CHAPTER IX

SUMMARY AND CONCLUSIONS

This chapter attempts to recapitulate the major findings of this study on employment, migration and livelihoods in the hill economy of Uttaranchal. An attempt is also made to draw policy implications based on the findings.

I. INCOME AND POVERTY

Uttaranchal came into existence as the 27th state of Indian Union on November 9, 2000 by carving out 13 districts of Uttar Pradesh. The available estimates of net district domestic product (NDDP) for Uttaranchal show a higher per capita income for the state at Rs. 9971 as compared to the national average of Rs. 9288 during the year 1997-98. The higher per capita income for the state is also marked by a comparatively very low per capita income in all the mountain districts, except Nainital and Uttarkashi, ranging between Rs. 6512 in Chamoli to Rs. 8866 in Garhwal district. Growth in per capita income remained almost stagnant in the state during the period, 1980-81 to 1996-97. A noteworthy feature of the growth of per capita income is that though it increased by more than 2 per cent per annum during the 1990s in the state, yet it remained nearly half of the national growth rate. The current low level of development of agricultural and industrial sectors in the state is mainly responsible for such low levels of income in its mountain districts. Agriculture is largely practiced on traditional lines: it is centered on cereal production for self-consumption with hardly any market orientation. There is hardly any significant change in the cropping pattern in the larger areas of mountain districts. Moreover, agricultural development is constrained by the limited geographical area (about 14 per cent) available for cultivation, preponderance of marginal land holdings (less than one hectare), rainfed situations and complete absence of technological applications. As a result the productivity of two major crops, namely paddy and wheat, in the mountain districts is much less than even half that in the plain parts of the state. Animal husbandry is yet another major subsistence activity, which is mainly practiced to
meet milk and draught power requirement apart from providing manure for agriculture. Hill districts are virtually devoid of any major industry. More than half the small-scale industries are located in just three plain districts, viz., Dehradun, Udham Singh Nagar and Hardwar, accounting for about 58 per cent of employment in 1999-2000. The end outcome of such lopsided development is the widespread poverty among the rural households in the mountain districts of the state. Nearly 36 per cent rural households live below poverty line. Furthermore, the commonly applied indicators of poverty do not always reflect poverty or its absence in mountain areas.

II. POPULATION AND LABOUR FORCE
With a population of 8.48 million, Uttaranchal accounts for 0.82 per cent of the population of India. Distribution of population in the state is highly skewed as 46.7 per cent of its population resides in three plain districts of Hardwar, Dehradun and Udham Singh Nagar. It is one of the few Indian states which witnessed a faster deceleration in the growth of population particularly since 1981. The deceleration has been more pronounced in the mountainous districts. Almora and Garhwal witnessed a three-fold decline in the growth rate of population during the decade, 1991-2001 as compared to earlier decade, i.e. 1981-1991. The faster deceleration in the growth of population in these districts has been due partly to a decline in the birth rates and partly to high out-migration, especially of males, from these districts. This is clearly reflected in the very high sex ratios in the mountain districts (ranging between 1017 to 1147), which too tended to improve over the years.

Uttaranchal ranks 9th among the Indian states in terms of literacy with more than 72 per cent of its population being literate. The growth in literacy rate in the state has been sharper with the onset of the eighties, particularly in the case of females. The inter-district disparities in the level of literacy attainments declined in respect of both the sexes in the decade, 1991-2001. The state also witnessed a rapid growth in its secondary and higher education as reflected in the growth of its relative index of enrolment. This strong human resource base of
the state can be transformed into human capital by providing market oriented education and training with minimum efforts. Though technical education grew rapidly in the state, it is marked by underutilisation of its sanctioned intake capacity. Moreover, technical education in the state lacks orientation towards creation of skills that are in demand in mountain areas.

One of the distinguishing features of the state is its higher labour force participation for females (35.9 per cent) as compared to the national average (30.2 per cent) and lower for males (46.1 per cent as compared to 54 per cent). These differences are more pronounced in rural areas. LFPRs declined both in Uttaranchal and India, but there has been a significant decline in LFPR in the former (by about 9 percentage points) during the 1990s. This has been true for both the sexes. High participation of females in education, higher male out-migration as reflected in increasing sex ratio during the 1990s and withdrawal of females from agriculture-related works are the factors attributed to the decline in LFPRs in the state. Nearly 40 per cent of the population of the state is in the work force. This emerges both in NSS and Census data.

