



# LIFE AHEAD FOR UTTARAKHAND

Rebuilding Infrastructure & Reviving Economy

August 2013



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ISBN No. 978-81-924590-5-9

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**Suman Jyoti Khaitan**  
President

## From President's Desk

Uttarakhand has emerged as one of the fastest growing states of India, supported by its vibrant agriculture, industry and services sectors. Although agriculture is one of the most important thrust areas of its socio-economic structure, tourism is also one of the key driving sectors of the economy.

In recent years, rapid industrialisation has been attracted by the state in different sectors of the economy. The state has picked up growth with establishment of large and small scale industries especially the MSMEs. However, the state well known for its enormous natural beauty was recently hit by heavy rains and cloudburst.

The terrible magnitude of nature's wrath in Uttarakhand ruined thousands of houses, swept away many structures, thousands got stranded and many precious lives have been lost. The State suffered heavy losses of infrastructure and its economic activity. Tourism sector, the mainstay of the hill economy has been worst hit by the disaster ruining around 60% of total tourism prospects of the state. Chardham yatra, one of the major contributors to the state's economy has been severely affected.

PHD Chamber has always worked in the direction to develop the Northern and Central states of India and the nation. It acts as a catalyst for rapid economic development in the northern and central regions of India through promotion of trade, industry and entrepreneurship. With its focus on socio-economic development of the grassroots, the Chamber actively endeavours to facilitate socio-economic progress in the states served by it and the nation at large, through its research based policy advocacy.

PHD Chamber of Commerce and Industry would like to urge everyone for their collaborative efforts to support those who are affected and threatened by natural disaster in Uttarakhand. We have our deepest sympathies and pray for the peace of the departed souls. We hope for the well being of those who lost the bread earners of their families in the dreadful tragedy.



**Sharad Jaipuria**  
Sr. Vice President

## From Senior Vice President's Desk

Uttarakhand is well known for its education as it is bestowed with the best boarding schools in the country especially in the areas of Mussoorie, Dehradun and Nainital. Dehradun, the state capital is an important centre of education in North India.

Education has contributed significantly in the economic development of the state. It is also encouraging to know that the literacy rate of Uttarakhand has always been higher as compared to the national average. The literacy rate of the state stands at around 80% as compared to national average of around 74%.

At this point of time when Uttarakhand is badly hit by the nature's fury we would like to express our deep condolence to the people who have lost their near and dear ones. The economic loss which is incurred by the state can be recovered by promoting its strong education sector. State should establish educational institutions and other vocational training institutes to impart best education which can further help in rebuilding its economy.

PHD Chamber of Commerce and Industry has always played an important role in economic development of Northern and Central states of India. Today when Uttarakhand is facing heavy loss of lives and infrastructure, we urge everyone to come together and contribute in rebuilding the state. We pray to god to provide solace to the departed souls and give courage to the bereaved families to bear this loss and fortitude.

**Alok B Shriram**

Vice President

## From Vice President's Desk

Uttarakhand is one of the largest producers of seasonal fruits like leechi, apple, plum, peach, etc and premium quality basmati rice. It has vast potential for exports. In order to explore the export prospects of the state various focussed measures have been adopted by the state government. Numerous proactive policies have been devised to enhance agri-exports from the state. Further, to promote the agri exports from the state four Agri Exports Zones (AEZs) have been developed.

Uttarakhand has been severely affected in the recent catastrophe and incurred heavy losses of lives and livelihood. The natural disaster in the state has devastated many areas and taken a heavy toll in human lives. The state has been exposed to economic challenges and uncertainties. Going forward, there is a need to focus on promotion of MSMEs and boosting exports from the state as it would play a critical role in revitalising the overall economic growth of the state. We need to work hand in hand to rebuild the damaged infrastructure and reviving the economic development of the state.

In the hard time, we stand together with the people of Uttarakhand and express our heartfelt condolences to the victims of the disaster. We convey our sympathies to the families of victims.



**Ashish Mohan Wig**  
Chairman, Infrastructure  
Committee

## Foreword

Uttarakhand has been an agrarian economy but during recent years industry and services have contributed significantly to the economic growth of the state. It has shown consistent industrial growth since its inception contributing a share of around 36% in GSDP during 2012-13.

The process of industrialization has been boosted in Uttarakhand during the recent years. The key industries contributing significantly to economic growth of the state are tourism, IT, education, agro and food processing and biotech. Large number of small and medium scale enterprises has been established in the major cities of the state. Further, numerous industrial sops have also encouraged industrial development of the state.

However, recent disaster has severely affected Uttarakhand in terms of loss of lives and infrastructure. The incident will also impact the industrial development of the state. We are deeply concerned with the recent tragedy which has affected the thousands of people and business activity at large in the state. We convey our deepest and heartfelt sympathies to the families affected by the rain-flood tragedy.

Going forward, the state has a daunting task of reconstructing and rebuilding its economy which would require efforts not only from the government but also from industry and socio economic institutions. Uttarakhand need to revive its economy by initiating measures in the areas of employment generation through promotion of MSMEs, boosting tourism, infrastructural development, encouraging service sector activities, promoting education and facilitating agro and food processing industry.

We need to have a planned and sustainable development where we should not only respect the environment but also improve our economic growth. Thus, it is essential for the state government and industries to join hands and work in the development and betterment of the state.



**Saurabh Sanyal**  
Executive Director

## Preface

“Life ahead for Uttarakhand: Rebuilding Infrastructure & Reviving Economy” is a study examining the aftermath of the recent devastation which wrecked the state of Uttarakhand. PHD Research Bureau has come up with an assessment of the loss in terms of tourism prospects suffered by Uttarakhand in the disaster which hit the state in the month of June 2013. This study captures the demographic and infrastructural changes which the hilly state has gone through in recent years.

It captures the structure of state’s economy, key drivers of its economic growth with special consideration to tourism prospects and economic policies. The study also highlights the latest industrial developments in the state and initiatives taken to fuel up further growth. Although Uttarakhand has scaled rapid growth, the hilly areas have suffered heavy losses in recent natural disaster. There is a need to address different approach in the hilly regions of Uttarakhand for environmentally sustainable development. In light of the painful incident, state should focus on advance monitoring system to avoid such tragedies while geo-climatic conditions should be considered before boosting industrial development. Further, immense efforts are required to rebuild the affected areas of the state.

