

**RURAL DEVELOPMENT OF UTTARAKHAND: PROBLEMS AND
FUTURE ROADMAP**

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ABSTRACT

Present paper having reviewed indicators of development of Uttarakhand including geographical position, demographic status, indices of infrastructure, agriculture, potential of tourism and economic profile of the state collated with available studies on economic development of Uttarakhand state aims at exploring various factors resulting in underdevelopment of target area and economic disparity between Hill and plains district of Uttarakhand state even after fourteen years of creation as 27 th state of India from bifurcation of Uttar Pradesh . Present paper extensively studies drivers and enablers of development in target area. Present study emphasizes optimum and increased use of conventional and non conventional energy sources and recommends tapping of enormous potential in tourism and organic farming for ensuring rapid economic development. Paper also identifies various potentials which needs to be exploited judiciously towards bright future for development of region.

INTRODUCTION

Uttarakhand, after bifurcation from Uttar Pradesh, was formed as the 27th state of India on 9th November 2000. It is divided into two broad regions - .Garhwal and Kumaon. The state has 13 districts, 49 sub-divisions and 95 development blocks. Uttarakhand is primarily a mountainous state, as the plains constitute only about 10% of its total geographical area. Out of thirteen districts, only Haridwar, Udham Singh Nagar and some parts of Dehradun and Nainital districts are in the plains. The state is part of the central Himalayas and most of the northern area comprises of high ranges and glaciers and the lower reaches are covered by dense forests. Rich in natural beauty, the state is on the priority list of tourists, with Mussoorie, Almora, Ranikhet and Nainital among the most frequented places by domestic and foreign tourist in the country.

This state is also strategically located for religious tourism as two sacred rivers i.e Ganga and Yamuna originate from glaciers in the state. Haridwar, Rishikesh, Badrinath and Kedarnath are holiest shrines for pilgrimage for Hindus. The economy of Uttarakhand is predominantly agrarian as 78 % of its population is dependent on agriculture for livelihood.

Uttarakhand has vast potential for development however development has predominantly been in the plains, and the hill districts have been left behind. All the hill districts have subsistence farming as their main economic activity. Due to subsistence livelihood, migration and a remittance economy operate in the hill districts. They are land-locked with huge distances between the markets and resources. Because of these constraints, traditional agriculture cannot be the lead sector for development.

A study by Sabyasachi Kar (2007) explains as to how equitable growth focusing on GDP growth and distribution of growth to all sections of the population and geographical regions of the country is vital. In case of Uttarakhand the development has been restricted in the plain districts of the state and the hill districts have remained cut off from country's mainstream. Kar emphasizes on the need of policy making according to the aspirations of the hill districts of the

state. Rashmi Gangwar (2007) points out as to how due to high migration rate of men in Hills women are left behind to make both their ends meet that also with insufficient and infertile land. Sekhar (2007) found that women's participation in the rural economy is noteworthy. Migration even tends to be highly gender-specific: in Uttarakhand it is the male population who leave their villages to engage in off-farm activities while women remain behind to maintain domestic affairs.

Mehta (2008) pointed identifies alternative economic activities that are viable given the economic, social, and institutional constraints in order to reduce the drudgery of women in agriculture. She explains the importance of women co-operative and self-help group towards developing alternative livelihood activities.

Chakraborty 2009 in "A Note on microfinance in Uttarakhand" explains as to how mimo finance as a professional microfinance institute in Uttarakhand provides credit, insurance, money transfer, pension products and micro-equity services to poor and women. Sekhar (2007) points out the relevance of alternative professions for women other than agriculture viz..Dairy farming, mushroom cultivation, bee-keeping, quilt-making, poultry farming, papadmaking, and petty business. As alternate/supplementary economic activities, the last three, namely, poultry farming, papad-making, and petty business contribute more than 50% to household income.