III. ASSET BASE

Our survey data show extremely limited asset base for rural households which ultimately shapes the pattern of their livelihoods. Owing to the absence of modern technological applications, the effective use of their asset base is further constrained by the inaccessibility and fragility of mountain areas. Land, for example, a major source of livelihood for an overwhelming majority of workforce in rural areas, is a scarce asset in the mountain region of Uttaranchal. More than 80 per cent households own land holdings of less than one hectare each and more than 36 per cent households own even less than 0.5 acre land. Another one-tenth households are landless. Livestock, which mainly covers milch, draught and other animals like goats and sheep, is mainly practiced to support crop production and meet the milk requirements of the households. Poor households tend to retain a proportionately larger number of milch animals to be able to augment their livelihoods. Accessibility to the market encourages rural
households to make large investments on milch animals, these being mainly demand driven. The livestock suffers from poor quality with low milk yield. Due to limited availability of land, most of the households are faced with the problem of fodder shortage, which in turn also discourages them from maintaining a large number of milch animals. An overwhelmingly large number of households do not own any non-farm implements as there are hardly any manufacturing and processing activities in the mountain villages. Here again, only well-off households and those located in peri-urban areas make the highest investments in non-farm assets. The poor physical asset base of rural households is combined with the high levels of literacy (about 80 per cent) whereby nearly one-fourth of the sample population is educated up to high school and above. Moreover, the educational attainment of the population is significantly influenced by their socio-economic characteristics. This is evident from the fact that the highest level of illiteracy coupled with lowest percentage of educated are found among SCs, casual wage labour and ultra-marginal land owing households.

IV. EMPLOYMENT AND UNEMPLOYMENT
The Census data show an absolute decline in the number of main workers both males and females in Uttarakhand from 2155 thousand in 1991 to 1969 thousand in 2001—i.e. by 186,000. Taking both the main and marginal workers, their growth halved from 2.3 per cent during the decade, 1981-1991, to 1.1 per cent during the decade, 1991-2001; the growth being even less than half per cent in most of the mountain districts. This only suggests the deteriorating employment opportunities in the state.

According to 2001 Population Census, agriculture employs 58 per cent of the workforce in Uttarakhand. It employs nearly 72 per cent of workers in rural areas of the state. Gender-wise, 88.5 per cent of female and 59 per cent of male workers are employed in agricultural sector. The NSS 55th Round data for the year 1999-2000 show that more than 82 per cent of rural workers are employed in agricultural sector in Uttarakhand and that no major shift has taken place in the overall structure of employment during the past 20 years. However, there has
been a shift in the structure of male employment, and more so among the rural males. The Census data also shows a major shift of rural male workers in favour of rural non-farm employment. Thus, rural non-farm employment is mainly the domain of males with limited access to female workers in the state. Self-employment is the predominant mode of employment as over three-fourths of the workforce is self-employed. In other words, opportunities for casual wage employment in the state are extremely limited.

The survey data show that about three-fourths of the non-migrant workforce in the sample households is engaged in agriculture and allied activities for sustaining their livelihoods while the remaining one-fourth workers are employed in rural non-agricultural sector. The survey data reconfirms the excessive polarization of the workforce between the two sexes, as females alone constitute nearly 74 of the workforce engaged in agriculture whereas males constitute more than 92 per cent of non-agricultural workforce. This kind of highly 'gendered' allocation of work is a result of the 'risk averting' strategy by a household, which prepares its male workforce for taking up more remunerative work outside agriculture and leaving the primary responsibility of cultivation to its female members. In effect, the high incidence of out-migration among male workforce (about 27 per cent) is the culmination of such a household strategy for sustaining their livelihoods. This tendency is becoming more pronounced over the years. With the result that today over 53 per cent of male youth workforce earn their livelihood through out-migration. In all, out-migration provided 18 per cent of employment for rural households in mountain region of Uttaranchal. Resultantly, the sample data show a significant shift of about 13 per cent points in the structure of employment in rural households in favour of non-farm activities over a decade, which is not reflected in both the NSS and Census data.