My deep sympathies are with the affected people of the state and I affirm my support and join their all efforts to support affected people in this hard time. I would like to sincerely thank our esteemed members, Suman Jyoti Khaitan and Company, Jaipuria Institute of Management, DCM Shriram Industries Group, J K Group of Industries, Jubilant Life Sciences Ltd, Jaypee Group, Jindal Steel and Power Ltd, Wig Brothers India Pvt. Ltd and Uttara Agritech Pvt. Ltd who have contributed towards the Chief Minister’s Relief Fund and also engaged in relief work in Uttarakhand. I would also like to thank Ms Gauri Maulekhi, Member Secretary, People for Animals Uttarakhand, for providing valuable inputs for the study.

I commend and appreciate the tireless efforts of PHD Research Bureau, which has come up with this report with their focused approach. I hope that this report serves as a handy and informative readers’ guide.

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## 1. Uttarakhand

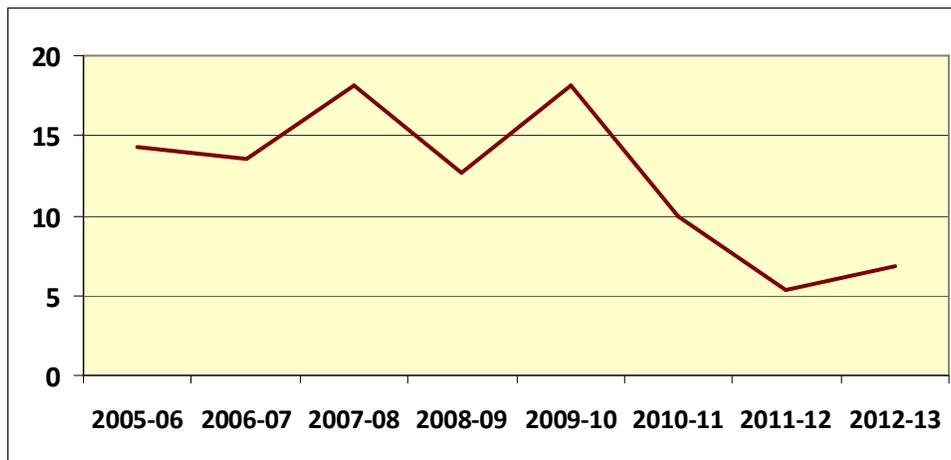
Uttarakhand is strategically located at the foothills of the Himalayan ranges and has a mountainous topography. It forms part of the northern boundary of the country, sharing its borders with Nepal and China (Tibet). It touches Tibet in the north, Himachal Pradesh in the west and northwest, Gangetic plains of Uttar Pradesh in the south and Nepal in the east. Starting from the foothills in the south it extends to the snow clad mountains in the north. The state is rich in natural resources, especially water and forests with many glaciers, rivers and dense forests. Char-dhams, the four most sacred and revered Hindu temples of Badrinath, Kedarnath, Gangotri and Yamunotri are nestled in the mighty mountains. It's truly God's Land (Dev Bhoomi). The state is blessed with 175 rare species of aromatic & medicinal plants. It has almost all major climatic zones, making it amenable to a variety of commercial opportunities in horticulture, floriculture and agriculture. It has a vast potential in adventure, leisure, and eco-tourism.



## 2. Structure of the Uttarakhand economy

Uttarakhand is one of the fastest growing states in India. Its economy has shown a healthy growth path during recent years. The real GSDP of the state has increased from around Rs.28340 crores in 2005-06 to Rs.62586 crores in 2012-13 posting an annual average rate of around 12% during the period.

**Graph 1 Growth of real GSDP of Uttarakhand since FY2006**



Source: PHD Research Bureau, compiled from Ministry of Statistics and Programme Implementation, Government of India

During 2012-13, the services sector contributed a remarkable share of around 53% in GSDP followed by the industry and agriculture sectors at around 36% and around 11% respectively. Over the last five years the share of agriculture sector in the GSDP has decreased, however the share of industry and services have started picking up.

**Table 1 State Domestic Product and its composition**

Share in real GSDP (in %)					
Sector	2008-09	2009-10	2010-11	2011-12	2012-13
Agr and Allied	12.8	11.9	11.4	11.2	11.0
Industry	34.6	35.1	35.1	35.2	35.7
Services	52.6	53.0	53.4	53.6	53.4
Sectoral growth (in %)					
Sector	2008-09	2009-10	2010-11	2011-12	2012-13
Agr and Allied	(-)3.7	9.6	5.5	3.3	3.9
Industry	12.4	19.7	10.2	5.4	8.4
Services	17.7	19.2	10.8	5.6	6.5
Real GSDP	12.7	18.1	9.9	5.3	6.9

Source: PHD Research Bureau, compiled from Ministry of Statistics and Programme Implementation, Government of India

**Table 2 Summary of socio-economic indicators**

State Capital	Dehradun
Area (Sq. km)	53,483 Sq Km
Area under forests	37,651 Sq Km, 70%
Area under Agriculture & Allied Activities	13.4 Lakh Ha. (23.6 %)
Area under other uses (Infrastructure & Urban Development)	2.2 Lakh Ha. (3.8 %)
Other Revenue Land / Fallow/Waste Land	6.3 Lakh Ha (11.1 %)
Population (Census 2011)	1 Crore
Population Density (Sq. Km) Census 2011	189
No. of Districts	13
Important Rivers	Ganga and Yamuna
Mountains	The Great Himalayas
Foodgrain production (2011-12)	1853 Thousand Tonnes
Contribution to national food grain production (2011-12)	0.7%
GSDP at Current Prices (2012-13)	Rs. 107548.3 Crore
Real GSDP at (2012-13)	Rs. 62586 Crore
Growth of real GSDP (2012-13)	6.9%
Fiscal Deficit (2012-13)	3.4% of GSDP
Poverty (2011-12)	11.3%
Per capita income of the state at Current Prices (2012-13)	Rs.90843
National Highway length (2010-11)	1376 Kms
Rail Length (2005-06)	345 Kms
Domestic Airport	Dehradun, Pant Nagar
Basic/Secondary education (No. of schools/Colleges-2010-2011)	22865
Govt. Medical Institutions (2009-10)	3236
Per Capita Health Expenditure (2004-05)	Rs. 818
Literacy Rate (2011 Census) <sup>1</sup>	79.6%
Sex Ratio (2011 Census)	963
Key Prospective Industries	Agro and food processing , Auto components & automotive, Drugs & Pharmaceuticals, Engineering goods, Gems and jewellery, Handicrafts, Information Technology, Leather & leather products and Textile industry
Main Industrial Cities	Dehradun (IT Park,Pharmacy Selaqui, SIDCUL), Haridwar (Integrated Industrial Estate, SIDCUL Industrial Estate), Pantnagar (IIE SIDCUL Pantnagar, SIDCUL Sitarganj and Bio-Tech Park Pantnagar), SIDCUL Sitarganj

