onslaught of extremism.

The Chairman of the Sub-Commission El-Hadji Guisse declared the 50th session closed on April 28, 1998. It was clear that the 50th session continued to give increased attention to economic, social and cultural rights. It was in this session that for the first time in its history the Sub-Commission had proposed to the Commission the establishment of a working group on the impact of the activities of transnational corporations on economic rights individually and collectively, as well as social forum to develop discussions in that area. This session also provided an opportunity for the members of the Sub-Commission to adopt a resolution on the establishment of a follow-up mechanism to report on impunity for violations of economic, social and cultural rights. The Sub-Commission had also been asked by the Commission to undertake studies to prepare for the forthcoming world conference against Racism and Racial Discrimination, Xenophobia and Related Intolerance.

BOOK REVIEW

THE POLITICS OF THE ENVIRONMENT

Edited by **Robert E. Goodin**

Edward Elgar Publishing Limited, Hants, England, 1994.624pp.£ 115.

This edited volume is a collection of 25 leading essays belonging to the subject of ecopolitics, covering wide spectrum of themes such as ecophilosophy, ecopsychology, environmental ethics, and politico-legal and socio-economic aspects of environmental action. This volume is equally useful for both the beginners and specialists as it provides an insight into the subject matter and further builds upon it. Dr. Robert E. Goodin, a Professor of Philosophy at Research School of Social Science, The Australian National University, Australia, has been selective, and at the same time quite open minded in enlisting these articles in such a way that they flow progressively and become self explanatory in the process. His preface which can be termed as an introduction with as many as 50 footnotes and a detailed bibliography, aptly puts the 25 essays in the context of contemporary ecological debate worldwide. It also reflects to some extent his own work in this area of research and helps place him in the line of modern eco-thinkers. A collection of such widely dispersed reference material provides the contemporary research scientists an opportunity to further build the subject matter about politics of environment, which has assumed importance in today's life.

This book represents the 25 years of research that has gone into the dialogue over such a vital issue of ecology and environment, in particular, towards evolving a green political theory. The book is mainly divided into two parts : the first part deals with the philosophy of ecopolitics while the second part gives details of various resulting environmental actions.

Part I of this book, 'environmental ethics' contains 10 essays published in the 1970s and 1980s, which was the most vital period for understanding the politico-legal foundations of ecology. Basic issues such as, legal rights of natural objects including that of animals and of the next generations; preserving natural environment, species and wilderness, etc. have been addressed. Similarly areas such as ecomovements, ecofeminism, rational ecology, ecophilosophy, ecopsychology, and

environment law have been dealt in detail, in particular, the process of laying down the foundations of modern and holistic understanding.

Part II, dealing with 'environmental action', includes 15 essays, mostly the universally quoted ones, which have proven to be the milestones in the development and restoration of the science and arts of environmental studies. This section presents an overview of the classic texts referred in this area of environmental research, representing various phases in which such understanding has evolved. On the one hand it deals with basic texts like, 'The Small is Beautiful' or 'The Tragedy of Commons', while on the other, it gives details of the best sellers like, "A Blueprint for Survival" and "The Economics of the Coming Spaceship Earth". Other areas of environmental action which have been keenly included are : environmental crisis, bioregionalism, new social movements, ecosabotage, democracy, technology, economics, economic incentives and conservation, social discount rate and modern global ethics.

In a nutshell, one would realise after going through this book that Dr. Goodin, editor of this book, has provided a very timely reference book to all those interested in environmental issues. By presenting the original texts he has given the researchers an opportunity to frame their own opinion without diluting or making judgments about the whole issue of ecology and the environment. This book is of great importance for understanding the influence of ecological considerations in local and national policies, generally expressed in policies and programmes by incumbent governments of all shades at the global level. The book considers both the living and the non-living resource base with regard to conservation, and also the disadvantages and advantages of alternative courses of action for future generations. It also calls for much more emphasis in conserving natural systems and the resource base, giving greater regard for equity within contemporary society and nations. In total, the book pleads for an integration of ecological, social, political, legal and economic considerations in decision-making.

Dr. P.C. SINHA

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I, Prof. K. Warikoo, solemnly declare that above items are correct to the best of my Knowledge.

Sd/-
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HIMALAYAN AND CENTRAL ASIAN STUDIES is a quarterly Journal published by the Himalayan Research and Cultural Foundation, which is a non-governmental, non-profit research, cultural and development facilitative organisation. The Journal is devoted to the study of various issues pertaining to the Himalayan and trans-Himalayan region in South and Central Asia or parts thereof, connected with its environment, resources, history, art and culture, language and literature, demography, social structures, communication, tourism, regional development, governance, human rights, geopolitics etc.

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