Kumar (2005) has examined the potential of micro-hydropower in Uttarakhand. Uttarakhand has enormous potential for small, mini- and microhydropower generation. The overall hydropower potential of the state is estimated as 40,000 megawatts, Hydro-electric power generation provides electricity at a cheaper price and in an environment-friendly manner. This crucial price advantage of hydropower-based electricity may act as a catalyst for the economic development of the state and can be a boon in sectors of the state economy, such as agriculture, fiber-processing, and tourism.

The hill region districts are less developed compared to plains in terms of infrastructure, i.e., electricity, roads, health facilities, irrigation. This leads to increasing disparity in terms of income and livelihood between the hills and the plains. More than three-fourths of Uttarakhand's total population depends on agriculture for their livelihood and the economy is predominantly dependent on mountain agriculture following terrace farming. However, the land holdings in

Uttarakhand are small and fragmented, and irrigation facilities limited. This poses serious problem of generating income for local population. (ICRIER working paper 217: 2008)

The indicators provide in the next section reflect the present status covering geographical position, demographic status, indices of infrastructure, potential of tourism and economic profile of the state.

SCOPE OF THE STUDY

- (i) Explore various factors resulting in the underdevelopment of target area
- (ii) Study drivers and enablers which provide strength towards the development of area

OVERVIEW OF STATE - UTTARAKHAND

Uttarakhand state created out of erstwhile uttarpradesh consists of a total geographical area of 53,483 sq. km which accounts for only 1.63 per cent of India's area. The state contains about 63 per cent of forest area and about 13.37 per cent of area is under agriculture (Table 1). (Uttarakhand at a Glance, 2011 (Govt. of Uttarakhand))

Table: 1 Geographical Indicator

INDICATORS	UTTARAKHAND
Total Geographical area (thousand sq km)	53,484 sq km
Area under forest	34651 sq km (63%)
Area under agriculture	13.37 lakh Ha(23.6%)

Sources: Indiastat (www.indiastat.com) and Uttarakhand at a Glance, 2011 (Govt. of Uttarakhand).

DEMOGRAPHIC STATUS

The state has got low population density and growth rate of population is less than national average. The promising demographic feature of the state is high literacy rate, especially among females

Table: 2 Demographic indicators

INDICATORS	UTTRAKHAND	INDIA
Total Population (in lakhs)	1.01	121.01
IMR	36	44
Population Growth Rate	19.17%	17.64%
Population Density	189	325
Sex Ratio	963	940
Crude Birth Rate	18.9	21.8
Crude Death Rate	6.2	7.1
Literacy Rate Total	79.63	74.04
Male	88.33	82.14
Female	70.70	65.46

Source: 2011 Census

The state has got very low population density and growth rate of population is less than national average. The promising demographic feature of the state is high literacy rate, especially among females:

STATUS OF INFRASTRUCTURE Difficult terrain has proved to be a major constraint to creation of adequate infrastructural facilities, especially in ensuring connectivity by road. Roads are the major mode of transportation service available in the Uttarakhand. However much needs to be done for strengthening Railways and civil aviation especially in rural and hilly regions.

Table 3: Status of Infrastructure

ITEMS	YEAR	PARTICULARS
Road Network	2009-10	33,914.7 KM
Road Density	2006-07	52 KM/100 Sq. KM
Rail Network	2009-10	345 KM
No of Airports	2009-10	2
Installed Power Generating Capacity	2010-11	1305.90 MW

Electricity generated (Gross)	2010-11	4906.27MU
Per Capita Electricity Consumption	2000-01	396/Units

Source: Reports of GOI and Uttarakhand Govt 2010-11

Table 4: Road Infrastructure

CATEGORY OF ROADS	LENGTH IN KM
National Highway	1375
State Highway	1576
Major District roads	568
Other District roads	6827
Rural Roads	12375
Light Vehicles Road	1100
Total	23774

Source: PHD Research Bureau, Compiled from Directorate of Economics and Statistics
 Uttarakhand Data pertains to 2009-10.

STATUS OF TOURISM

A large number of domestic and foreign tourist visit Uttarakhand as a favorite tourist destination owing to natural beauty with a unique mountain environment as well as rich historical and cultural assets. State also has internationally acclaimed religious shrines.