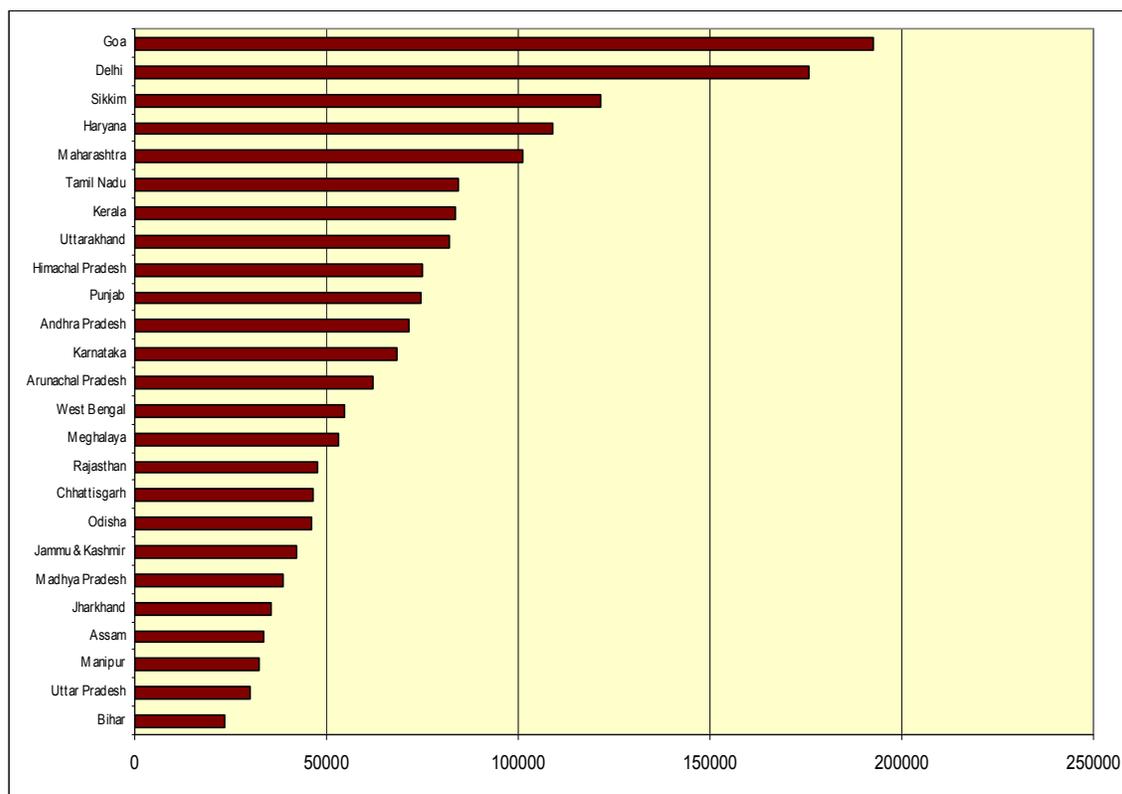
Source: PHD Research Bureau, Compiled from Directorate of Economics and Statistics Uttarakhand, RBI, Economic Survey of India 2012-13

<sup>1</sup> Literacy rate pertains to the population aged seven years and above.

## 2.1 Per-capita income

Per capita Net State Domestic Product of Uttarakhand at current prices stands at Rs.82193 as compared to about Rs.60603 at national level during 2011-12. According to the latest comparable data (FY2012), Uttarakhand secured 8<sup>th</sup> position in terms of per capita income among all Indian states.

**Graph 2 Pattern of per-capita Net State Domestic Product of the Indian states**



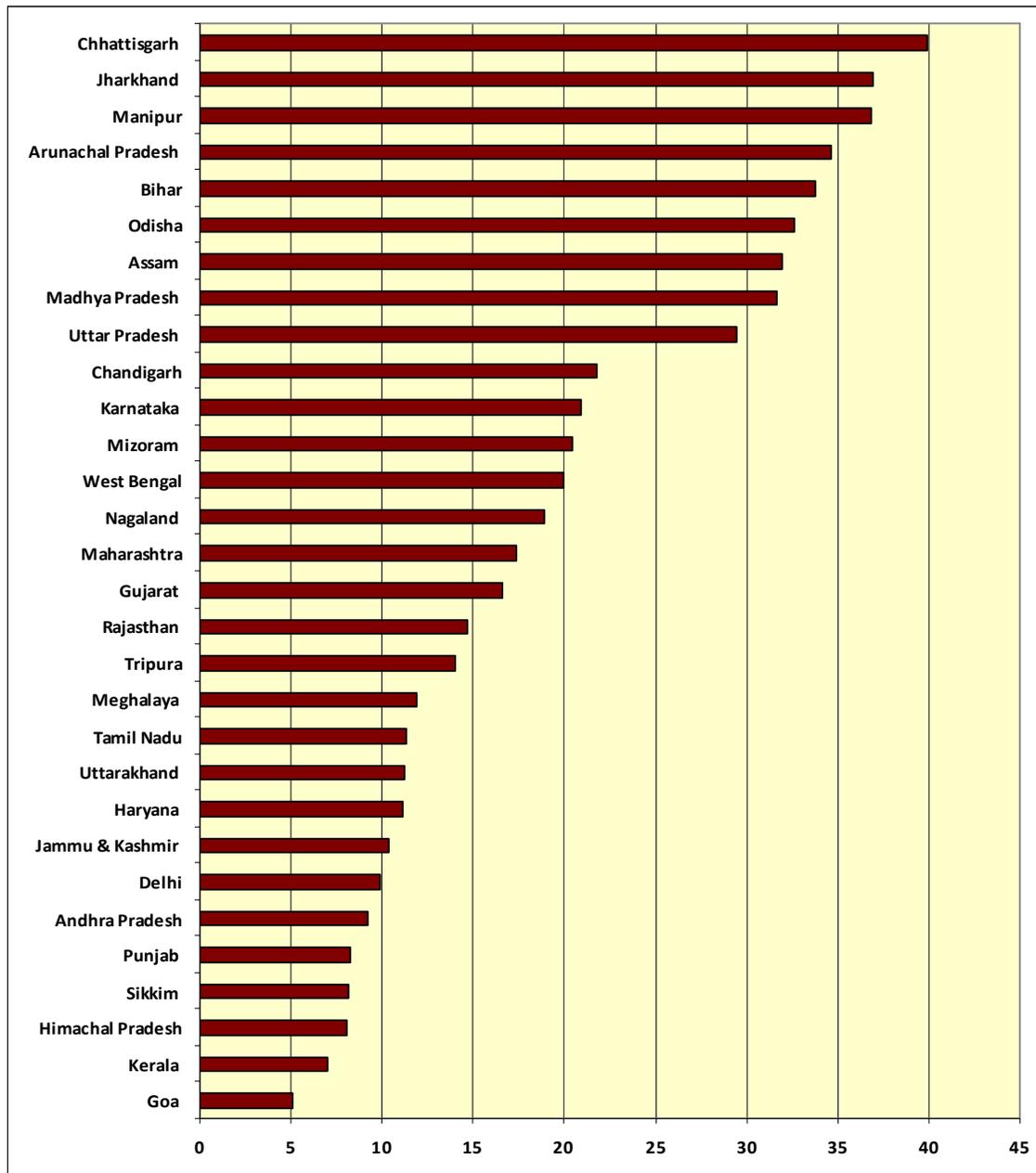
Source: PHD Research Bureau, compiled from Economic Survey 2012-13, Government of India.

