

INCLUSIVE GROWTH IN HILLY REGIONS: PRIORITIES FOR THE UTTARAKHAND ECONOMY*

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ABSTRACT

In the recent past, the focus of economic policy in India has shifted to issues of equitable growth. This implies that the economy should not only maintain the tempo of growth but also spread the benefits of growth to all sections of the population and geographical regions of the country. This change in approach is particularly important for the hilly regions of the country, as they constantly struggle with underdevelopment, even when the rest of the economy is doing well. This paper analyses the problems of a relatively new state in the hills, Uttarakhand, and particularly the reasons for stagnation in the hilly regions of the state. It also examines the policy priorities that can enable the state to achieve inclusive growth.

Key Words: Inclusive growth, Uttarakhand economy, Infrastructure, Horticulture, Tourism

1. Introduction

There has been a significant shift in the focus of economic policy in India in the last few years, with issues of equitable growth getting more importance. This is clearly revealed in the change in the Planning Commission's perspective – from 'high growth' during the

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Tenth Five Year Plan to 'inclusive growth' in its Approach Paper to the Eleventh Five Year Plan. This implies that the economy should not only maintain the tempo of growth but also spread the benefits of growth to all sections of the population and geographical regions of the country. This change in approach is particularly important for the hilly regions of the country, as they constantly struggle with underdevelopment, even when the rest of the economy is doing well. This paper analyses the problems of a relatively new state in the hills, i.e., Uttarakhand and particularly the reasons for stagnation in the hilly regions. It also examines the policy priorities that can enable the state to achieve inclusive growth.

The state of Uttarakhand is bounded by Nepal in the east, the Tibet Autonomous Region of China in the north, Himachal Pradesh in the west and Uttar Pradesh in the south. The total geographical area of the state is about 53,483 sq. km. According to the Census, the state's population was 84.89 lakhs (8.5 million) in 2001. Uttarakhand was carved out of Uttar Pradesh and given an independent status as the tenth Himalayan state and the twenty-seventh state of the Indian Union on 9th November, 2000. Formation of this state was a long-standing aspiration of the people of Garhwal and Kumaon as this would accelerate the pace of socio-economic and human development. The state has been created with the inclusion of 13 districts of undivided Uttar Pradesh. It is further divided into 49 sub-divisions and 95 development blocks in order to ensure rapid human development through effective administration. There are 15,638 inhabited villages and 86 urban settlements in the state.

Uttarakhand is primarily a mountainous state with only about ten percent of its total geographical area in the plains. Of the thirteen districts, Haridwar, Udham Singh Nagar and some parts of Dehradun and Nainital districts are in the plains, while the remaining areas of the state are hilly. Further, with more than three-fourths (78 percent) of its total population dependent on agriculture for livelihood, the economy of Uttarakhand is predominantly dependent on mountain agriculture. However, the scope for agricultural policies based on modern input-intensive agriculture is severely constrained in the hilly regions of this state due to various physical, geographical and environmental problems.

This has resulted in the majority of the rural population in the hills either surviving on subsistence agriculture or migrating to other parts of the country for employment. In the face of such economic backwardness in the rural mountainous areas of the state, generating remunerative livelihoods in these areas is the only way to fulfil the objective of pursuing an inclusive growth strategy in Uttarakhand.

A policy framework to generate inclusive growth for a state like Uttarakhand has to be consistent with the geography of the area. In other words, policies that might give successful results for any other state in India situated in the plains, may not prove to be fruitful in this hilly state. Moreover, the peculiarity of the geography implies that only a few specific sectors have growth potential in these backward areas and the policy framework has to focus on these sectors primarily. For example, sectors like horticulture (both fruit and vegetable cultivation) have a comparative advantage in the region due to its agro-climatic conditions. Similarly, given its natural resources and scenic beauty, the hilly regions are ideally suited for the development of the tourism sector. Most importantly however, the chances of success in these specific sectors will depend on the development of physical and social infrastructure. Thus the inclusive growth policies must emphasize the development of these sectors in the hilly regions of the state.

In the current milieu of economic liberalization and market reforms, the policies for inclusive growth have to be based on an active participation of the private sector in these areas. The policies for the targeted sectors must try to encourage market-led growth strategies, wherever possible. However, the private sector is usually reluctant to enter into areas like infrastructure, partly due to the public utility nature of these projects, and partly due to the long gestation periods involved. The state has to play an active role in these areas, sometimes through the public sector and sometimes in the form of public-private partnerships.

There is another very important area that needs intervention of the state and that is environmental degradation. The ecology of the area is already in a fragile state due to unplanned development in the past. There is a chance that rapid development without due

recognition of this problem may lead to the destruction of the natural resource base of the area. Since the livelihood of the weaker sections in the hill areas is completely dependent on these natural resources, their destruction will make the process of inclusive growth unsustainable in the long run. Thus the state must ensure that the growth process in general and private participation in particular does not destroy the ecology of the area.

This paper deals with the issues described above. Section 2 analyses past growth rates and provides projections for plausible growth rates during the Eleventh Plan period. It also highlights the fact that if current trends are to continue, the state will attain high growth rates but the growth process will not be very inclusive. Section 3 analyses the current patterns of inequality in the state. These inequities provide the impetus for inclusive growth. Section 4 discusses the structural constraints in the economy that lead to unequal growth and development in the state. It also focuses on the potential strengths of the economy that can be used to achieve inclusive growth. Finally, section 5 focuses on some priority sectors that need to be developed in order to achieve the goal of inclusive growth. It analyses various aspects of these sectors and provides policy recommendation necessary to develop these sectors.

2. Growth in Uttarakhand : The past and the future

Following its inception as an independent state in 2000-01, the Uttarakhand economy has been growing at very high rates in the last few years. This has led to expectations of continued high growth rates during the Eleventh Plan period as well. However, any objective projection of future growth rates has to be based on a careful analysis of the long-run trends in the economy. The relevant period for this exercise is the era following the reforms initiated in the Indian economy. Specifically, the data for the period 1993-94, up to the present needs to be analysed in order to generate projections for the Eleventh Plan period.

Trends in sectoral and sub-sectoral growth in the Uttarakhand economy since 1993-04, show two distinctly different kinds of growth dynamics. There are six sub-sectors that

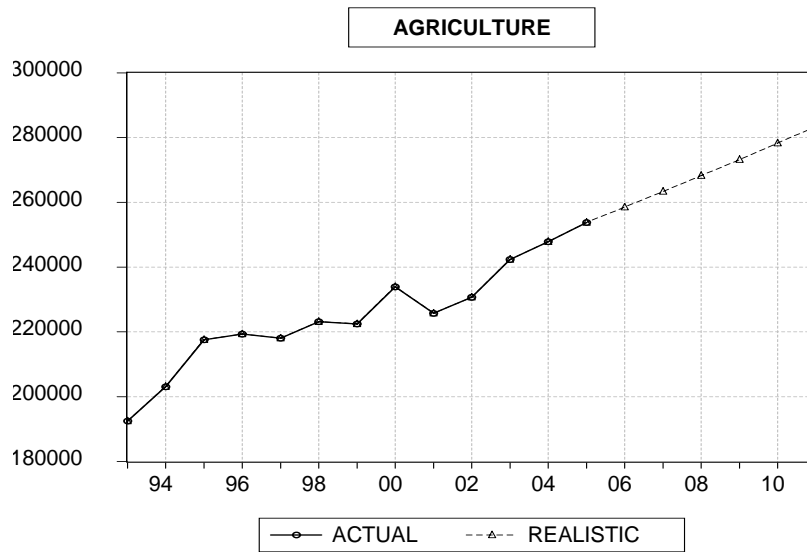
exhibit steady and unchanging growth dynamics for the whole period. These are (i) Agriculture,(ii) Forestry,(iii) Fishery, (iv) Mining, (v) Real Estate, Ownership of Dwellings & Business Services, and (vi) Banking and Insurance. On the other hand, the remaining seven sub-sectors show a distinct jump in growth rates since the time the state was established, i.e., 2000-01. These are (i) Manufacturing,(ii) Construction,(iii) Electricity, Gas and Water,(iv) Trade, Hotels and Restaurants, (v) Transport, Storage and Communications, (vi) Other Services, and (vii) Public Administration. These high rates of growth are partly due to the small base of these sectors while other factors like better administration and governance, together with fiscal incentives for private participation in these sectors, are also important. While some of these factors will remain significant even in the long run, others will have a more temporary impact on the growth rates. Clearly the capacity to sustain high growth rates will depend on whether the long-run factors remain more relevant than the temporary factors in the future.

In order to generate growth projections that capture this changing economic behaviour exhibited by the state following its inception, it is useful to define alternative growth scenarios. In fact the most feasible outcomes for Uttarakhand for the Eleventh Plan period can be taken care of by three alternative scenarios. These may be termed as the Optimistic Scenario, the Pessimistic Scenario and the Realistic Scenario. These scenarios are defined for the sub-sectoral growth behaviour and then aggregated to generate the sectoral (agriculture, industry and services) and aggregate GSDP growth behaviour for Uttarakhand.

2.1 Steadily growing sectors

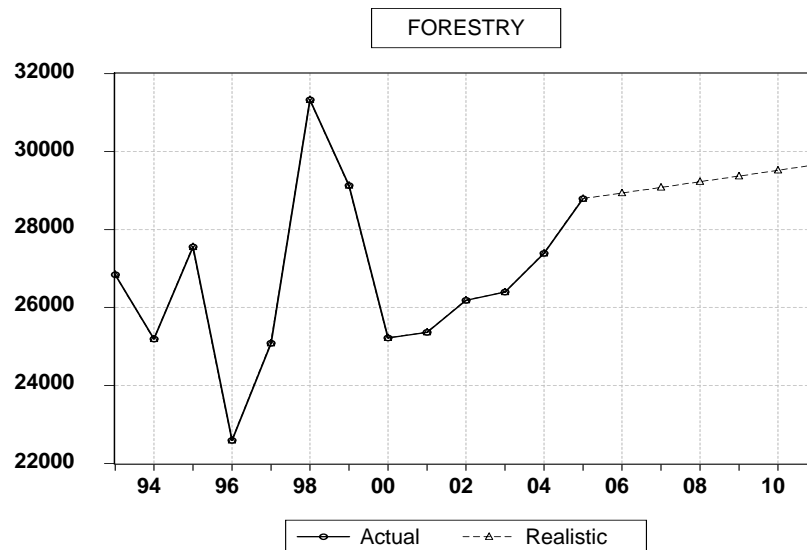
A single scenario, i.e., the Realistic Scenario, captures the growth dynamics for the six sub-sectors that exhibit steady growth for the period 1993-04 to 2005-06. In this scenario, the sectors are assumed to grow at the same (constant) rate at which they have grown in the post-reform period. The projections for output from these sub-sectors for the Eleventh Plan period are represented graphically below. The corresponding average projected growth rates are also provided.