Table 5: Time line data for Tourist Arrival

	2008		2009		2010	
	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
Uttarakhand	20546323	99910	21934567	106470	30206030	127258
All India	562982298	14112590	650038673	13717522	740214297	17852777

Source: Indian Tourism Statistics, 2009-10

As shown in Table 5, Out of the total number of tourists who arrive in India only 3-4 per cent tourists visit Uttarakhand. This situation has remained unchanged since the state was created in 2001. Among tourists, the majority are domestic tourists. This presents a gloomy picture of state tourism development and also shows that there is a lot of requirement for developing tourism sector in Uttarakhand.

AGRICULTURE

Total population of Uttarakhand dependent on agriculture for their livelihood is about 75-85 per cent. As against this the contribution of agriculture to the state’s domestic product was about 23.4 per cent in 2004-05 which has fallen down to 14.73% in 2010-11. People in the hills have been primarily engaged in subsistence agriculture. The low agricultural yield reflects the small size and scattered land holdings, difficult terrain, unfavorable climatic conditions for some crops, lack of or inadequate availability of improved inputs and technology, and lack of credit and marketing facilities (Dewan and Bahadur 2005). Declining contribution of agriculture and allied activities in one of the macro indicators of state’s economy in the form of state domestic product (SDP) with base year 2004-2005 are appended below.

Table 6: Sector wise Percentage Contribution of GSDP at Current prices

Sector	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
1	2	3	4	5	6	7	8
Primary	23.48	21.03	19.82	16.70	15.51	15.66	14.73
Secondary	27.02	29.80	32.46	34.89	34.35	32.60	32.41
Tertiary	49.50	49.17	47.72	48.41	50.14	51.73	52.86

Note: Rounding off has been done.

Source: Directorate of Economics and Statistics, Govt. of Uttarakhand

Analysis of sectoral contribution in GSDP at current prices reveals that contribution of primary sector comprising of agriculture, livestock, forestry, fishing, mining and quarrying is decreasing. While the contribution of secondary sector comprising of manufacturing, electricity, gas and

water supply is increasing. It is clear that share of primary sector has gone down by 8.75 points in the reference period whereas share of secondary sector has gone up by 5.39 points. Contribution of tertiary sector comprising of trade, banking insurance, transport, business services and other services has gone up slightly by 3.36 points

FUTURE ROAD MAP TO DEVELOPMENT IN UTTARAKHAND

Uttarakhand has tremendous potential owing to its vast bounty of natural resources and flora/fauna which adds to the state's attractiveness as an investment destination, especially for tourism and agriculture and forest-based industries. A study by Malhotra (2005) shows that forests play an important role in the state economy. Forests are the major source of raw materials for industries, buildings, railways and other tertiary sectors. Timber and fuel form the major produce group, while herbs, grasses, gum, resins, bamboo, etc. constitute the minor produce group. Uttarakhand is the first state in the country to have created a Tourism Development Board by legislation. Also, it is the first one to be called an organic state. The positive features of these hill districts are that they have tremendous development potential due to availability of nearly 70% Forest cover, natural beauty along with pleasant climate for attracting domestic and foreign tourist and a plethora of unexploited natural resources which have to be harnessed for a development strategy (ICRIER working paper 217, 2008). Various Potentials which needs to be exploited judiciously towards bright future for development of Uttarakhand state are as follows:

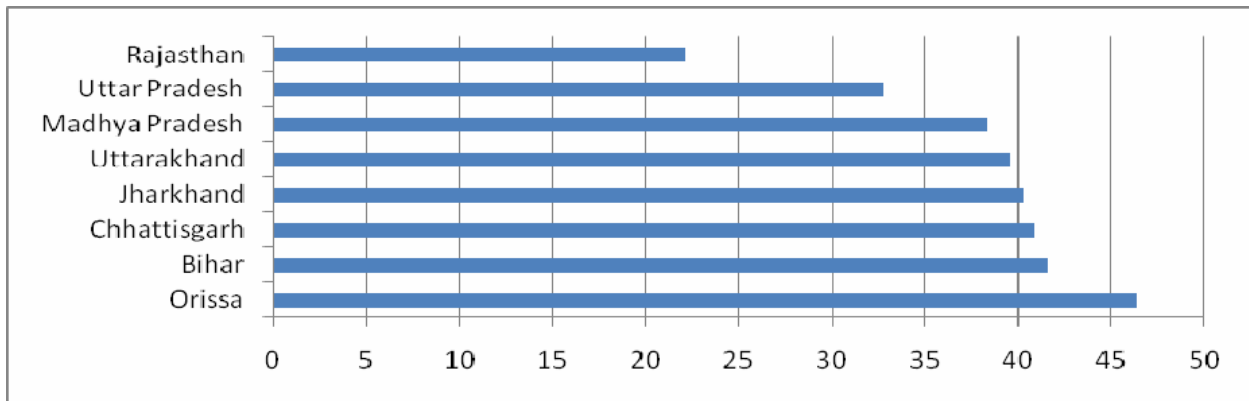
- Huge prospective for adventure, rural and religious tourism
- High rate of literacy since 1971, literacy rate of Uttarakhand has been higher than India's literacy rate. In 2011, the literacy rate of Uttarakhand, which is around 80%, is also higher than the national average, which is estimated around 74%. Uttarakhand ranking is better than the developed states like Punjab and Gujrat
- Potential for hydropower generation to the tune of 40,000 megawatt (Kumar 2005)
- Rich cultural heritage
- Rich source of biodiversity i.e. Himalayan Flora and fauna and natural resources

CONSTRAINTS IN DEVELOPMENT

Uttarakhand is strategically located at the foothills of the Himalayan ranges and has predominant mountainous topography. Uttarakhand is one of the fastest growing states of India, the State's economy grew more than 9% during the last decade. The tertiary sector contributes around 52.86% in GSDP followed by the secondary and primary sectors at 32% and 14% respectively. Share of Industry sector in the state's economy has shown excellent growth during recent years. However socio economic indicators of economic development when summed together do not present a optimistic picture. Various constraints which are retarding growth story of Uttarakhand even after 15 years of its formation are as follows:

- There is a high rate of unemployment in Uttarakhand due to which most of the Uttarakhand, young men generally migrate to the plains in search of employment due to absence of avenues for employment and livelihood options for local population whereas women are left behind to cultivate the land and take care of the children and the older generation. (Shekhar 2007).
- Migration of men from hills to other states for employment due to high migration rates of men for work. With little education and technological know-how, women are left to struggle with infertile marginal agricultural lands, diminishing natural resources as well as insufficient health and infrastructural facilities to nurture their families (R Gangwar Center for Environment Education- Himalaya, Lucknow, India).
- Poor infrastructure and Scattered population- over 80% villages have a population less than 500 (Kar 2007) The study shows that development has been mainly in the plain districts of the state and not the hills, which have remained cut off from the rest of the country.
- Poverty is still a major bottle neck in the development of the state. Poverty level in the state is 39.6% which is quite high as compared to the national average of 27.5%.

Figure 1:



Source: PHD Research Bureau, Compiled from Annual Report to People on Health, September 2010

- Almost entire state is identified under very high seismic zone category v and iv
- Almost 65% of total geographic area is covered by forest leaving little space for developmental activities
- Uneconomic holdings in hills 72% holdings are under category of marginal holdings and 47% are below the size of 0.5Ha (*Uttarakhand Annual Plan 2011-12*)
- Regional inequalities between hill and plane districts of Uttarakhand as brought about in *Uttarakhand Annual Plan 2011-12*, shows that share of all 09 hill districts (out of 13) in GSDP is merely 35% of state GSDP. This is a major impediment in development.