Note: Comparable data for all the states was available for 2011-12 at current prices

## 2.2 Poverty

Uttarakhand is one of the fastest growing states of India and it has effectively addressed poverty as one of the major challenges in the development of the state. Poverty level in the state is around 11% which is relatively low as compared to the national average of about 22% in 2011-12.

**Graph 3 Population below poverty line (BPL): Uttarakhand amongst other states (%)**



Source: PHD Research Bureau, compiled from Planning Commission, Note: Data pertains to 2011-12

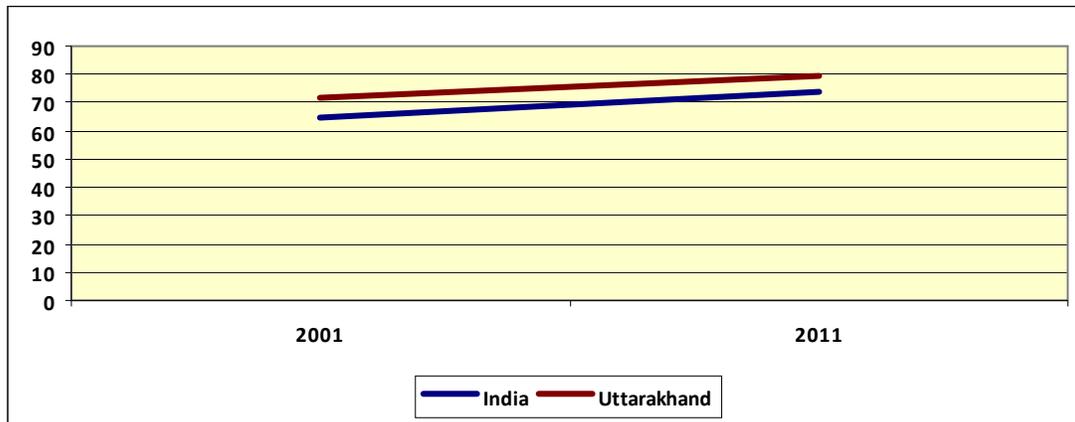
Share of rural population is higher in the state's BPL (Below Poverty Line) population. According to poverty estimates 2011-12, there are 11.6 lakhs (11.2%) persons are BPL, which is 11.6% of the total rural families in the state while 10.5% persons of the total urban families are BPL in the state. The state government has initiated many schemes to improve employment and income level in rural areas.

### 2.3 Literacy

Education contributes directly to the human resource development and quality of life. Dehradun, the state capital is an important centre of education in North India. The state has 225 colleges for professional education and 12 universities. There are 107 graduate and post graduate colleges in Uttarakhand. It is home to 1 central university, 7 state universities, 5 private universities, 4 deemed universities, apart from 1 IIT at Roorkee, 1 NIT at Srinagar and 1 IIM at Kashipur. The state ranks number 3 in primary education<sup>2</sup>.

According to the 2011 census, literacy rate in the state stands at 79.6%. Since inception, literacy rate of Uttarakhand has been higher than India's literacy rate. In 2001, the literacy rate of Uttarakhand was 71.6% as compared to national average of around 65% and in 2011, the literacy rate of Uttarakhand is around 80%, which is also higher than the national average of around 74%.

**Graph 4 Trend in literacy rate: Uttarakhand vis-à-vis India**

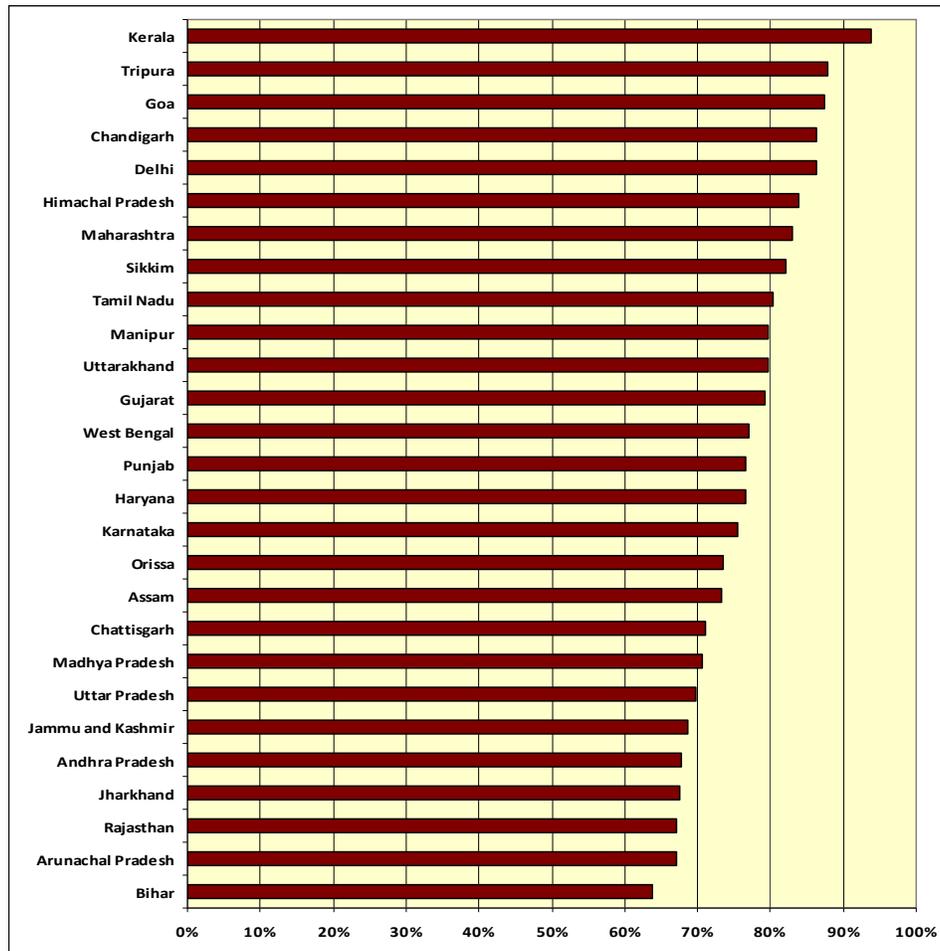


*Source: PHD Research Bureau, compiled from Economic Survey of India 2012-13*

Uttarakhand has some of the best boarding schools in the country especially in the areas around Mussorie, Dehradun and Nainital. Basic education is largely covered under Sarv Siksha Abhiyan. Rajiv Gandhi Navodya Vidyalyas are sanctioned in 8 districts to provide quality education and residential facilities to rural population. Further, in order to achieve 95% literacy target, a threefold strategy of 100% enrolment, 100% retention, continuous education programme has been adopted by the state government. At an all India level, the state ranks 17 in literacy among all Indian states.