About 28 per cent workers are illiterate and another 24 per cent possess education up to the primary level. Nearly 28 per cent workers are educated (high school and above). A noteworthy feature of the educational level of the workforce is the very poor educational attainment of those working as self-employed in the agricultural sector as more than 40 per cent among them are illiterate. It is
observed that educational attainment is mainly instrumental in facilitating a shift from farm to non-farm employment, particularly in self-employed ventures.

1. Multiple Employment
Apart from higher work participation rate, resorting to multiple employment is yet another important feature of rural Uttaranchal as more than 58 per cent principal workers (excluding regular) are engaged in secondary gainful activity. The extent of multiple employment is very high among the principal male workers as compared to their female counterparts—71 per cent male and less than half female workers being involved in multiple employment. Among male workers, about one-fifth of the primary workers are engaged in more than two activities. The extent of multiplicity is highest among casual wage labourers and those self-employed in petty trade and business as more than 75 per cent and 70 per cent among them are also engaged in more than one occupation, respectively. This also shows that trade and business is being pursued as a survival activity. At the same time, poorest are constrained to take up multiple occupations. Clearly, the factors that largely determine the extent of multiplicity of activities among workers include their poor asset base, bigger household size and low level of per capita income.

2. Diversification in Rural Employment
About 26 per cent of the rural non-migrant workforce is employed in rural non-farm activities, which is mainly a male domain. The regression results confirm our hypothesis that diversification of rural workers from farm to non-farm sector is mainly a ‘distress-led phenomenon’ as the size of workforce in rural non-farm activities tends to decrease significantly with the increase in farm income. Similarly, once a household starts receiving remittances of a sizeable amount, it tends to gradually withdraw from the subsistence rural non-farm activities. At the same time, improvement in the educational levels of workers has significant impact on their diversification towards non-farm activities. Also, proximity to the urban centers has a significant positive impact on the diversification of workforce from farm to rural non-farm activities.
3. Unemployment and Underemployment

The incidence of open unemployment in Uttaranchal is marginally low at 2 per cent as compared to that for India at 2.4 per cent. However, open unemployment in the state is a male specific phenomenon. In rural areas it is almost double that at all-India level at 3.9 per cent. Unlike the national pattern the incidence of unemployment in the state is comparatively higher among rural males than urban males. This is so despite the sizeable proportion of out-migration of male workers. Thus, the major problem is the lack of regular employment opportunities and the high incidence of underemployment in terms of unutilized labour time and inadequate levels of income despite higher work participation, particularly in the case of rural female workers.

Our sample data show 3.1 per cent of male and 1.8 per cent of female labour force as unemployed according to their usual status. However, according to the usual principal status, about 15 per cent of male and 3.2 per cent of female labour force is unemployed, an overwhelmingly large majority (92 per cent) among them being youth (15-29 years). The incidence of unemployment is almost double (17.5 per cent) among those with high school/higher secondary education as compared to those with educational level upto middle standard (9.6 per cent). It is highest (24.5 per cent) among graduate labour force. More importantly, the incidence of unemployment is lowest (7.5 per cent) among those with technical education. Nearly 42 per cent of unemployed are registered in employment exchanges. It emerged significantly that the relatively better-off persons can afford to remain unemployed for a comparatively longer period. In all, a large majority (nearly 70 per cent) unemployed suffer from a 'severe' unemployment syndrome as they remain unemployed for more than nine months in a year.

The extent of underemployment is quite high among the rural households in the mountain region of Uttaranchal despite a large proportion of workers being engaged in multiple gainful activities. As many as 48 per cent of non-migrant workers remain underemployed during a year. The extent of under employment
is particularly striking in the case of male workers (56 per cent). The duration of underemployment is higher among male workers, who remain without work for over two-thirds of days in a year. In the case of female workers, it is observed that they work continuously during the whole year in one or other activity and in activities other than agriculture. On an average they work for 13 hours during peak agricultural season and about 10 hours during the lean season.

Public employment generation programmes could hardly help in ameliorating the problem of underemployment owing to their extremely limited coverage and intensity. On an average, about 22 days of employment could be provided to each beneficiary household under the wage employment programmes of the government during a year preceding the survey.