(i) *Agriculture*



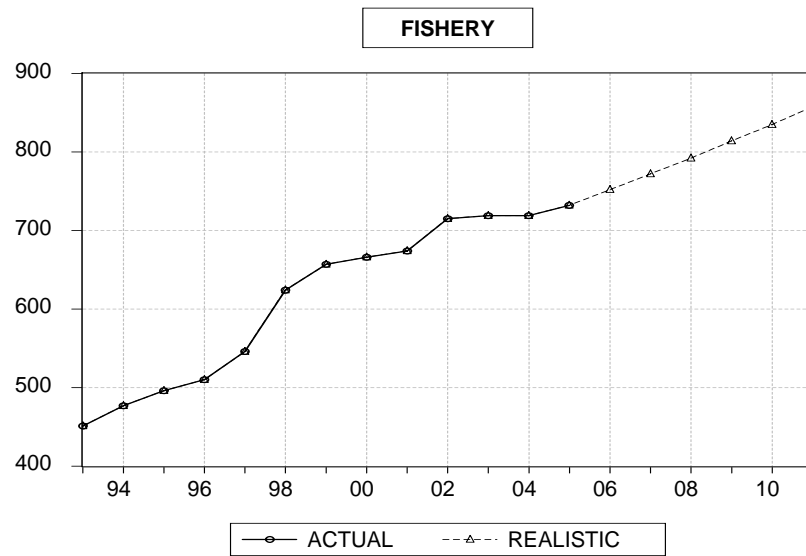
Eleventh Plan average projected growth rate: 1.86% (Realistic Scenario).

(ii) *Forestry*



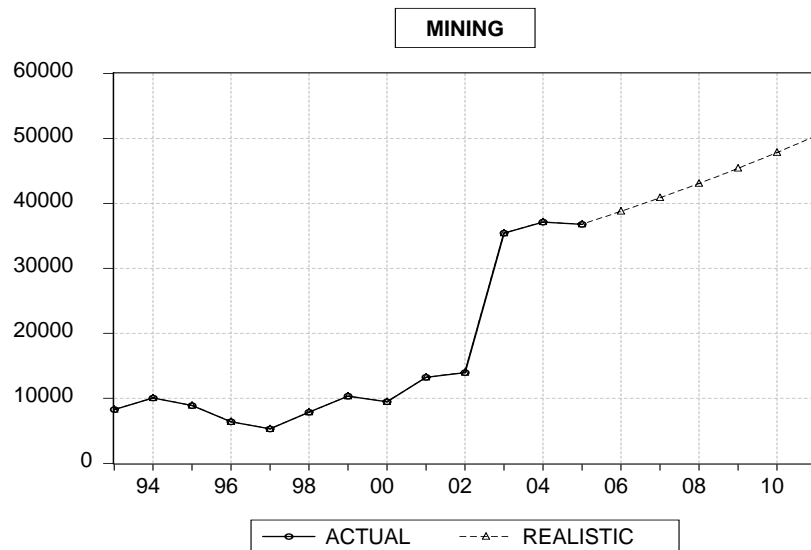
Eleventh Plan average projected growth rate: 0.5 % (Realistic Scenario).

(iii) *Fishery*



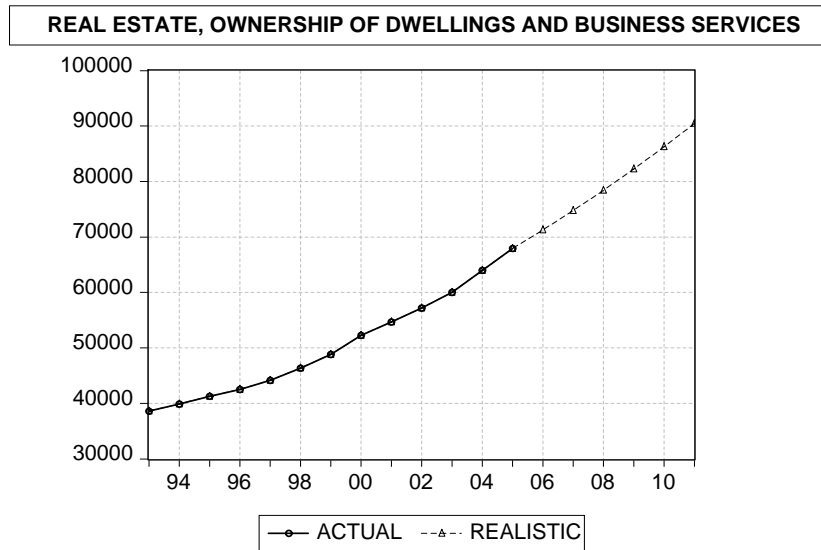
Eleventh Plan average projected growth rate : 2.68 % (Realistic Scenario).

(iv) *Mining*



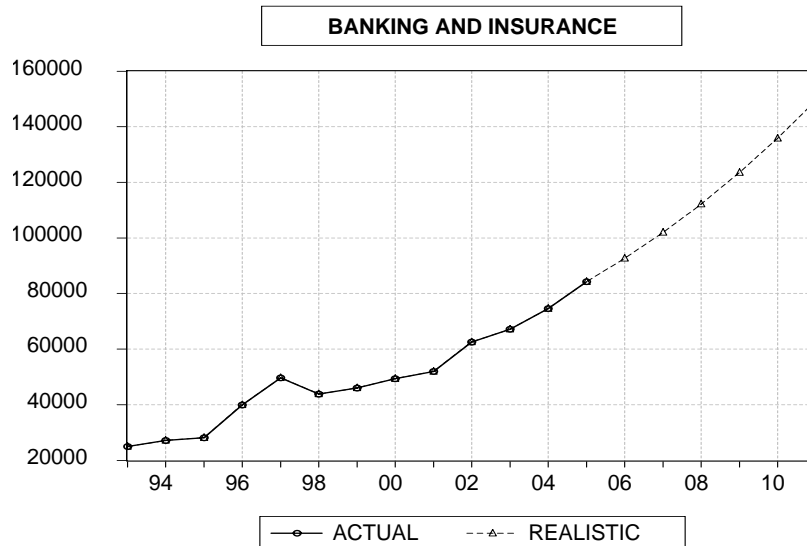
Eleventh Plan average projected growth rate: 5.38 % (Realistic Scenario).

(v) *Real Estate, Ownership of Dwellings and Business Services*



Eleventh Plan average projected growth rate: 4.89 % (Realistic Scenario).

(vi) *Banking and Insurance*

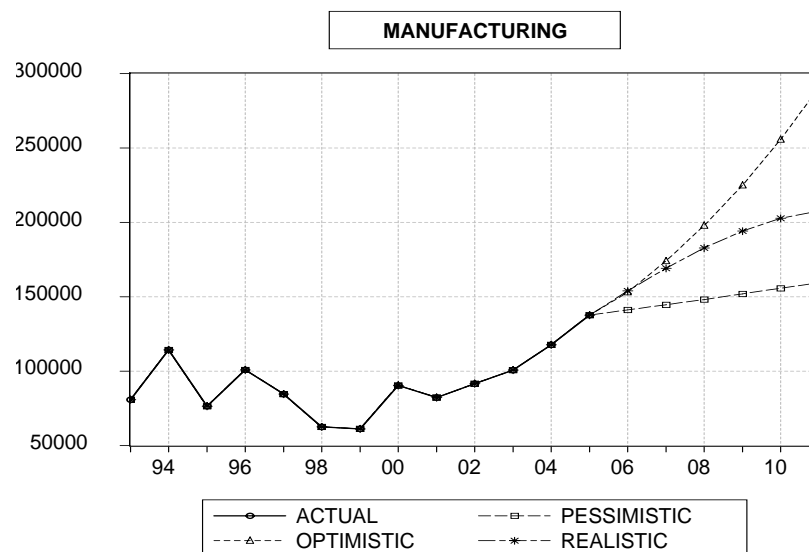


Eleventh Plan average projected growth rate: 10.03 % (Realistic Scenario).

2.2 Sectors with a jump in growth rates after attainment of statehood

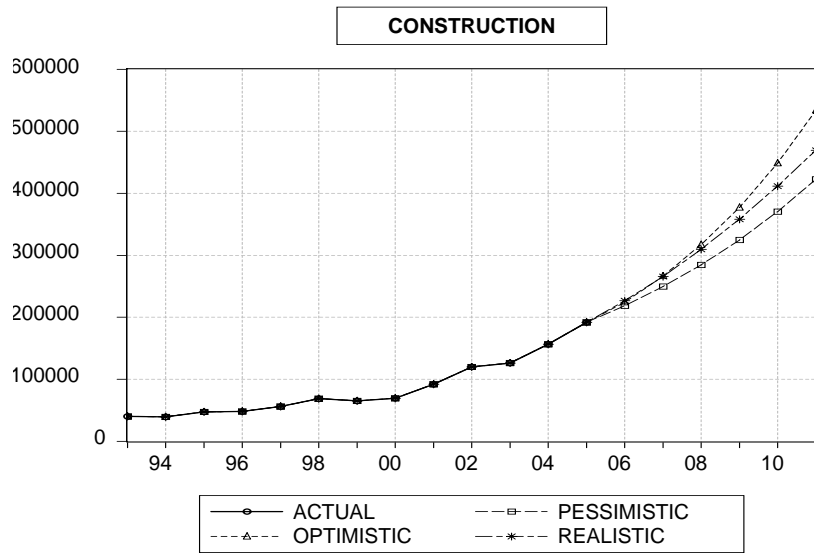
For the sub-sectors that exhibit higher growth rates after the inception of the state in 2000-01, all three scenarios (Optimistic Scenario, Pessimistic Scenario, Realistic Scenario) are required to capture the growth dynamics in the period 1993-04 to 2005-06. The Optimistic Scenario assumes that the high growth rates achieved after 2000-01 are not due to temporary factors and hence can be sustained throughout the Eleventh Plan period. The Pessimistic Scenario, on the other hand assumes that the high growth rates were due to highly short-lived factors, and hence the economy will immediately (from 2006-07) revert to the long-run (constant) growth rate (exhibited during the period 1993-04 to 2005-06) and continue to grow at that rate throughout the Eleventh Plan period. The Realistic Scenario recognizes that both the Optimistic and the Pessimistic Scenarios are based on extreme assumptions and the most realistic outcome will lie somewhere in between. Specifically, it assumes that instead of falling immediately, the growth rates keep falling steadily from the high rates in the recent past, so that by the end of the Eleventh Plan period (2011-12) they have reached the long-run rates.