<sup>2</sup> Source, article by Laveesh Bandari and Bibek Debroy in India Today dated 10<sup>th</sup> November 2010.

**Graph 5 Trend in literacy in comparison with other states**



Source: PHD Research Bureau, compiled from Economic Survey 2012-13

## 2.4 Unemployment

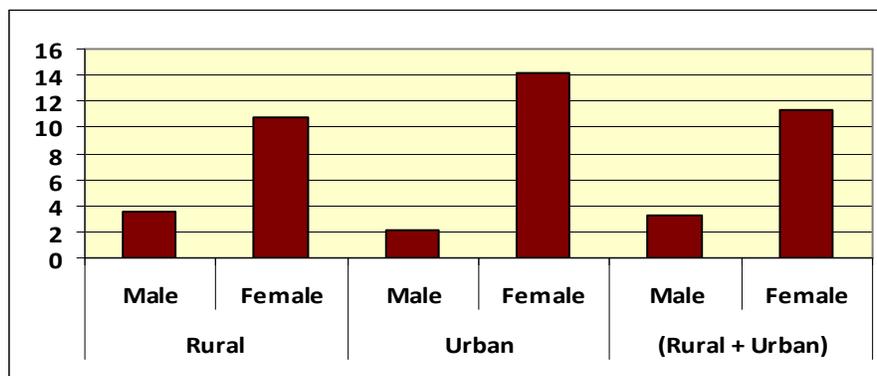
The unemployment rate<sup>3</sup> for rural & urban (combined) in Uttarakhand stands at 5.2% (2011-12), which is considerably higher as compared to the national average of 3.8%. Unemployment rate among males stands at 3.2% while for females it is 11.3% for rural & urban (combined). Rural unemployment rate among males and females in Uttarakhand stands at 3.5% and 10.8% respectively while urban unemployment in Uttarakhand stands at 2.1% and 14.2% for males and females respectively.

Prime Minister’s Employment Generation Programme is launched with an objective to generate employment opportunities through establishment of micro enterprises in rural

<sup>3</sup> Unemployment rate is based on usual principal status approach for persons of age 15yrs and above

as well as urban areas of the state. PMEGP is a central sector scheme administered by the Ministry of Micro, Small and Medium Enterprises (MoMSMEs). The scheme is implemented by Khadi and Village Industries Commission (KVIC), a statutory organization under the administrative control of the Ministry of MSMEs as the single nodal agency at the national level.

**Graph 6 Unemployment rate among males & females in Uttarakhand**



Source: PHD Research Bureau, compiled from Report on Employment & Unemployment 2011-12, Labour Bureau, Government of India, Data pertains to 2011-12

Note: Unemployment rate is based on usual principal status approach for persons of age 15yrs and above

## 2.5 Health

The Health infrastructure in the state comprises 12 district level hospitals, 239 primary health centres (PHC) and 322 state allopathic dispensaries. There are 8193 beds in the government hospitals of Uttarakhand. Availability of natural herbs and medicinal plants in Uttarakhand boosted the large number of ayurvedic and unani hospitals in the state. There are 543 ayurvedic and 3 unani hospitals in the state.

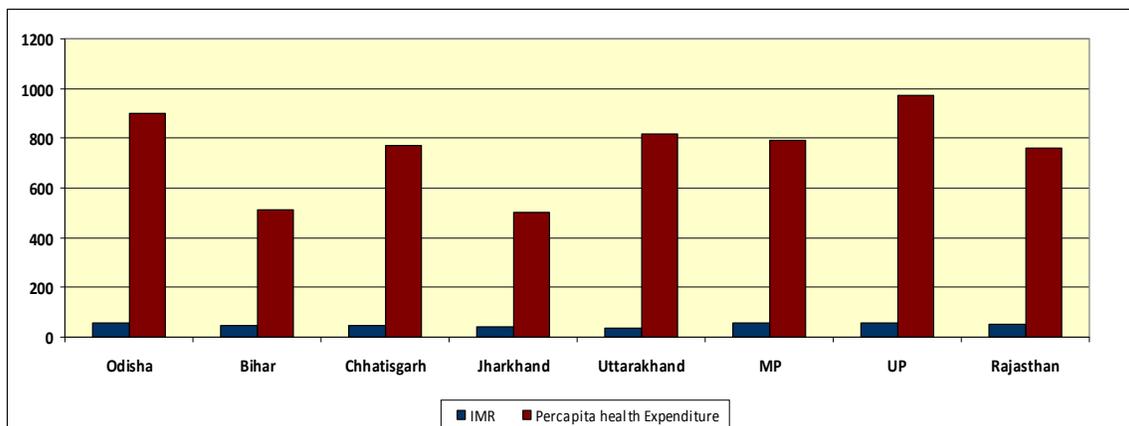
**Table 3 Summary of health indicators**

Infant Mortality Rate (2011)	36 per 1000 live births
Total Fertility Rate (AHS 2011)	2.3 children born per woman
Per Capita Health Expenditure	Rs 818
District Level Hospitals*	12
Primary Health Centres (PHC)*	239
State Allopathic Hospitals*	322
Beds in Govt. Hospitals*	8193
Ayurvedic Hospitals & Dispensaries*	543
Unani Hospitals*	3
Homeopathic Hospitals/Dispensary*	107

Source: PHD Research Bureau, compiled from Annual Report to People on Health, December 2011 and Directorate of Economics and Statistics Govt. of Uttarakhand, \*Data pertains to 2010-11.

There is a strong need to improve the per capita expenditure on health in Uttarakhand; the per capita health expenditure of Uttarakhand is almost 2/3 of the national average<sup>4</sup>. However, the infant mortality rate of Uttarakhand is better as compared to the national average. Among the high focus EAG states, Uttarakhand has the lowest IMR.