V. MIGRATION
The analysis brings to fore the fact that the increasing population pressure without commensurate increase in employment opportunities has compelled able-bodied youth males to out-migrate to eke out their livelihood and to support their families left behind. As a result, nearly 42 per cent sample households have at least one out-migrant worker.

The results of Logistic Regression show that probability of migration among household members is significantly higher among those households which have relatively better educated population and higher percentage of principal workers than other households. The probability to out-migrate is highest among upper caste households than the Scheduled Caste households. In fact, they have also a basic economic reason to migrate. These groups have the necessary resources to meet the cost of migration, while the poorest have neither the capacity nor necessary education and skills to take up a job on migration. In fact, a significant positive impact of education on out-migration lends credence to the above contention. Another important finding is that improvement in agricultural income of a household significantly reduces the probability of out-migration of its labour force. It is found to be significantly low among those households, which have a high degree of crop diversification in
favour of commercial crops. The results of multiple regression also reconfirm the nature of impact as is observed in the case of Logistic Regression.

Essentially, out-migration is largely of a semi-permanent, male selective and oriented towards urban destinations. More than half the migrant workers are youth (15-29 years), the mean age at migration having marginally increased over the years. An improvement in the educational levels of the population, the high pressure of population on cultivated land, general economic backwardness and sheer economic necessity are mainly responsible for a larger part of migration from among rural households in the mountain region of Uttaranchal (accounting for 60 per cent of migrants) as the region lack employment opportunities, mainly for its educated labour force.

In so far as the effects of migration on households’ income are concerned, it significantly improves household income by more than 25 per cent. However, since more than 70 per cent migrant workers are employed in low paid informal sector salaried jobs, their capacity to remit larger sum is severely restricted. By and large, migration has definitely increased income levels of migrant workers. More than half among them witnessed a five-fold or more increase in their income. Production loss due to migration is not found to be significant because despite migration households have enough workers (mostly females and children) to get the maximum yield from the land they possess. This has not been true for those areas that have larger area under commercial crops. Moreover, per acre male labour input in mountain farming is much less than that in the case of females even in respect of non-migrant households. Thus, migration results in net benefits of a significant magnitude to the households sending out-migrants. This is so even when only regular cash remittances are taken into account not accounting for accumulated savings of return migrants.

Another distinguishing feature is the increasing tendency among workers to migrate out along with the family once income level and service conditions of migrant workers improve. These migrants who constitute nearly 38 per cent of all migrant workers generally leave their old parents behind in their villages. Many
locked houses in the mountain villages in Uttaranchal is yet another testimony of such type of out-migration.

VI. DIVERSITY IN LIVELIHOOD OPTIONS

It is found that a large majority of rural households (more than 80 per cent) undertake at least three activities/occupations to support their livelihoods in the mountain region of Uttaranchal. The number of multiple occupations, however, is least among the very poor as well as very rich households for altogether different reasons. Owing to the large number of multiple livelihood sources, there is not a single major source of income for at least 40 per cent of households that could alone contribute more than half the income for a household. This only shows the vulnerability of rural households to risks of failure of any source of their income.

The index of livelihood diversification shows that livelihoods of rural households are highly diversified in the mountain region of Uttaranchal. This also establishes the inability of a single livelihood source for providing adequate livelihoods to rural workforce in the mountain areas. There are nearly 60 per cent rural households whose livelihoods though are highly diversified yet able to fetch very low incomes for the households—less than average per capita annual income of Rs. 8890. They simply diversify their livelihood sources as a coping strategy to meet their threshold income levels. However, diversification in livelihoods has benefited at least one-fourth of the sample households by significantly improving their per capita income levels. This kind of diversification is greatly facilitated by their better resource endowments like educational attainments, land and non-farm productive assets. It has also been observed that livelihoods are comparatively less diverse both in poor and rich households. The poor are constrained to diversify their livelihoods owing to their poor asset base. Though labour is the only major asset for them, it is unskilled with very low educational attainments, which bring low returns. The rich do not need to diversity as the single activity, most often cultivation, fetches sufficient income.

The income inequality is also quite evident among the rural populations as the lowest 40 per cent population shares less than 15 per cent income. This is
also seen in high value of Gini coefficient of income distribution at 0.45. Income inequality perpetuates further with the increase in per capita income.