(i) Manufacturing



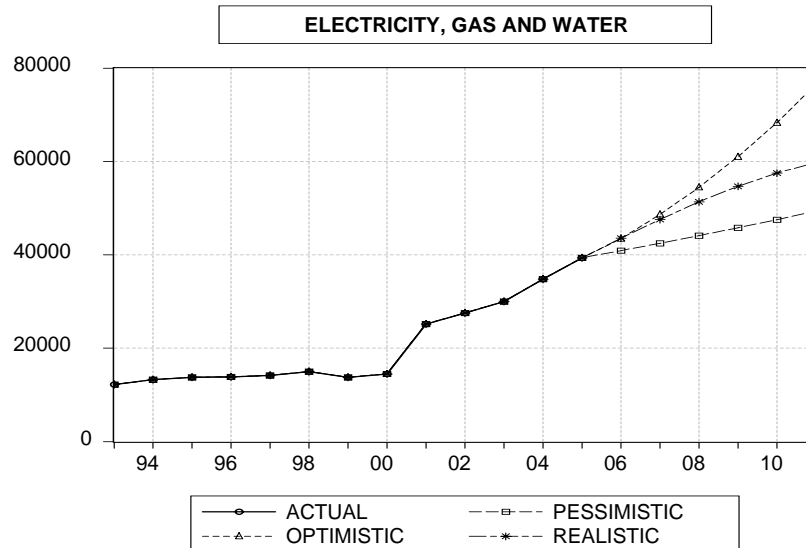
Eleventh Plan average projected growth rate : (i) 6.22% (Realistic Scenario), (ii) 13.68% (Optimistic scenario), (iii) 2.49 % (Pessimistic scenario).

(ii) *Construction*



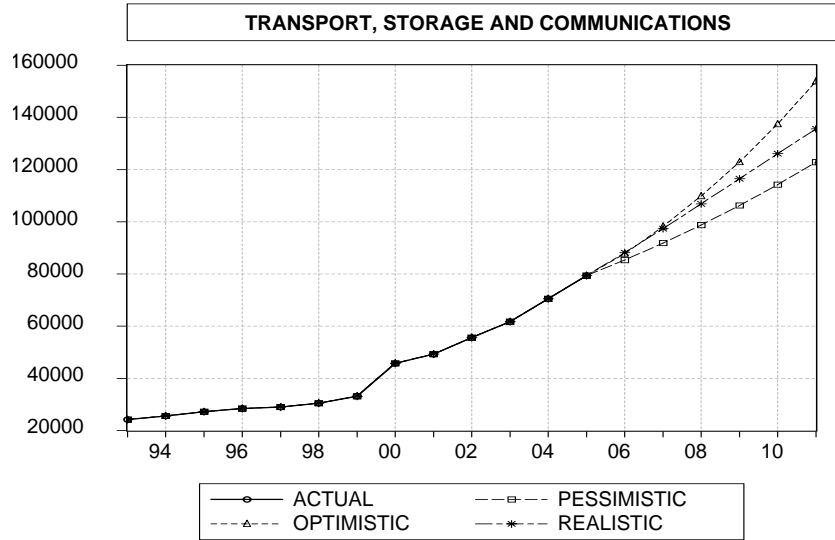
Eleventh Plan average projected growth rate: (i) 15.70 % (Realistic Scenario), (ii) 18.95 % (Optimistic scenario), (iii) 14.08 % (Pessimistic scenario).

(iii) *Electricity, Gas and Water*



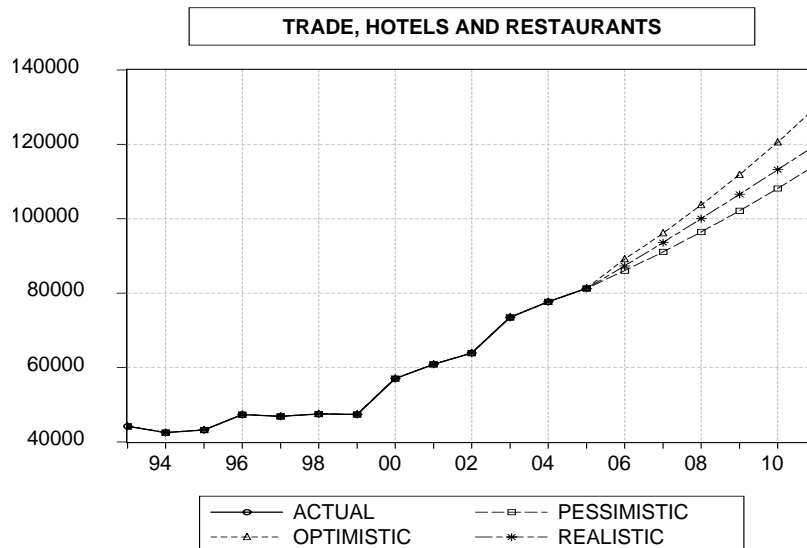
Eleventh Plan average projected growth rate: (i) 6.55 % (Realistic Scenario), (ii) 11.96 % (Optimistic scenario), (iii) 3.84 % (Pessimistic scenario).

(iv) *Transport, Storage and Communications*



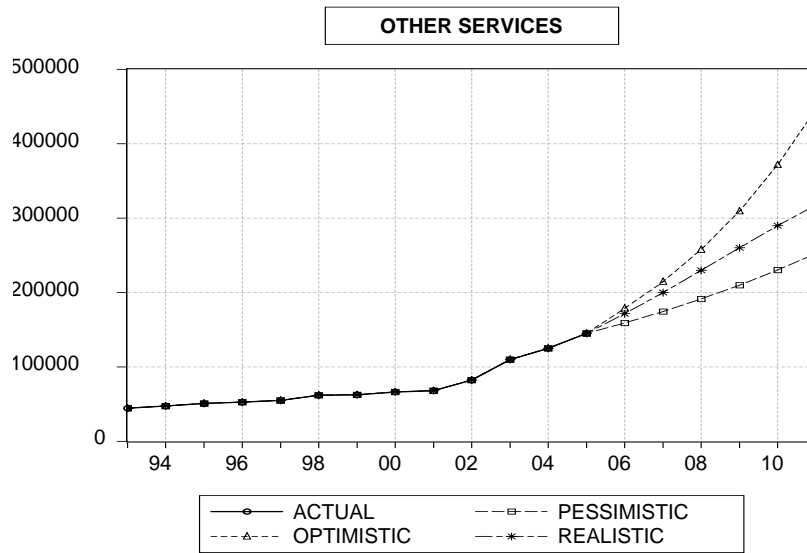
Eleventh Plan average projected growth rate: (i) 8.99 % (Realistic Scenario), (ii) 11.87 % (Optimistic scenario,iii) 7.56 % (Pessimistic scenario).

(v) *Trade, Hotels and Restaurants*



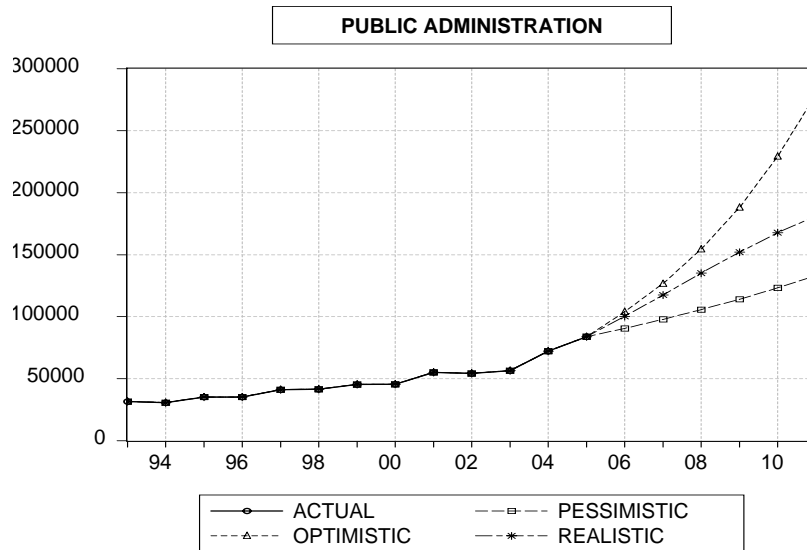
Eleventh Plan average projected growth rate: (i) 6.54 % (Realistic Scenario), (ii) 7.83 % (Optimistic scenario), (iii) 5.89 % (Pessimistic scenario).

(vi) *Other Services*



Eleventh Plan average projected growth rate: (i) 13.17 % (Realistic Scenario), (ii) 20.1 % (Optimistic scenario), (iii) 9.7 % (Pessimistic scenario).

(vii) *Public Administration*

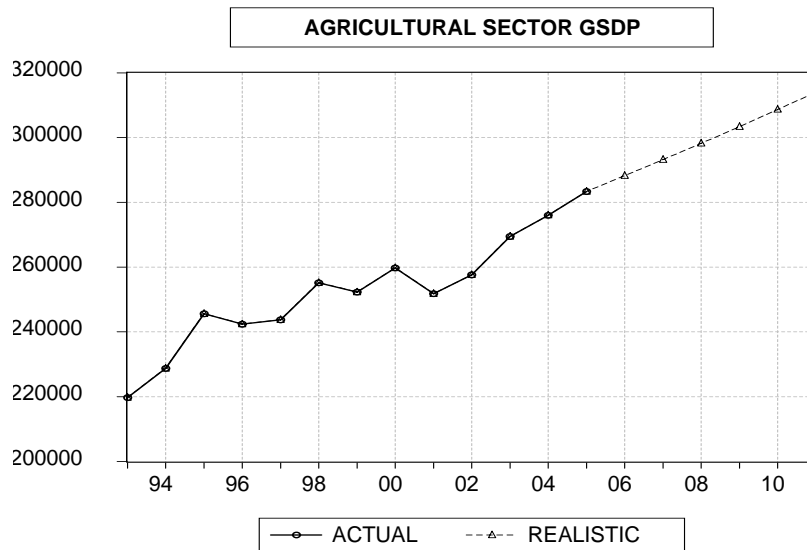


Eleventh Plan average projected growth rate: (i) 12.63 % (Realistic Scenario), (ii) 21.88 % (Optimistic scenario), (iii) 8.01 % (Pessimistic scenario).