**Graph 7 Uttarakhand vis-à-vis other EAG states in IMR**



Source: PHD Research Bureau, compiled from Annual Report to people on Health, December 2011. Note: Empowered Action Group Scheme has been launched by Ministry of Health and Family Welfare and covers the above eight states.

### 3. Drivers of economic growth

Although agriculture has been one of the major driver of Uttarakhand's economy but during recent years industry and services sector has also contributed significantly to the economic growth of the state. The contribution of agriculture to the gross state domestic product (GSDP) during 2006-07 was around 17%, which declined to around 11% in 2012-13.

Further, the growth of industrial sector in the State has been significant despite the constraints of the terrain and topography. Contribution of industrial sector rose from about 33% during 2006-07 and 36% during 2012-13. While services sector contributed a significant share of 49% to the GSDP during 2006-07 which increased to 53% during 2012-13. Key industries contributing significantly to economic growth are tourism, IT, education, agro and food processing and biotech. Tourism is the major industry contributing to the rise of services sector in the state.

<sup>4</sup> Average national per capita health expenditure stands at Rs1201, annual report to people on Health Dec 2011, Ministry of Health and Family Welfare.

### 3.1 Agriculture

Agriculture is one of the most significant sectors of the economy of Uttarakhand and agro food processing is one of the most important industries of the state. To boost the agro food processing industries, agri exports zones have been setup in the state for leechi, horticulture, herbs, medicinal plants and basmati rice. Fruits like apple, orange, pear, peach and plum are grown widely in the state, giving immense opportunity for food processing industry.

**Table 4 Summary of agro statistics**

Sr. No	Components	Growth/ratio/ production
1	Agriculture & Allied GSDP at Current prices (FY2013)	Rs.13634 Crore
2	Growth of Agriculture & Allied GSDP ( Avg. from FY2006 to FY2013)	2.8%
3	Agricultural sector's contribution at constant prices in GSDP (FY2013)	10.9%
4	Food grain production (FY2012)	1853 (Thousand Tonnes)
5	State's contribution to national food grain production (FY2012)	0.7%
6	Net irrigated area (FY2010)	338493 (Hectare)
7	Gross area irrigated (FY2010)	566599 (Hectare)
8	Area under wells and canals irrigation (FY2010)	312141 (Hectare)
9	Population dependent on agriculture	3/4
10	Rice Production (FY2012)	599 (Thousand Tonnes)
11	Wheat Production (FY2012)	874 (Thousand Tonnes)
12	Coarse Cereals (FY2012)	331 (Thousand Tonnes)
13	Pulses (FY2012)	49 (Thousand Tonnes)
14	Oil Seeds (FY2012)	31 (Thousand Tonnes)
15	Sugarcane (FY2012)	6596 (Thousand Tonnes)

Source: PHD Research Bureau, compiled from RBI & Ministry of Agriculture, MOSPI, Directorate of Economics and Statistics, Govt. of Uttarakhand

Sugarcane, rice and wheat are cultivated largely in Uttarakhand. Since almost 90% of the terrain of Uttarakhand is hilly, yield per hectare is not very high. There is a disparity between the gross cropped area between hills and plains. Hills comprise only 14% of the gross cropped area whereas the plains comprise 86% of the same.

Agro business policy of Uttarakhand coupled with policies of central government makes it one of the most preferred locations in the country for setting up agro and food processing industry. Uttarakhand has a natural advantage over the other states as very large numbers of fruits are grown in this region. The government of Uttarakhand provides assistance in establishing small and medium size units in agro parks and food parks. Many agri exports zones (AEZs) have been declared under the AEZ scheme of the Government of India. Uttarakhand is also eligible for higher incentives under various

schemes of Ministry of Food Processing Industry (MoFPI) as it comes under the category of difficult areas.<sup>5</sup>

### 3.2 Industry

Uttarakhand has shown consistent industrial growth since its very inception. The industry sector contributed a share of around 36% in GSDP during 2012-13. In order to promote industrial development in the State, State Infrastructure & Industrial Development Corporation of Uttarakhand Ltd (SIDCUL) has been incorporated. SIDCUL provides financial assistance in the form of debt, equity and venture capital to facilitate the development of infrastructure in the state. It also provides assistance to private initiative in industry and infrastructure.

**Table 5 MSMEs in Uttarakhand**

Total no. of MSMEs	2.2 (lakh)
MSMEs in registered sector	0.2 (lakh)
MSMEs in unregistered sector	2 (lakh)
Total employment generated	4.4 (lakh)
Total no. of micro enterprises	23349
Total no. of small enterprises	389
Total no. of medium enterprises	27
Enterprises in manufacturing/assembly/processing sector	13437
Enterprises in services sector	6607
Enterprises in repairing & maintenance sector	3721
Co-operatives	63
No. of enterprises owned by females	2.4 (thousand)
No. of enterprises owned by males	21.3 (thousand)

*Source: PHD Research Bureau, compiled from Fourth All India Census of Micro, Small & Medium Enterprises: 2006-2007: Registered Sector, Government of India*

Apart from large industries, the MSME sector has a pivotal place in Uttarakhand's economy. The state has ample scope for the MSME sector and as a result there are around 2.2 lakh MSME units in the state. As per the Annual Report 2012-13 of Ministry of micro, small and medium enterprises, the gross output of micro, small and medium enterprises in Uttarakhand stands at around Rs 16188 crores.

### 3.3 Services sector

During the last decade, share of services sector in the GSDP has been stable in Uttarakhand. The contribution of services sector in the GSDP of Uttarakhand was

<sup>5</sup> The Scheme of Package for Special Category States by MoFPI for providing concession/subsidy to boost industrial investment in the States of Jammu & Kashmir, Himachal Pradesh and Uttarakhand in order to reduce regional imbalance.

around 53% during FY13. The service sector of Uttarakhand mainly includes tourism, information technology, higher education and banking. Uttarakhand is naturally endowed and has all pre-requisites for developing as preferred destination for IT & ITES along with hardware production. IT and ITES have been accorded industry status by the state government of Uttarakhand. Land use, conversion charges are being rationalized for the promotion of IT in the state. A state of the art IT Park has been established in Dehradun. Along with stamp duty concession, various exemptions are given to IT industry established in the IT parks and Industrial estates.

The state government launched information technology policy 2006 to encourage the use of IT. Further, state focuses on the use of IT as GDP driver by promoting IT industry in the state. It aims to develop the state as an attractive IT destination with a view to generate employment for youth in this sector thereby raising their earning capacity and simultaneously realizing the export as well as domestic revenue potential in this sector. The state has a notified IT/ITES SEZ of about 14 hectares situated at Sahastradhara road, Dehradun.