In brief, much of the diversification in rural livelihoods is a coping mechanism for a larger section of the rural population that could not result in any significant impact in improving income levels. Though diversification in livelihoods through migration could to a certain extent ameliorate income of households, the fact remains that its overall impact on regional economy is not pronounced as it hardly helped to promote investment in local resources except by way of providing limited support for education of children, and enabling the purchase of land and building/renovation of houses.

It merits mention here that the factors that significantly contribute to income levels are availability of land, productive assets, educational attainment of the labour force, and location of a household in terms of access to markets and road networks. It is found that diversification of traditional cereal-based agriculture into commercial crops such as fruits and vegetable production offers enormous potential for improving both employment and income levels provided it is supported by infrastructure like roads, markets, etc. This has also significantly reduced out-migration of youth male labour force.

Our analysis leads us to conclude that rural areas in the mountain districts of Uttaranchal present a special case of a rural economy reeling under the penumbra of backwardness trapped in low level equilibrium, with hardly any linkages for expansion. Its resource base is low and even that has not been adequately harnessed towards creating an expanding productive base within the region. Households undertake multiple activities through diversifying within farm, off-farm and non-farm activities. The end result is highly diversified livelihoods each of which make a crucial contribution to household incomes. Contrary to the general view, our analysis leads us to conclude that livelihoods of the poor are least diversified, as they do not own any productive asset other than their labour. They are unable to migrate owing to their lower educational endowments, which reduce their chances of securing jobs. Also, the cost of migration is too high for them to bear, given their meager incomes. In fact, this is the main reason for their
poor income levels. The marginal land holding households rather have more diversified livelihoods.

The moot question is: why do people diversify their livelihoods. Is it simply because this provides a coping mechanism to augment household income to minimum threshold level or to enhance the existing income above the threshold level? Does it lead to an increase in household incomes to any significant proportion? It has been proved that more diverse livelihoods do not necessarily help to improve per capita income levels. In fact, for nearly 60 per cent households, diversification is a mere coping mechanism that reduces their risks associated with very low income of a single livelihood option. On the other hand, there are a significant percentage of households with larger land holdings (nearly one-fourth) which diversified their livelihoods not out of sheer economic necessity but in order to increase existing income levels so as to minimize the risks of an uncertain future. Their comparatively better resource endowment including higher educational levels enabled them to do so.

For supporting livelihoods, migration is a widespread strategy adopted by rural households—both rich and poor in mountain districts of Uttaranchal. A distinct feature of migration from rural areas of mountain districts of Uttaranchal is its being urban destined, male-specific and of a semi-permanent nature. The relatively low propensity to migrate among the poor contradicts the common finding of many studies on migration that poor and landless tend to migrate proportionately more than other population groups. In most of studies, migration of labour from rural areas is generally treated as a survival strategy as these areas lack employment opportunities. In Uttaranchal too lower resource base and the general economic backwardness of the state has been predominantly responsible for migration. It can therefore definitely be said that migration is a mere survival strategy for a majority (nearly 60 per cent) of migrant workers who belong to the lowest three income strata households. One factor that generally remains unnoticed is that a significant proportion of migration also takes place for the economic betterment. The common strategy of such households is to migrate for acquiring higher education, which in turn enables the migrants to secure
better employment. There is at least one-fourth of such migration from the rural households of Uttaranchal.

Though migration has resulted in many-fold increases in income of the migrant workers, the consequent flow of remittances to the mountain region could hardly bring a significant upward shift in the income class of a migrant household. Thus, remittances do not account for a major share of the household income. However, they provided crucial support to such households in sustaining their consumption expenditure. But remittances account for a small share of investment in agriculture, housing and education of children. In view of the changing pattern of migration—from temporary to permanent and single to family migration—remittances are unlikely to continue to flow in as in the past. This is clearly borne out from the least propensity to remit among highly educated and permanent migrant workers. At the same time, if the migration process continues unabated it will not only drain the educated manpower but also add further to the underdevelopment of mountain region of Uttaranchal.