2.3 Sectoral and Aggregate Growth Projections

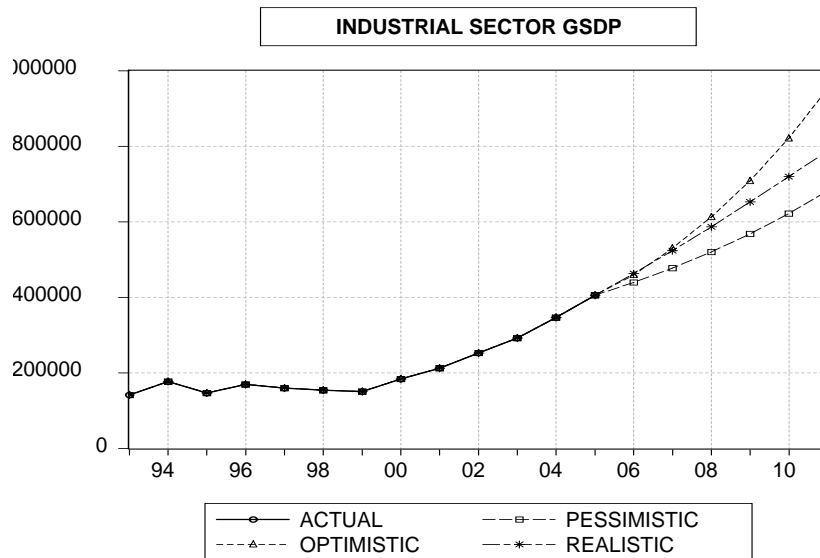
The output and growth projections of the agricultural sector, the industrial sector, the services sector and aggregate GSDP are based on projections from thirteen sub-sectors. The projected agricultural sector output is equal to the sum of the projected output from (i) Agriculture, (ii) Forestry, and (iii) Fishing. The projected industrial sector output is equal to the sum of the projected output from (i) Mining, (ii) Manufacturing, (iii) Construction, and (iv) Electricity, Gas and Water. The projected services sector output is equal to the sum of the projected output from (i) Transport, Storage and Communications (ii) Trade, Hotels and Restaurants, (iii) Real Estate, Ownership of Dwellings and Business Services, (iv) Banking and Insurance, (v) Other Services, and (vi) Public administration. The projected aggregate GSDP is equal to the sum of the projected output from the (i) Agricultural sector, (ii) Industrial sector, and (iii) Services sector. The graphical projections of sectoral and aggregate output for the Eleventh Plan period are presented below. The corresponding average projected growth rates are also provided.

(i) Agricultural Sector GSDP



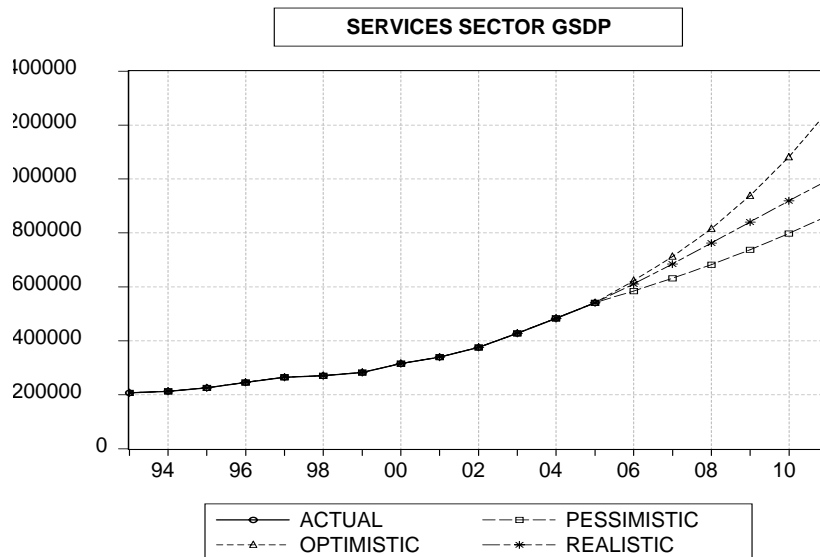
Eleventh Plan average projected growth rate: 1.72 % (Realistic Scenario).

(ii) *Industrial Sector GSDP*



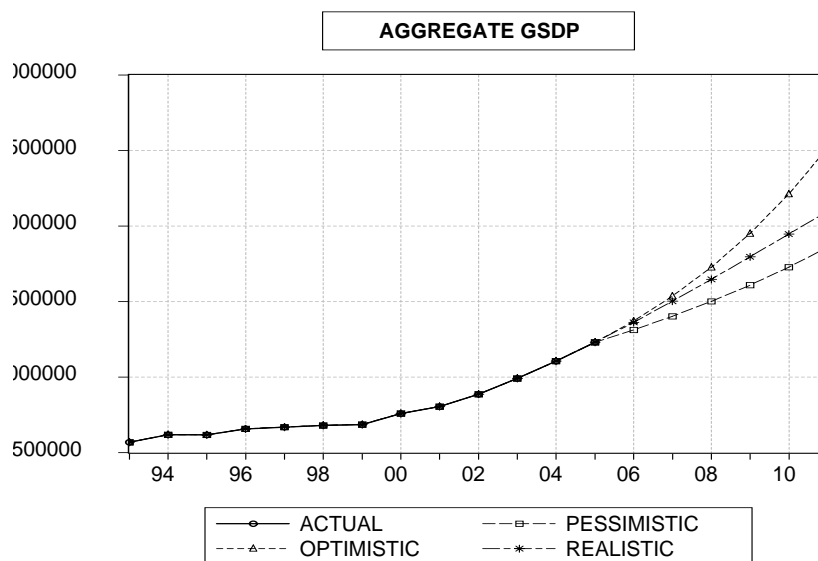
Eleventh Plan average projected growth rate: (i) 11.23 % (Realistic Scenario), (ii) 15.67 % (Optimistic scenario), (iii) 9.18 % (Pessimistic scenario).

(iii) *Services Sector GSDP*



Eleventh Plan average projected growth rate: (i) 10.24 % (Realistic Scenario), (ii) 14.92 % (Optimistic scenario), (iii) 8.09 % (Pessimistic scenario).

(iv) *Aggregate GSDP*



Eleventh Plan average projected growth rate: (i) 9.01 % (Realistic Scenario), (ii) 12.90 % (Optimistic scenario), (iii) 7.21 % (Pessimistic scenario).

It is clear from the projections presented above that the growth prospects are very positive for the state of Uttarakhand. The realistic scenario, which describes the most plausible outcome in the future, pegs the growth rate of GSDP at around 9 percent. Although this is somewhat lower than the current GSDP growth rate of about 11 percent, it is far higher than the growth rate in the state before 2000-01. Even with the pessimistic scenario, the growth rate is above 7 percent, which is a high growth rate by any standard. The problem, however, is that the trends depicted by the above scenarios do not lead to inclusive growth. For example, the agricultural sector, which provides livelihoods to three-fourths of the population in the state, is pegged to grow at 1.72 percent only. This clearly shows that the industrial and services sector-led growth, which benefits largely the plains, is not going to be very inclusive in nature. In other words, if inclusive growth is to be promoted, then current trends will not be sufficient and focused development

planning will be necessary to encourage growth in those sectors that provide livelihoods to the weaker sections and backward areas.

3. Inequalities in the Uttarakhand economy

As with the rest of India, there are various forms of social inequalities in Uttarakhand that manifest in the form of unequal opportunities and quality of life for certain social groups. These groups include the scheduled castes, the scheduled tribes, and women. The scheduled castes in Uttarakhand, like elsewhere in the country, have suffered due to a deep-seated process of discrimination and exploitation over a long period of time. These problems are compounded by the fact that the hill society of Uttarakhand has traditionally been an upper caste dominated society, in which the dalits were relegated to an extremely low social position. To a large extent, similar problems afflict the tribal population as well (though they constitute only 3 per cent of the population as compared to 18 per cent in the case of the scheduled castes) with the added complication that their social isolation is combined with physical isolation as well. The main tribal groups of Uttarakhand are the Bhotiyas, Tharus, Boxas and the Jaunsaris and each of these groups have distinct characteristics and needs. In addition, there is also a very small forest-dwelling tribal group known as Rajis (or Ban Rawats) numbering a few thousand, who live in the areas bordering Nepal in Pithoragarh district. Finally women, especially rural women, are a particularly vulnerable group in Uttarakhand. As a result of the out-migration of a large section of the able bodied men, the women constitute the main workforce in agriculture. They also take care of the cattle, collect fuel wood and fodder from forests, often situated at considerable distance from the villages involving four to five hours of walking both ways, and do all household chores. Their life is an unending drudgery of hard work. Their condition is made worse by the fact that they also suffer from poor nutrition, which makes them vulnerable to many health hazards including chronic anaemia and tuberculosis. There is also a considerable gap in the male and female literacy rates.

More than these social inequalities however, it is the geographical inequality between the hills and the plains of Uttarakhand that divides the state most critically. This geographical

disparity manifests itself in the form of inter-district inequality. Four of the thirteen districts, namely, Nainital, Haridwar, Dehradun and Udham Singh Nagar, are in the plains or have large parts in the plains. Compared to the other nine districts, these districts are way ahead in terms of various indicators of development. For instance, a recent study of inter-district disparities in Uttarakhand undertaken by the Planning Department shows that three of these districts (Dehradun, Haridwar and Udham Singh Nagar) have a relatively high level of development, and three districts (Tehri Garhwal, Champawat and Chamoli) figure low in the development scale as measured by 24 indicators using the ranking and index method.