SUGGESTIONS AND RECOMMENDATION

- ***Optimum utilization of hydro power potential:*** The overall hydropower potential of the state is estimated as 40,000 megawatts, which is half the additional power projected to be realized during the next two decades for the entire country. (Kumar 2005). State should aim to tap the hydropower potential of Uttarakhand which itself will be a catalyst for its development and to raise the quality of life of its people by providing cheaper and environment friendly electricity. Uttarakhand has huge potential for generating

hydropower; nearly 15000 MW of hydropower can be generated in the state. The government has identified 47 small hydro sites (upto 25 MW) for allotment to the private sector, 17 major hydro sites (25-100 MW) have also been taken up for development (Uttarakhand: The State Profile June 2011 : PHD Chamber of Commerce and Industry).

- **Power:** State should ensure 100 % electricity connection to all households by reducing transmission & distribution loss, harnessing potential of hydro power generation, and focusing on smaller power plants for ensuring power to remote villages and feasibility of revival of gharats (ICRIER working Paper No 217, 2008)
- **Water:** In spite of having many perennial rivers, only 52 % of residents of state have full access to drinking water. Need of the hour is water harvesting. The harvesting and storing of water is an important technology that needs to be shared and implemented to protect toward sustainable development of hill state.
- **Agriculture:** integrated approach should be adopted to facilitate development of agriculture & food processing industry in the state. Creating linkages between producers and buyers will boost the farm output growth. Special focus on seasonal fruits, high value herbal, medicinal and aromatic plantation etc, will help in improving income of the farmers. Emphasis should be on improvement in yield and quality of agriculture products. The government needs to provide assistance to establish and sustain small and medium size agro parks, food parks, etc. for fruits, rice and medicinal plants. State government also needs to provide subsidy for projects under various schemes of Agricultural and Processed Food Products.
- Contract farming of medicinal plants, herbs and fruits with buy back arrangement is to be promoted in Uttarakhand, involvement of Self Help Groups, Non-Government Organisation and Private Partnership in field of Agriculture will go a long way in producing desired results.
- In Uttarakhand around 10,000 ha land is under organic farming, covering over 15,000 farmers and 45 crops (ICRIER Working Paper 217, 2008) Organic farming needs to be promoted more and more in state.

- Malhotra (2005) points out that forests play an important role in the state economy accordingly more forest area needs to be brought under mixed forestry for sustainable agriculture development in the hills
- An impact assessment study (UOCB, 2007) concluded that setting up three institutions in marketing, credit and watershed management would considerably enhance the move towards organic farming in the state. Watershed development programme needs to be implemented in a big way
- *Increased use of energy resources* Remote Village Electrification can be achieved through non conventional ways like solar and Micro Hydel projects and Watermill. Equipments like Solar Lantern, Solar Home Light & Solar Street Light , Solar Water Heating systems and Solar Steam Cooking Systems can also be promoted in rural and remote areas. Installation of Domestic & Institutional Biogas Plants and Liquid Waste Projects are also viable options (Uttarakhand Renewable Energy Development Agency, 2010)
- Establishment of scientific parks and technological hubs will go a long towards development of pharma and biotechnology sectors.
- R & D set up to be created for developing low cost technologies for improving the quality of life of hill people (especially woman) by linking them with Microfinance (Chakraborty 2009).
- Tourism sector has lot of potential which needs to be explored. Eco- tourism including development of facilities viz.. hotels, resorts, amusement parks and ropeways and safaris along with adventure tourism should be targeted. State government has come up with many schemes to promote investment in the state including rebate in the taxes for new tourism units and tax holiday for five years for new amusement parks and ropeways.
- Transport infrastructure in form of Roads and connectivity with other regions, is lagging in Uttarakhand. Maintenance of the roads due to heavy rainfall, landslides, soil erosion, snow fall and natural calamities in state is also a grey area. Railways have a very limited network in state which needs to be addressed. Keeping in view the topography of the State, high cost of road construction and natural calamities involved therein, civil aviation can be one of the

most feasible alternatives. The state as on date has only single operational airport at jollygrant near Dehradun. Development of airports with connectivity to major metropolitan cities needs to be planned for.

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