VII. COMPARATIVE ADVANTAGE BASED OPTIONS: NEED TO IDENTIFY AND SUPPORT

In conclusion, the basic problem of mountain districts of Uttaranchal is not primarily that of unemployment per se but of low productivity and income on account of underdeveloped economic base and virtually stagnant character of the economy. The development policy should exclusively focus on initiating a development process that can unlock the present deadlock of economic backwardness, which in turn can improve the livelihoods of population in the mountain districts of Uttaranchal. Given the mountainous terrain, high degree of inaccessibility and environmental sensitivity of the natural resources, a highly diversified pattern of economic activities is neither feasible nor sustainable for the production of goods that are more economically produced by better endowed plain areas. Clearly, the development strategy therefore needs to focus on commodities and services in which mountain areas have a comparative advantage (Papola, 2003). In this context, the first ever Five-Year Plan (Tenth) of
the state has rightly identified agricultural diversification, tourism, and information technology as the key sectors for injecting and accelerating growth in the state.

It is increasingly being realised that comparatively low per capita cultivated land, characterized by preponderance of marginal land holding size in mountain areas of Uttaranchal will have to play an important role in sustaining the livelihoods of mountain farmers through diversification of subsistence agriculture into a market and demand-based production system. There is a great potential to diversify agriculture into horticulture, vegetable production, floriculture, soybean, and medicinal plant production. It has been clearly established in our study that the diversification of traditional cereal-dominated agriculture into commercial crop production such as fruits and vegetable production has a greater potential to support and sustain rural livelihoods. Case studies on agricultural diversification have amply shown how farming of high value crops has increased food security and employment thus improving the living conditions of mountain people (Sharma, et al., 2001; Badhani, 1998). They also show that accessibility to the wider market network coupled with strong R&D institutions are critical to the commercialisation of subsistence agriculture through the production of high value crops. Some key preconditions for diversification of agriculture are as follows:

(i) Availability of infrastructure, both physical and institutional, at the local level (e.g., irrigation, road, rope ways, post-harvest technology, power, storage, marketing infrastructure, modern communication facilities, extension services, etc.);

(ii) Access to support services (e.g., credit, agricultural inputs, technologies, training, marketing support and information);

(iii) Improved access, particularly of marginal farmers to markets and knowledge about comparatively profitable products and functioning of product markets

(iv) Availability of foodgrains at affordable prices; and

(v) Safeguards against ecological problems (e.g., land degradation, pests/diseases, overexploitation of natural resources, and endangered biodiversity).
All these need strong government support. At present productivity level of commercial crops including fruits and vegetables is very low in the state as compared to other hilly states like Jammu & Kashmir and Himachal Pradesh. The productivity levels can be improved through use of high yielding seeds and plants, rainwater harvesting for irrigation, and watershed development.

In regions where it is neither feasible to grow high-yielding varieties nor desirable to resort to the diversification of crops, value addition to the existing produce could be an acceptable option. For example, hills are natural habitat for growing crops like finger millets, barnyard millets, amaranthus, buckwheat, etc. These crops are rich in various nutrients and can be used as health foods after making a number of products. These need to be supported with more research on their uses and market networks.

The biggest constraint in agricultural development is the extremely limited per capita land available for cultivation (accounting for only 13 per cent of geographical area). There is a scope for bringing another 7 per cent of the geographical area, which include cultivable waste and fallow land, under cultivation with its proper development. The area can be leased out among the economically weaker sections. Considering the fragmented and marginal farm holdings of the majority of farmers, state government could take proactive steps to consolidate farm holdings in order to realize economies of scale.