The inter-district inequality is most acute in terms of various forms of infrastructure. Table 1 shows the district-wise distribution of three of the most critical infrastructure facilities, i.e., electricity, roads and irrigation. It is very clear that the districts in the plains have much better infrastructure as compared to the districts in the hills. The inter-district inequality in infrastructure leads to inequality in terms of income and livelihood between the hills and the plains. This results in rampant underdevelopment in the hills while the plains are relatively prosperous. The underdevelopment in the hills leads to a poorer quality of life in these areas compared to the plains. Table 2 demonstrates this in terms of two indicators of the quality of life, i.e., availability of toilets and drinking water within the dwelling. This table makes it amply clear that the quality of life is particularly poor in the hilly areas compared to the plains.

TABLE 1

Geographical Region	District	Percentage of Households with Electricity	Length of Pucca Roads (in kms.) Per '000 sq. kms.	Net Irrigated Area as % of Net Sown Area
Hill Districts	Uttarkashi	48.88	133.9	15.1
	Chamoli	53.52	139.1	4.8
	Tehri Garhwal	48.79	480.5	14.4
	Pauri Garhwal	56.72	649.5	10.1
	Rudraprayag	46.72	247.5	13.5
	Pithoragarh	51.55	96.0	10.5
	Almora	50.10	508.8	6.4
	Bageshwar	43.43	283.8	17.0
Champawat	40.77	329.9	8.7	
Plain Districts	Dehradun	83.76	908.4	45.9
	Haridwar	60.55	748.7	84.6
	Nainital	67.65	943.0	61.5
	Udham Singh Nagar	47.49	599.7	97.0
Average of Hill Districts		50.43	318.78	10.52
Average of Plain Districts		70.11	799.95	81.06

TABLE 2

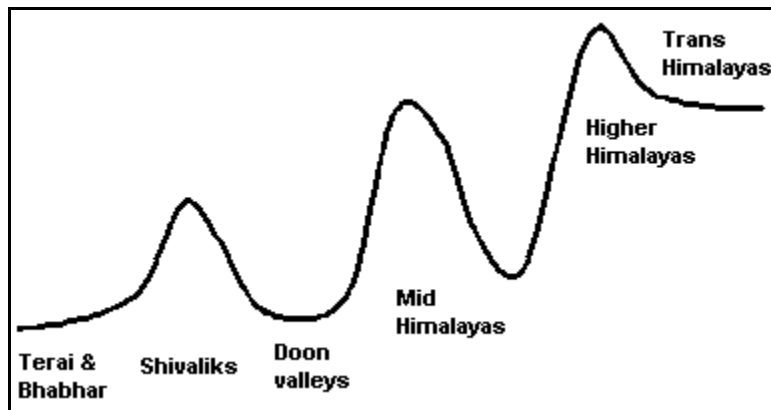
Geographical Region	District	Percentage of Households with Toilets inside the Dwelling	Percentage of Households with Drinking Water Facility inside the Dwelling
Hill Districts	Uttarkashi	32.83	29.15
	Chamoli	28.83	22.59
	Tehri Garhwal	31.19	21.58
	Pauri Garhwal	31.77	25.36
	Rudraprayag	26.25	15.54
	Pithoragarh	29.33	25.66
	Almora	30.10	18.00
	Bageshwar	24.18	13.32
	Champawat	28.96	26.92
Plain Districts	Dehradun	71.45	68.87
	Haridwar	55.52	67.14
	Nainital	60.46	51.73
	Udham Singh Nagar	53.37	75.96
Average of Hill Districts		29.88	22.24
Average of Plain Districts		60.34	67.18

4. Development of the hilly areas for inclusive growth in Uttarakhand: comparative advantages and disadvantages

The Uttarakhand economy, which was growing at about 3.5 percent in the post-reform period before attaining statehood, has achieved average growth rates in excess of 11 percent after 2000-01. It is clear that the achievement of statehood has helped Uttarakhand to transform itself from a low growth to a high growth economy. However, most of the growth has been restricted to the plains, while the hilly areas have continued to grow slowly due to a number of structural problems. Thus the challenge for inclusive growth policies is to generate faster development in the hilly areas of the state.

The main problem, of course, is the mountainous geography of the state. The Uttarakhand Himalayas can be divided into a number of physiographic zones depicted in the figure below.

Figure 1: Simplified Sketch of Physiographic Zones of Himalayas



These zones are :

1. *Terai & Bhabhar*: The Terai is a marshy and damp tract containing fertile soils with good water retention capacity, while the Bhabhar is a level surface zone at the foothills of the Himalayas with extremely porous soil type.
2. *Shivaliks*: These are the youngest of the Himalayan ranges extending in a narrow varying width of 6 to 30 km with altitudes of 300 to 1000 m.

3. *Doon Valleys*: These are flat longitudinal structural valleys to the north of Shivaliks.
4. *Mid Himalayas*: This zone extends in a varying width of 60-90 km in an abrupt rise in elevation between 1000 m to 3000 m and contains two types of physiographic sub-units namely (i) The Himanchal ranges, and (ii) the Himanchal valleys and lake basins.
5. *Greater Himalayas*: This zone has a varying width of 40-60 km. The altitude varies between 3000-7000 m. Except for lower valleys, this zone is perpetually covered with snow and covers glacial landforms above 3000 m.

The hilly regions fall under the last four zones. The soil in these regions is, in general, quite shallow, gravelly and not very fertile. In large parts of this region, the soil is mixed with fragments of parent rocks occurring within a few centimeters, except in valleys or depressions where they go up to about two metres. Moreover, a very large part of relatively fertile soil is under forests and hence cannot be used for agricultural purposes. As a result, agriculture takes place mostly in the valleys or scattered pieces of land on the hills that have the requisite fertility. Not surprisingly, the gross cropped area is only about 10 percent of the area of the state.

The nature of the soil and the inclined slopes make it impossible for ground water to collect in these areas. Thus irrigation becomes the most crucial factor in agricultural performance. Currently, the main source of irrigation in this region is natural streams that cover about 63% of the total irrigated area, while canal irrigation largely covers the rest of the irrigated area. As a result of the absence of other sources of irrigation, only those areas lying near river valleys and streams are irrigated and this amounts to only 12 percent of the gross cropped area. Thus, lack of irrigation is a big problem in this area.

Another problem is the population density, which is very low in these areas. The three districts of Uttarkashi, Chamoli and Pithoragarh have some of the lowest population densities in the country. About 84% of the village settlements (nearly 90% in Pauri Garhwal, Pithoragarh, Chamoli, Tehri Garhwal and Almora) have population sizes that

are less than 500 and hardly 0.5% of the villages in most districts have population sizes that are more than 2000. The sparse and scattered population prevents the development of market-based institutions, which need a minimum scale in order to operate. Social development has also been slowed down by this inaccessibility. Thus the scattered and small size settlements in hill regions offer a formidable challenge to development programmes and market formation. The villages and agricultural areas are not only scattered but are also situated at great distances from roads and markets. The lack of roads and means of transportation further compounds this problem. Thus, in the current scenario, transportation is difficult and costly.

The structural problems described above makes these areas completely unsuitable for large scale, mechanised, input-intensive modern agriculture. Even smaller scale, localized cash crops are not remunerative in the current situation because transportation and transaction costs are prohibitively high for a small farmer. Moreover, these cash crops also require higher levels of investment but the overall backwardness of these places prevents the development of financial institutions that may provide credit to these farmers. In order to ensure food security in the face of such adverse conditions, the cultivable land is mostly used for subsistence agriculture. Since the returns from subsistence agriculture is low and due to the non-availability of remunerative employment opportunities in the region, the men-folk either join the army and paramilitary forces or migrate in large numbers from the mountain areas to the cities and towns all over the country in search of employment. Their families are left behind and are dependent on remittances sent by these members employed outside the region. This phenomenon has earned the region the sobriquet of a 'Money Order Economy'. Male out-migration from the region has occurred on a significant scale and this can be seen from the fact that the overall sex ratio for the state in 2001 was 964 females per 1000 males, while in 8 of the 13 districts (all in the mountain area) it exceeded 1000. Even the men who don't migrate in search of work do not work in the fields. They are constantly in search of work in off-farm occupations. A significant consequence of this pattern of migration and male preference for off-farm employment is the lack of quality manpower in the agricultural sector.

In order to change this situation of economic and social backwardness in the rural mountainous regions of Uttarakhand, it is important to adopt a strategy based on long term planning that will take steps to counter all the problems described above. However, given the fiscal and administrative constraints of the state, it is more sensible to identify a few sectors at a time and attempt vigorous development in these sectors before moving on to other sectors. The first step in such a strategy is to identify those sectors that are impeding the growth process in these areas and those sectors in which this region has a comparative advantage. The current condition of the infrastructure sector is clearly a constraint on the development in this area and must be the focus of the strategy for inclusive growth. As far as comparative advantage is concerned, two sectors that have great potential are horticulture and tourism.

The most important types of infrastructure necessary for the development process in these areas are irrigation, electricity and roads. The potential for developing these sectors in Uttarakhand is significant. Minor irrigation projects based on tanks and reservoirs are possible in those areas that are not covered by canal or stream irrigation as these areas receive normal to heavy rainfall during the year. The mountain rivers provide an ideal opportunity to generate large quantities of hydroelectricity. As far as roads are concerned, the current infrastructure is highly inadequate and hence there is both scope and necessity for large investments in this sector.

The horticulture sector is eminently suitable for the hill areas. The climate of these regions allows a variety of fruits and vegetables to grow in this area. Moreover, the hill areas are capable of growing off-season vegetables that have a great demand in the plains. A related advantage for Uttarakhand is its relative proximity to Delhi and other north Indian urban centres that have an increasing demand for fruits and vegetables.

The tourism sector is already partially developed in the state. However, this sector has more potential and can provide an additional source of income in the hill areas. In fact, the state can promote different kinds of tourism including: (i) leisure tourism at the hill

stations, (ii) religious tourism at the “Char Dham”, (iii) adventure tourism including skiing, trekking, paragliding, etc., in the higher slopes, and (iv) nature and wildlife tourism in the protected forests and sanctuaries. The high literacy rates in the state will also be useful for development of foreign tourism.

5. Strategy to promote inclusive growth: focusing on thrust areas

It is clear that currently, the hill areas of Uttarakhand are economically backward compared to the plains due to a number of reasons, but there exists great potential for the development of these areas. This will however require a focused approach aimed at the development of the infrastructure sector as well as sectors like horticulture and tourism that has the capacity to generate income and employment in these areas. This section looks at these sectors in greater detail and provides policy prescriptions for the development of these sectors.