Banks have become the spine for the development of the economy on all parameters in any state. Likewise banks play a pivotal role in the development of Uttarakhand's economy. Banks are not only important for the industrial development but they are equally helpful in social development activities. There are more than 1500 branches of different categories of banks (in Uttarakhand) with 974 branches of nationalized banks. Regional rural banks and co-operative banks have a very strong network to facilitate developmental activities of the state. Regional rural banks and co-operative banks in Uttarakhand contribute around 28% of the total number of branches/ offices of banks in Uttarakhand.

**Table 6 Banking scenario in Uttarakhand**

Banks in Uttarakhand	No. of branches in Uttarakhand
Nationalised Banks	974
Regional Rural Banks	204
Private Sector Banks	122
Dist. Co-operative Banks	10
Branches of co-operative Banks	204

*Source: PHD Research Bureau, compiled from Uttarakhand at a Glance 2011-12, Directorate of Economics and Statistics, Government of Uttarakhand*

Uttarakhand is well known tourist destination for both domestic and international tourists. The state has enormous resources for adventure, cultural, leisure, pilgrimage and wildlife tourism. The state is the first in the country to have created a tourism development board by legislation. Further, it has drafted its tourism policy in an attempt to enhance its tourism potential. State has taken remarkable steps to bring out the

manifold tourism attractions in close cooperation with the private sector and all those associated with tourism industry, both in India as well as in abroad. This has been done to develop tourism as a major source of employment and revenue generation sector of the state. The state was awarded prestigious National Tourism Award by the Government of India in 2003 in the category of “Best Practices by the State Government”. The state in nutshell has a potential for tourism related services and scope to develop niche markets.

Share of tourism sector in the state’s economy has shown excellent growth during the recent years. The state is a services driven economy including tourism, banking and information technology, as the vital areas. It has potential to be developed as tourism hub of India. It is one of the most preferred locations in India for pilgrimage, adventure and eco-tourism. The share of tourism in the GSDP of Uttarakhand is estimated at around 25-30% in recent years boosted by improvement in the tourism infrastructure of the state. The state is expected to attract around 47 million domestic tourists and about 0.5 million foreign tourists in 2013. However, it is severely hit due to recent disastrous flash floods.

#### **4. Recent wave of industrialisation in Uttarakhand**

Uttarakhand has taken a rapid path for industrialisation. Several industrial sops have been provided by the central and state government to boost industrialisation in the state. In order to develop the industrial infrastructure in the state many policy initiatives were brought in and private players were also encouraged to invest through PPP (public private partnership) mode.

The Industrial policy of the state focuses on the sectors where Uttarakhand has inherent advantage like agro and food processing, floriculture, handloom, hydropower, khadi and village industries and tourism. The industrial policy aims to accelerate industrial development in the industrially backward and remote hill districts of Uttarakhand. It focuses to develop industrial infrastructure to encourage entrepreneurial development through market encouragement and to provide financial support to entrepreneurs in the state. Further, State Infrastructure & Industrial Development Corporation of Uttarakhand Ltd (SIDCUL) has also boosted the development of industrial infrastructure in the state. SIDCUL facilitates implementation and management of various projects. As per the MSME Annual Report 2012-13 of Ministry of micro, small and medium enterprises, the gross output of small and medium enterprises in Uttarakhand state is around Rs 16188 crores which is remarkable.

The process of industrialization has been boosted in the state during the recent years. Large number of small and medium enterprises has been established in the major cities

of the state. Number of small & medium industries increased from 14163 in 2000 to 39160 in 2011. Investment in small & medium industries stood at Rs.700 crore in 2000, which grew to Rs.6776 crore in 2011. Number of large scale industries increased from 41 in 2000 to 215 in 2011, while investment in large scale industries grew from Rs.5753 crore in 2000 to Rs.26955 crore in 2011. In the recent years MSMEs have significantly contributed to the employment generation in the state. The total employment generated by the sector in the state scaled up remarkably from about 67600 in 2000 to around 254000 in 2011.

Uttarakhand is developed as a hub for hydel power projects over the past decade. Around 500 dams which are part of 250 hydro power projects are proposed in the state<sup>6</sup>. Power generation capacity has increased from 1115 MW in 2000-01 to 3618 MW in 2011-12. In addition, projects of 3493 MW are in progress. The capacity owned by the state utilities comprise about 92% of hydropower plants and rest is generated from other sources. Uttarakhand is being developed as an 'energy state' to tap its huge hydro electric power potential of over 20,000 MW. Uttarakhand is also promoting other sources of power such as bio gas and solar energy. Uttarakhand is a leading state of the country in non-conventional energy resources applications also. In order to promote generation of renewable energy development in the state, Uttarakhand Renewable Energy Development Agency has been set up in 2008.

**Table 7 Power generation and consumption pattern in Uttarakhand**

Category	Unit
Total installed power generation capacity (2011-12)	1306 MW
Electricity generated (Gross) (2011-12)	4906 MU
<b>Electricity consumption</b>	
Domestic*	1485 (MU Watts)
Commercial*	942 (MU Watts)
Industrial*	4198 (MU Watts)
Agriculture*	296 (MU Watts)

*Source: PHD Research Bureau, compiled from Directorate of Economics and Statistics, Govt. of Uttarakhand.*

*Note: \* Data pertains to FY 2010-11*

Roads are the major mode of transportation in the state. During the last decade, not only the length but quality of roads has also been improved. However, there are still many areas which need to be worked upon, especially in rural and hilly regions. The total road network in the state is estimated at around 36,614 Km in 2010-11. According to Annual Report 2012-13 of Ministry of Road Transport & Highways, Government of India, National Highways running through the state has a total length of 2,042 Km and

<sup>6</sup> Economic Times, dated 30-6-2013

the State Highways length stands at 3,788 Km. Major district road length in the state stands at around 3,290 Km and village roads totaled to around 14,544 Km in 2012. Recently in the state budget of 2013-14, an amount of Rs.1314 crore has been allocated for the development of the roads. State has developed high end bus services between Delhi and Uttarakhand under PPP structure for better transportation.