Since Government of Uttaranchal is focussing on promoting diversification of agriculture in mountain region it is likely to offer a great potential to develop agro-based and food processing industries. This should improve livelihoods of rural population. There is a need to promote investment, both domestic and foreign, in food processing industry. Government should provide assistance towards establishing small and medium size agro parks which will provide a common infrastructure for storage, processing and marketing, thus ensuring that surplus fruits and vegetables do not go waste. The development of food processing industry should be integrated with the development of agriculture.
Tourism is another sector which is being regarded as a very high potential activity for sustaining livelihoods in Uttaranchal on account of the natural beauty, healthy climate, diverse and interesting terrain, high mountains, unique biodiversity and cultural diversity. The Tourism Policy of the Government of Uttaranchal, which was announced soon after the formation of the state, identifies pilgrimage, cultural tourism, heritage, eco-tourism and adventure tourism as the potential sub-sectors. In so far as the contribution of tourism towards improving and sustaining the livelihoods of people is concerned, it varies depending on the type of tourism being promoted and the capabilities of the local people to take advantage of employment and income opportunities offered by it (Sharma, 2000). Basically, the promotion of tourism contributes towards improving the livelihoods of people by (i) generating (a) direct employment both within the industry and related industries/activities such as transport, guiding tourists, pottering, hotels, restaurants and eateries, and (b) indirect employment through the production of items of tourist use and interest such as food articles like, meat, eggs, vegetables and handicrafts, thus ensuring a better realization of income from these activities; and (ii) providing a boost to infrastructure, that also improves accessibility, communication and market information and marketing in respect of the products of the tourist areas. Most of the tourism activity in Uttaranchal is of religious and seasonal nature, which has little impact on the livelihoods of the local people as it is highly dependent on imports from plain areas and does not use much of the transport and services within the state. Resort tourism has the potential for generating some local employment through construction activities, and also in menial jobs. If based on natural resources, it has the potential for providing sustained employment and income opportunities provided the linkages and arrangements are suitably planned. It also has the potential for stimulating the demand for local agricultural, horticultural and livestock products. New forms of tourism systematically planned for areas of ecological interest and rural settlements have shown to have the highest positive impact on the livelihoods of the people in the local communities. It is significant to note that ecotourism, which focuses on nature and biodiversity as items of tourist
interest, and conservation have been successfully practiced in many areas and has large potential for development in Uttaranchal (Papola, 2003).

The major challenges, therefore, include augmentation of infrastructure facilities with particular focus on improving air, rail and road connectivity, and development of new tourist destinations. Enhanced private partnership in developing tourism is equally important. Like-wise, an aggressive and well-planned publicity and marketing strategy are essential to promote tourism. Promoting active participation of local communities is of utmost importance. Another important aspect of tourism is to develop a cadre of trained people at the local level who are knowledgeable about the local mountain environment and can provide quality services to tourists while promoting the local, cultural identity and who can make a positive contribution towards preserving the environment.

VIII. HUMAN RESOURCE DEVELOPMENT: NEED TO LINK WITH POTENTIAL LIVELIHOOD OPTIONS

For achieving higher levels of economic development and secured livelihoods human capital development, undoubtedly, has been found to be a major contributor. No other approach to development based either on physical infrastructure development, capital investment or induction of technology has been found to be successful unless accompanied by the development of human capital, particularly education with a focus on the development of technical skills, enterprise and organisational capabilities, and the introduction of health improvement measures. Uttarakhand enjoys the advantage of high level of literacy and education of its population, which has improved tremendously as compared to the national average after the 1980s. Presently, there are nearly 30 per cent educated (high school and above) persons in the population. But the economic backwardness of mountain districts has resulted in a growing outflow of human resources resulting in a drain of human skills from the region. Our results show an abysmally low proportion (less than 2 per cent) of persons with technical education and skills in the workforce. Therefore, greater emphasis needs to be accorded to the promotion of technical and vocational education with more mountain specific orientation with a view to improve the employability and
productivity of the labour force. In particular, there is a need to improve the education and skill levels of the female workers who outnumber males in the workforce in the rural areas of the mountain region of Uttaranchal, and suffer from gender discrimination, almost in every sphere of activity—be it education, health, nutrition, work, mobility, decision-making, etc. More than 95 per cent among them are employed in cultivation and animal husbandry. Thus the immediate task of the state government should be to initiate measures aimed at promoting their productivity. They need to be given reasonable education and technical skills for appropriating their farm incomes. Apart from this, improvement in their technical skills would enable them to diversify their occupation. Needless to emphasise, if concrete improvements in the rural educational system do not occur apace in the mountain areas, the rural labour force is bound to suffer further in the labour market.

These in turn will entail (i) restructuring of the existing education programmes as well as institutions for technical and vocational education and training, particularly at ITI and polytechnic level; and (ii) ensuring participation of a larger proportion of students in vocational and technical courses, particularly of women who form the backbone of the mountain economy of Uttaranchal. To meet the challenge of a switch over from a subsistence to market oriented economy, a great deal of effort would be required to impart training in entrepreneurship development, management of enterprises and marketing on a larger scale. Both government and developmental non-government organisations, can ensure larger participation of various population groups, particularly women and Scheduled Castes in improving their skills.