Infrastructure

Infrastructure has to be given the highest priority in the development effort of Uttarakhand during the Eleventh Plan period, as the future growth rate in this state will depend critically on the rapid development of this sector. This is even more important if the emphasis is on inclusive growth, since there is a direct link between the availability of infrastructure facilities in the backward regions of the state and the standards of living of the masses living in these areas. Clearly, policies for inclusive growth have to correct the current imbalances in the distribution of infrastructure in the state. The policies for development of physical infrastructure will have to focus on the roads and transport network, electricity, irrigation, marketing infrastructure for agricultural produce and financial institutions. Equally important, if not more so, is the development of social infrastructure with special thrust on health and education, as this will generate the human capital that is a critical input into the development process.

There is an urgent need in Uttarakhand to address problems with regard to connectivity, particularly of remote and inaccessible areas located in the mid and outer Himalayan ranges. As is well known, the hilly terrain and topography of the state renders further expansion of railways beyond the Himalayan foothills comprising mainly the districts of Dehradun, Hardwar, Udham Singh Nagar and Nainital unfeasible and practically impossible. In such circumstances, the development and improvement of road networks, that provide inter and intra state connectivity, attains paramount significance. There is undeniably a need for strengthening the existing road network across the state. This is particularly important for the marketing of primary produce, including horticultural crops, which requires a well-developed network of roads connecting the fields to the markets in the urban areas. However, there is at the same time an equally pressing need to conserve the fragile ecosystem of the Himalayas, which are sometimes undermined by road construction. Therefore, infrastructure development must strike a balance between the need for connectivity and the need for environmental conservation. The solution lies in the development of a network consisting of major and minor roads together with low cost ropeways, connecting villages and agricultural areas to the urban areas and *mandis*. In other words, what the state needs is an integrated approach towards connectivity with the development of roads, transport, energy and technological resources keeping the specificities of a mountainous region in mind.

The major roads in Uttarakhand mostly run from the southern plains to the mid and outer Himalayan ranges high up in the north. These roads run along the river valleys, and their location and direction have in most cases been determined by the strategic defense requirements of the nation, and not from purely developmental considerations. As a result, there are national highways connecting the *terai* region comprising mainly the southern plains to the northern districts, while there is a dearth of major roads connecting the eastern districts of Kumaun region to those of Garhwal division in the west. One of the fallouts of such a situation is the lack of adequate connectivity between the various tourist spots in the state. A number of tourist spots, ranging from Nainital to Almora in the east to Mussouri and Chakrata in the west, though connected to each other by minor roads, are not connected by any major roads. There is a need to develop these minor

roads into major roads in order to promote tourism across this belt. Presently the highway authorities are considering the building of a trans-Himalayan highway across the state. Necessary steps need to be taken to ensure the speedy implementation of this trans-Himalayan project.

Uttarakhand is endowed with a perennial source of water supply throughout the year with mighty rivers like Ganga, Yamuna and their tributaries viz., Alaknanda, Bhilangana, Bhagirathi, Tons etc. spanning the entire region. This implies that there is tremendous scope for the development of small-scale hydro systems for electrification of the state, particularly in the far-flung areas of the Central Himalayan region marked by the absence of alternative sources of power. Alternatively called “run-of-river” systems, small hydel plants essentially capture the energy in the water flow by using a special turbine placed in the course of flowing water to generate electricity. In sharp contrast to large dam projects, such small-scale labour-intensive renewable energy options not only involve minimum rehabilitation and resettlement, they also have very low operational costs and are therefore, the most cost-effective option for power supply especially in remote hilly areas. Despite such significant benefits, only seven percent of the available hydropower potential has been harnessed so far in the state. Thus, the state should undertake the development of small-scale hydro systems for the electrification of Uttarakhand, as there is scope for further exploitation of the vast amount of untapped potential in this sphere.

In a state where more than three-fourths of the workforce is dependent on the farm sector for livelihood, agriculture is evidently the mainstay of the economy. However, this sector is characterized by severe infrastructure bottlenecks, especially with regard to irrigation and the marketing of primary produce. Barring the *terai* and *bhabhar* areas covering the foothills and valleys of the south-western plains, the state is by and large hilly, thereby making well (deep, shallow or dug) irrigation unsuitable. Alternative sources of irrigation like pump sets, canals, hydroelectric projects, small tanks, reservoirs, etc. too are confined to the former areas. It is then no wonder that as much as ninety percent of the net sown area of Uttarakhand is rainfed. In order to deal with this situation, focus must be on developing Rainwater harvesting along with sprinklers and drip irrigation systems

(especially for horticultural crops) in all such hilly areas marked by the absence of irrigation facilities. Additionally, appropriate steps must be taken for the restoration of defunct canals, particularly in the hilly region. At the same time, for areas lying along Ganga and Yamuna river valley basins comprising mainly the southern plains, developing small-scale river valley projects are the need of the hour, especially given the twin objectives of maintaining environmental sustainability on the one hand accompanied by an overall development of the region on the other.

The hill areas have a comparative advantage in the production of horticultural products including fruits and vegetables. However, the farmers in these regions will be able to take full advantage of this only when these products are not only produced but also marketed efficiently. In a broad sense, marketing would consist of all post-harvest activities including the collection of farm products from the field, processing and packaging of the product, storing and warehousing of the product, identifying prospective markets where the product can get the highest price and finally, transporting the product to these markets. Unfortunately, the small farmers in the hill areas are incapable of carrying out most of these activities on their own for a number of reasons. First, the relatively small size of each farmers produce and the distance of their villages from roads and mandis makes the process of marketing their products too costly to be profitable. Second, they do not have easy access to storage and warehousing facilities. Finally, they do not have ready access to information about potential markets for their produce. As a result of this lack of marketing facility, a large part of the total horticultural crops produced by the state of Uttarakhand is wasted each year. Clearly, there is a crucial need to develop an efficient marketing infrastructure in order to make it remunerative for the small mountain farmers to grow cash crops including fruits and vegetables.

The large capital and informational requirement necessary to carry out the marketing activities efficiently implies that only a large organization is suitable for this activity. This requirement can be fulfilled by setting up a Horticulture Marketing Board, either in the public sector or in a public-private partnership with a similar mandate. Some of the necessary activities of such an organization would include for example (i) setting up of

input retail outlets for better access to inputs, (ii) collection of the produce from the farms and provision of warehousing so as to address the problem of inadequate storage capacity (iii) value addition by setting up of food processing units and cold chains (iv) strengthening *mandis* and procurement agencies' network for better marketing facilities, etc. Over a sustained period, such an organization can help the farmers of the mountainous regions to develop the capacity to regularly supply high quality horticultural products. Once this target is achieved, the organization should focus its attention on the building up of export capabilities for these horticultural products.

The development of large infrastructure projects will have to be financed either by the public sector or by large private players with access to large pools of capital (or by public-private partnerships). However, smaller infrastructure projects like water reservoirs or small turbines have to be financed by local financial institutions. The development of the horticultural sector and the tourism industry will also crucially depend on the availability of funds to these sectors. Unfortunately, the credit-deposit ratio, which is an indicator of the extent to which funds that are collected from the economy are pumped back into the economy, is abysmally low for the state. In 2004, Uttarakhand had a credit-deposit ratio as low as 0.23 for scheduled commercial banks, as against an all-India figure of 0.58. This is clearly reflective of the limited functioning of the financial institutions in the hilly state.

In order to change this situation and make funds available for necessary investment in the state, the deposits in scheduled commercial banks, regional co-operative banks and rural developmental banks, etc., have to be mobilized and pumped back into the economy by providing credit to the relevant sectors. However, the state lacks a well-developed network of financial intermediaries, particularly in the remote hilly areas of the countryside. Clearly, there is a need to set up more bank branches at the district and local levels. Further, these bank branches in the remote areas must make sure that the small landowners or other small players in the horticulture or tourism industry get access to the credit necessary for their activities. This can be ensured by developing micro-finance

facilities for self-help groups, something that has been found to be successful in other backward areas.

The Eleventh Five Year Plan should emphasize on human development, especially through education. In the field of primary education, though access has improved considerably and enrolment is near universal, the big challenge is to ensure retention and completion of the upper primary stage, by addressing the problem of dropouts and high rates of wastage due to failure. Above all there is the problem of quality of education. The private sector has emerged as an important player in the education sector at all levels. Earlier private effort at the primary and secondary levels was restricted to the urban areas, but increasingly it is also spreading to the rural areas. However, it can by no means be claimed that all private institutions are providing quality education. While a few select ones are doing so, the vast majority are of indifferent quality. This highlights the need to increase public expenditure on education in order to improve the quality of education in the public institutions. Another problem in this sector is the highly skewed pattern of educational development across the state. While some of the educationally advanced districts like Dehradun and Nainital report literacy rates close to 80 percent, others like Udham Singh Nagar, Uttarkashi and Haridwar have registered the same averaging close to the national figure of 65 percent. Not only are inequalities in terms of regional spread of overall literacy rates across the state glaring, the fact of gender discrimination especially at the elementary level in some of the educationally backward districts of the state like Uttarkashi is alarming. With the female literacy rate as low as 15 percent as against 78.9 percent for males in the Naugaun block of Uttarkashi district, a huge gender gap of 63.9 percent at the elementary level is a clear pointer in this direction. Added to this is the high drop-out rate of over 9 percent, especially for the socio-economically deprived sections of society comprising mainly the SCs, STs and OBCs in districts like Chamoli, which is a cause of concern and therefore, requires immediate consideration. These challenges in the education sector will have to be addressed by implementing the *Sarva Shiksha Abhiyan* (SSA) during the Eleventh Plan period. In order to sustain the gains of the SSA, efforts will also have to be made improve quality of teaching-learning and facilities at the secondary level. However, the SSA will not be sufficient for the

development of employment opportunities and this will require the promotion of vocational and job-related education such as computer education. A good beginning has been made in the field of computer education through the *Aarohi* programme at the school level. Similar efforts will have to be extended to other aspects of secondary education.

The health sector is an equally important area demanding the policymaker's attention. Not only does the state have a low record in immunization levels of children, the incidence of institutional births is also reported to be low. Though infant mortality rates registered for Uttarakhand are much lower at 41 (for the year 2003) compared to the all-India figure of 63 (for the year 2002), there is a wide divergence in the rural (62) and urban (21) rates, thereby indicating the extremely uneven pattern of development in the health sector as well. Moreover, there are issues related to women's health and nutrition, particularly in the remote hilly areas where access to basic health facilities is denied that need to be addressed. Access to health care in the rural parts of mountain districts continues to be poor. Given the constraints of terrain and topography and the small and scattered nature of the rural settlements, increasing access poses a major challenge. Of course private sector investment in health facilities has been on the rise, but it has its limitations. It tends to be concentrated in curative facilities, often quite expensive ones, mainly in the urban areas. The poor are unable to afford the high cost of private medical care. This makes a strong case for increasing public expenditure on health. Innovative solutions to the problem would also have to be sought. Partnership with communities and NGOs as well as committed private enterprises could be fruitfully tried, but public expenditure would have to continue playing a leading role. The challenge before policy therefore is to develop institutions that can offer cost effective solutions to problems of access and availability of health facilities for the rural mountainous regions.

Horticulture

Currently, more than three-fourth of the population of the state and a very large portion of the population in the hilly areas have their livelihood in the agricultural sector. Thus, any

attempt at inclusive growth has to increase the incomes from this sector. The agricultural produce consists largely of cereals like rice, wheat and millets, although horticultural products including fruits and vegetables also form a significant part of the net sown area. The yield from the field crops like rice and wheat is not very high in the hilly areas of the state. This is largely due to the mountainous terrain that makes it impossible to adopt mechanized modern agriculture in these areas. Thus, these crops are produced in the hills mostly to fulfill the subsistence needs of the farmers.

The farmers in the hilly regions should be encouraged to shift from the cultivation of cereals to the cultivation of horticultural products as this sector has vast potential. First, the varied climate of the region makes it an ideal location for growing temperate, sub-tropical and tropical fruits that fetch a high value in the domestic urban markets and international markets. Second, the climate also allows these regions to grow off-season vegetables that get a high price for these in the plains. Finally, and perhaps most importantly, the consumption pattern of the average Indian is shifting toward fruits and vegetables and hence the demand for these products are going to increase over time. Unfortunately, despite these advantages, the horticultural produce is not providing the farmers with higher incomes, due to the absence of necessary infrastructure, institutions and incentives.

The development of horticulture depends crucially on three types of factors. These factors can be classified as :

- (i) Natural conditions;
- (ii) Infrastructure and institutions; and
- (iii) Incentives for horticultural producers.

The natural factors include the availability of water to irrigate the plants, the suitability of the climate for the crops and the impact of natural calamities. Irrigational facilities are very important for any kind of agricultural practice. However, the production of fruits like apples requires less moisture than vegetables and hence can be more successful in

areas that lack good irrigation facilities. On the other hand, apples and other deciduous fruits require a temperate climate. Thus, growing deciduous fruits may be more suitable in the relatively higher mountain ranges while vegetables can be grown more successfully in the foothills and valleys that provide a sub-tropical climate, and also have irrigational facilities. The development of horticulture is also affected negatively by the recurrence of natural calamities. The occurrence of very heavy rainfall can destroy vegetable crops while hail causes more damage to fruits.

The development of horticulture also depends on the presence of various kinds of infrastructure and institutions. The yield from horticultural plants- particularly vegetables-depend on the availability of irrigational infrastructure. Post production, the collection and transport of the crop to the market is dependant on roads and transport infrastructure. The perishable nature of these crops leads to the necessity of a network of warehouses and cold storages. The high input costs and the risk of crop failures in this sector makes it necessary to develop financial institutions that can provide credit as well as crop insurance. Last but not the least, there must exist marketing institutions that enable the farmers to sell their crops at a profitable price.

The incentives that the state can give to the small farmers to shift to horticultural production can also encourage the development of this sector. The most important justification for providing such incentives is that the small and marginal farmer who is dependant on subsistence agriculture has no savings and is not creditworthy. This makes it very difficult for them to switch over to horticulture due to the higher input costs involved. Thus the state needs to provide these farmers with subsidized inputs like seeds, fertilizers, insecticides, etc. The second reason for providing incentives is to take care of the uncertainties due to market failure and natural calamities. The most common form of market failure is the lack of competition among the purchasers of these products leading to a low price and profit for the farmer. The state should provide minimum support prices in order to make sure that the poor farmers get a remunerative price. Finally, the provision has to be made to minimize farmer's losses due to natural calamities by means

of crop insurance. If the premium for such insurance is too high for the small farmers, then the state should subsidize this to make it affordable.

There is a lot of potential for the development of horticulture in the state of Uttarakhand. The varied climate conditions make it ideal for the development of diversified horticultural products including fruits and vegetables. However, there are a number of constraints in the development of these crops, particularly in the hilly regions of the state. The biggest constraint faced by the small farmers is the lack of an effective marketing infrastructure that can enable them to grow fruits and vegetables and sell these at a profitable price. Currently, the predominant practice is to sell the produce to middlemen (*Artias*) based in the *mandis* in the plains. This market is highly oligopsonistic, i.e., the middlemen have a lot more bargaining power than the farmers. As a result, the farmers do not get remunerative prices from the middleman, while the latter makes large profits by selling these products at major markets all over India. Another practice, popular with the owners of fruit orchards, is to rent out the produce to private players and middlemen much before the fruits are ready for harvest. In this case as well, it is the middleman who takes most of the profit, while the local orchard owner gets minimum returns from this enterprise. Clearly, the low returns that the landowners get from growing fruits and vegetables discourage them from investing more money and effort in horticulture.

The second problem that limits the development of horticulture is the lack of irrigational infrastructure. Currently, the proportion of net sown area that has irrigation facilities is very low and this is concentrated around the streams and rivers. The rest of the cultivated area gets its water from the rains. Although Uttarakhand gets very heavy rains during the monsoon season, the topology of the area and the nature of the soil do not permit the soil to retain this moisture. Parts of the state are also drought prone with inadequate rainfall once in a while. As a result, a large part of the arable land becomes unfit for production, or gives low yields. The lack of irrigation facilities also discourages the farmer from using costly inputs like fertilizers, high yielding seeds etc. Instead, they use these fields to produce food crops like rice and wheat to fulfill their subsistence needs.

The returns earned by the farmers from horticulture, and particularly from fruits, are also low due to the lack of sufficient agro processing units and agro industries in the state. There is a significant part of the fruit produce that gets spotted due to hail or does not have the requisite shape or colour due to natural reasons. These become unsuitable for sale as fresh fruits and are more appropriate as inputs for agro processing industries. However, due to the absence of these industries in the state, the farmers try to sell off such lower quality fruits together with the better quality. As a result, they get an average price for all the qualities and this is usually very low.

The practice of producing horticultural crops is not new in the mountains of Uttarakhand, although in the past, a large part of it was for domestic consumption rather than for commercial purposes. For increasing the incomes of farmers in the rural mountainous regions, the thrust has to be on modern commercial horticultural practices. The problem however, is that small and marginal farmers lack adequate knowledge about the most suitable and remunerative crops or the scientific practices that can ensure the success and high yields of these crops. Even when this knowledge and information barrier is bridged, they are handicapped by the high cost of acquiring high yielding seeds, fertilizers, insecticides, pesticides etc., partly due to their high prices and partly due to their outlets being far off from the villages and farms.

Small and marginal farmers in particular are also vulnerable to the vagaries of nature. Unseasonal or heavy rains sometimes completely destroy the vegetables before they are ready for harvesting. Hailstorms regularly destroy a significant part of the output from fruit orchards and vegetable farms. A related problem is the lack of an adequate network of warehouses and cold storages, as a result of which a large portion of the produce perishes before the farmers can sell it.

It is clear that in order to develop the horticultural sector in the state, all the problems listed above have to be addressed by means of appropriate policies. A successful policy package has to consist of specific policies that will address the problems in this sector. It must also be clearly understood that the overall policy package must try to solve all the

problems simultaneously, as any one set of problems, if not addressed adequately, can significantly dampen the development of the sector.

The lack of marketing institutions and infrastructure has to be dealt with immediately by the government. The objective of this policy should be to provide the farmers with alternative options to sell their products, so that the portion of the profit going to the middlemen is minimized and the farmer gets a better price for his produce. There are three types of institutions that the government needs to create or strengthen for this purpose.

1. A Horticultural Marketing Board that will help, particularly the small and marginal farmers, to grow horticultural crops and market them at remunerative prices.
2. Strengthen the farmers cooperative associations and encourage them to corporatise themselves so that they can employ professionals to help them market their products.
3. Allow and encourage contract farming between farmers and fruit and vegetable retailing firms, so that the role of the middlemen can be minimized.

It must be understood that while the first institution, i.e. the marketing board, should primarily target the poor and marginal farmers, the medium and large farmers can use the second and third type of institution more effectively. It may be useful at this stage to point out, that though the state has declared that it is an “Organic State”, it will be useful to the farmer only when the produce can be marketed at a higher price with the help of organic certification.

The second set of policy initiatives have to deal with the provision of various types of infrastructure facilities necessary for the development of the sector. An effective network of major and minor roads and ropeways need to be built to enable the collection and

transport of horticultural produce to markets and make this process less costly. In order to provide irrigation in the rain fed areas, rainwater harvesting has to be developed and small and medium sized reservoirs for the collection of rainwater have to be built. Electric pumps can be used to lift water to the farms at higher attitudes, while sprinklers and drip irrigation should be encouraged for the efficient use of water. Warehouses and cold storages for the preservation of the fruits and vegetables have to be built in the hill areas as well as in the major markets of the country. Agro processing units need to be encouraged through public-private partnerships both in the hills and in the southern plains of the state.

The problems of inadequate information about best crops and best practices that are faced by farmers are crucial to the development of horticulture. The planning for horticultural development has to include a continuous process of scientific market analysis that will determine the most remunerative crop or group of crops for a particular region. The institutions for the dissemination of knowledge about these crops and the scientific methods of horticulture have to be strengthened. There is the related issue of the supply of appropriate inputs for these best practices to the farmers. These inputs have to be supplied at appropriate times from outlets that are in the nature of one-stop shops that are within a reasonable distance of such villages and farms from where the farmer can get all kinds of agricultural inputs under one roof.

The small and marginal farmers need both scientific and financial help for their fight against natural calamities. For calamities that are relatively moderate in impact, small and marginal farmers must be supplied with poly-houses, poly-tunnels, hail nets, etc. However, for calamities that are severe, the only protection for farmers can be through crop insurance. The financial infrastructure must be strengthened and encouraged to provide an insurance cover for various kinds of horticultural crops. If the premiums for such insurances are high, then small and marginal farmers may not be able to afford these policies. The state should subsidize the crop insurance for small and marginal farmers.

Tourism

Another sector of the Uttarakhand economy that should be developed vigorously during the Eleventh Plan period is tourism. Tourism is the third largest economic activity in the world, surpassed only by oil and motor vehicles, and forms the largest activity in the services sector. While more than two-thirds of the global tourist arrivals and receipts are accounted for by developed countries, the contribution of tourism to third world economies is by no means insignificant. It is also one of the fastest growing sectors of the world economy. Moreover, domestic tourism is also on the rise in India. The high growth rate of the Indian economy in the last few years and the accelerating income of the middle class have given a considerable boost to this sector. As a result, the demand for this sector is at an all-time high. The Uttarakhand economy is ideally situated to take advantage of this situation and scale up its tourism sector. The two inputs that are necessary for the development of this sector, i.e., natural and human capital, are abundantly available in the state. Thus, it has the potential to match the rise in tourism demand with an increase in supply of tourism services.

While industrial and most services-related activity naturally flourish in areas that are already developed in terms of infrastructure, urbanization, etc, tourism can be developed in relatively underdeveloped areas, provided they have something of interest to the tourist. Thus, in comparison to industry and these other services sectors, the tourism sector is especially suitable for promoting inclusive growth. Uttarakhand is particularly well endowed in this respect and can develop various kinds of tourism activities. These include

(i) Leisure tourism in the hill stations:

There are a number of hill stations in the state including Nainital, Mussoorie, Almora, Kausani and Ranikhet that are currently established centres for leisure tourism. There are a number of other spots like Chakrata that can be further developed for these activities.

(ii) Religious tourism:

The “Char Dham”, i.e., Kedarnath, Badrinath, Gangotry and Yamunatry are some of the most venerated religious places for the Hindus. The state can develop the tourist infrastructure in these places and along the roads leading up these places.

(iii) Adventure tourism:

These activities include river-rafting, kayaking, skiing, trekking, paragliding, etc. The fast moving mountain rivers and the slopes in the higher ranges of the mountains provide ideal locations for these activities.

(iv) Nature and wildlife tourism:

The state has a number of protected forests and sanctuaries, including the Corbett National Park, Rajaji National Park and the Valley of Flowers. These areas can be used to develop wildlife and nature tourism on the pattern of successful cases like Kenya.

Development of the tourism sector can help the local economy in a number of ways. The most important impact is the creation of employment for the local people. Employment will be created in the hotels, restaurants and other kinds of lodgings as well as in the tour-operating sector. More importantly, employment will also be created through indirect channels in a variety of sectors including local handicrafts, etc. Apart from employment creation, the sector can also increase the demand for fruits, vegetables and milk, etc. produced in the villages around tourist spots, for the consumption of the tourists. The development of this sector also provides tax revenues to the government in terms of user charges, etc., and this can be used for the development of the area. More importantly, a thriving tourism industry links up the hill areas with the rest of the country and brings down the social and economic isolation of the people.

There are, of course, some potentially negative effects of tourism as well. The biggest problem with unregulated and unplanned growth in tourism is the environmental degradation that it can cause by the overuse of the natural capital. This will not only have an adverse impact on other productive activities in the mountains, but can destroy the future prospects of the tourism sector as well. Further, unregulated tourism puts a heavy burden on the urban infrastructure of tourist destinations, choking up roads, civic amenities, etc. This can cause the tourists and the local population severe hardships in the peak tourist seasons.

It is clear that the tourism sector has to be developed extensively as a part of any policy programme for inclusive growth in Uttarakhand. However, the adverse impact of unregulated growth in this sector, particularly in terms of environmental degradation, cannot be ignored. An optimal tourism policy will have to assess the volume and quality of tourism that will not cause environmental degradation or overuse of urban infrastructure in the tourist destinations, and hence will be sustainable in the long run. Once this is determined, the development of tourism should be on the basis of a planned approach that maintains this volume and quality of tourism, while trying to maximize the returns to the local economy – in terms of income and employment to the local people. In order to do this, the focus will have to be on high-value tourism, i.e., encouragement to those tourists who are capable of spending substantial amounts of money during their stay in these areas. These would obviously have to include the well-to-do tourists in the domestic sector and foreign tourists.

In order to promote high-value tourism in the state, the sector has to provide a high quality tourism experience. The main attraction for tourists in the state is, of course, the Himalayas. The experience of watching the snow capped peaks from a close range is a sublime one, and the tourism infrastructure must make sure that this experience can be provided to the tourists without compromising on comfort, and in new and innovative ways. Apart from developing the infrastructure of hill stations, this should involve aerial tours of the Himalayan ranges using helicopters. Of course, a high value tourist would want other forms of recreation as well, and this means that the state must offer a package

of activities that will attract the tourist. The forest areas and the protected sanctuaries are ideal for the development of nature tourism. The upper ranges of the mountain can be used to develop adventure tourism with activities like skiing, paragliding, etc. The Mountain Rivers are also appropriate for the promotion of rafting, kayaking, etc. Most importantly, all these activities must be coordinated with the hotels and tour operators so that tourists find it simple and easy to opt for these activities.

The development of tourism requires a lot of physical and human infrastructure. The most important physical infrastructure for a hilly state like Uttarakhand is a network of good quality roads that connect all the tourist destinations. Deploying high quality bus services and encouraging car rental facilities can further develop the transport network. The connectivity of the destinations can be further improved by developing facilities for air taxi services by small aircrafts. The human capital needed in this sector needs to be developed as well. This involves the training of tour guides, trekking attendants and instructors for activities like skiing, paragliding, rafting, etc. These jobs need technical expertise that may be imparted through vocational training centres. Overall, the tour operators and tourists agencies must be encouraged to corporatize and become more organized and professional.

Other than infrastructure, the most important factor for the development of high value tourism is the availability of quality hotels. While this sector should be developed through the private sector, there are some issues here that need policy intervention. The first problem is the availability of land. There may be a number of problems including land-use laws, environmental clearance, etc., and the state must act as a facilitator, enabling the private sector to acquire land for the development of hotels, lodges, etc. The other problem with the hotel industry is the seasonality of tourism leading to largely unused capacities and low returns during significant parts of the year. This problem may be dealt with by encouraging a policy of market segmentation coupled with price discrimination. This involves a separation or segmentation of different groups of consumers and charging different segments differently. For example, discounts on 'standard prices' such as reduced airfares for particular groups, viz., students, senior

citizens and so on. The tourism policy must also break the seasonal pattern by developing winter tourism.

For the successful development of high-value tourism, it is important to reach out to the potential tourists who are ready to spend substantial amounts of money for the services in this sector. For this, while it is important to build quality tourism-related infrastructure, it is equally necessary to make sure that the potential tourist has adequate information about the facilities available in the state. The most effective way to attain this objective is to promote the state and its tourism sector as a brand. This will involve innovative campaigns through the media and the Internet that focuses on the factors that attract various types of tourism.

The development of the tourism sector should also give more thrust to international tourism. In order to adopt appropriate policies for this sector, it is very important to understand certain aspects of the international tourism industry. Unlike standard manufacturing industries, international tourism does not have a unique base as an industry. It is essentially a collection of a wide range of service-based activities comprising mainly of three important sub-sectors, i.e., (i) the International Tour Operators and Travel Agents based mostly in the first world countries, (ii) the Civil Aviation and Transport Industry that carries tourists to their destinations, and (iii) the Hotels and Accommodation sector in places of tourist interest.

International tour operators are basically intermediaries between the producers and consumers of tourism related services. Their main function is to reduce information and transaction costs for the tourists and promotional expenditures for the suppliers of tourism services. However, the rising profitability of tour operators owing to the increasing competitiveness of the civil aviation market has led to a highly monopolistic international tour operator industry. Thus, a small number of tour operators have a very large share of clients in the US and Europe. On the other hand, in the civil aviation industry, the gradual movement from a regulated to a deregulated regime in the nineteen nineties has led to cutthroat price competition and minimum profits in the international

airline market. The growth of foreign tourists to any country is also greatly influenced by the nature of its hotel industry. The present structure of the international hotel industry is highly skewed in favour of multinational corporations who are mainly based in developed countries. Not only are these multinational hotel chains able to produce goods and services more cheaply owing to significant economies of scale in production, they are also considered to have better managerial and organizational skills compared to their domestic counterparts.

The three sub-sectors that make up the international tourism industry, i.e., the international tour operators, the civil aviation industry and the international hotel chains, are closely interconnected through cross ownership. Thus, large players in the tour operating and civil aviation industry have major stakes in the multinational hotel chains. This results in each sector having a stake in the success of the other sectors and the three sectors act as a part of the overall supply chain in international tourism. This has important policy implications for the international tourism sector. To put it simply, any tourist destination that becomes part of this supply chain has an assured supply of foreign tourists visiting it regularly. It follows that any region that wants to attract foreign tourists through this supply chain has to encourage multinational hotel chains to build and acquire hotels and resorts in the tourist destinations. The state should also encourage the multinational civil aviation firms to invest in the tourism sector in Uttarakhand.

It must be clearly understood that the development of high value tourism may not automatically lead to better livelihoods and incomes for the local people. If the tourism sector does not integrate itself with the hill economy, then the demand created by this sector will lead to an increase in incomes in the plains or in other parts of the country. The policy package for inclusive growth must ensure that the forward and backward linkages from this sector ensures growth in the local economy. There are two kinds interventions that can be undertaken to achieve this objective. The first is a fiscal intervention where the state can collect revenues by taxing the sector and spending it on the development of the local economy. The second form of intervention is as a facilitator, ensuring that the goods and services of the local people and their assets are

used by the tourism sector. These linkages between the tourism sector and the local economy can take many forms. The development of tourism requires land for various purposes and the state can encourage local landowners to earn an income by leasing their land. The state can enable the local farmers to fulfill the demand for fresh fruits, vegetables and dairy products consumed by the tourists. Non-farm employment can be created for the hill people by developing the production of handicrafts and ethnic products that can be sold to the tourists. The tourism sector can be encouraged to provide employment to the local people in the hotels and the tour operative business. Employment can also be created for the local people as tourist guides and instructors of adventure sports activities. Sometimes, market failures block the development of some of these activities or prevent the local people from getting a reasonable return from them. It is necessary for the state to intervene in these situations and deal with the market failures by means of appropriate policy.

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