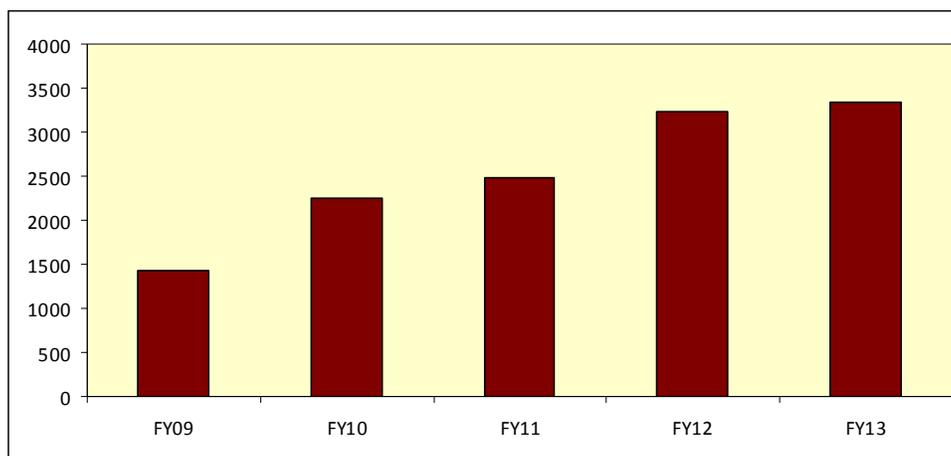
**Table 8 Road infrastructure of Uttarakhand**

Category of road	Length in Kms
National Highways	2042
State Highways	3788
Major district roads*	3290
Other district roads*	2945
Village roads*	14544
Light vehicles road*	858
Bridle roads/ Border tracks*	3730

Source: PHD Research Bureau, compiled from Ministry Road Transport & Highways and (\*) Public Work Department, Govt. of Uttarakhand, Data pertains to 2012.

State's expenditure on construction on roads has nearly doubled since 2008-09. It was Rs 1435 crore during 2008-09 which grown to Rs 3348 crore during 2012-13. However, the Ministry of Rural Development, Government of India has also sanctioned 118 roads and 8 bridges of 1140 km costing Rs 472 crore to the state.

**Graph 8 Trend in total expenditure on roads (Rs crore)**



Source: PHD Research Bureau, compiled from various sources

Uttarakhand is a hilly state and around 90% terrain is hilly. Therefore the railway services are very limited in the state and are largely confined to the plains. The total length of railways in the state stands at 345 Kms (2010-11). Recently, Uttarakhand is focussing on expanding the share of railway services in cargo transport and passenger

transport. Initiatives have been made by state government to start monorails at Dehradun, Haridwar and Rishikesh, on the inter-city linkage routes. The main railway stations in the state are Dehradun, Haridwar, Roorkee, Kotdwar, Kashipur, Udham Singh Nagar, Haldwani, Ramnagar and Kathgodam.

The civil aviation infrastructure network has been strengthened steadily within the state. The state has two domestic airports, one at Jolly Grant in state capital Dehradun and another at Pant Nagar in the district Udham Singh Nagar. While to facilitate international flights, the up-gradation work for the same is underway at the Jolly Grant airport. State Government is also maintaining and upkeeping the Naini-Saini (Pithoragarh), Guacher (Chamoli) and Chinyalisaur (Uttarkashi) Airstrips. The Government has allocated US\$230,000 (Rs.10580000) for the construction of at least one helipad per district because of the hilly terrain. The state is also planning to have an international airport in Haridwar district.

## **5. Major catastrophe hits Uttarakhand**

The state of Uttarakhand was struck with disaster in mid June 2013, due to heavy cloudburst and torrential rains, causing unprecedented floods which wrecked the state. On 17 June 2013 Uttarakhand received more than 385.1 millimetres of rainfall, which was 440% above the normal benchmark of 65.9 mm rainfall during a normal monsoon.<sup>7</sup> Heavy rains caused increase in the water level of three main rivers namely Alaknanda, Bhagirathi and Mandakini. This abnormal rainfall along with mud and silt devastated the state completely. The worst affected areas were Kedarnath, Badrinath, Uttarkashi, Rudraprayag, Rambada, Chamoli and Joshimath. Landslides in major part of the state resulted in heavy loss of lives, livestock and infrastructure. The volume of devastation multiplied as it was peak tourist season for the state and thousands of tourists were there for chardham yatra. Chardham yatra, which was severely affected as major pilgrimage spots Kedarnath and Badrinath were badly hit and tourists flow was impacted. Kedarnath, one of four highly revered shrines in India, is located at a height of 3,581 metres above sea level in the Rudra Himalayan range. The over 1,000 year old temple was said to be built by Adi Shankara. Currently, Kedarnath bore the burnt of floods as its ground floor completely submerged in the slush. Only the main temple is left at the 8<sup>th</sup> century old shrine and rest everything washed away including hotels, shops, rest houses etc. The hellish rains have turned Kedarnath into a deserted town.

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<sup>7</sup> Week@glance, dated 24-7-2013

## 5.1 Loss to lives & livelihood

Thousands of people including many pilgrims have lost their lives in this calamity. Many families have lost their homes and many villages have lost the head earner of the families as Char dham yatra was the major source of earning for them. However, nearly 110000 people have been evacuated from different areas of Uttarakhand<sup>8</sup>. According to state government 5748 persons are still missing and around 900 people lost their lives in the catastrophe.<sup>9</sup>



Due to this massive devastation, many cities of the state have been washed away, Rambada is one such example where all shops and hotels have been destroyed and roads have been broken which resulted in posting significant number of deaths in the same area. Rehabilitating the large population affected in the flood was a challenging task since relief packages were not reaching the affected areas due to continuous heavy rains and dense forests. Large scale rescue operations were undertaken to save the lives

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<sup>8</sup> Business Standard, dated 03-07-2013

<sup>9</sup> Business Line, dated 15-07-13

of people stuck up in the hilly areas amidst bad weather. Measures were taken to provide food and medication to all of those pilgrims and locals that had been rescued from the upper regions. Further, the task of cremating the dead bodies was another major challenge.

## **5.2 Loss to livestock**

Devastation has also resulted in death of large number of cattle and mules once used to carry tourists. In Rudraprayag, Tehri and Uttarkashi approximately 5000-6000 animals were killed including 2500 mules in Kedarnath/Rambara<sup>10</sup>. However, there were over 10,000 mules in the Kedar valley when the incident took place. Around 700 buffaloes and more than 5000 goats were also reared only in the Kedarnath Valley region for various domestic purposes. The route of Chardham yatra also falls within the boundary of the Kedarnath Wildlife Sanctuary which is home to a large number of wild animals. The major challenge faced during rescue operations were disposal of dead animals due to the absence of any carcass disposal method or facility. Even the animals which left alive were exposed to cold weather and had threat of spreading epidemics due to infection. Further, there were no bridges or passages to evacuate livestock, except at Sonprayag.

## **5.3 Loss to agriculture**

The constant rains in the state have hit the agricultural output also. Floods have destroyed not just farmlands but also the irrigation system in the mountains, hampering the network of canals and irrigation channels. Potato crop which is one of the major source of income for the farmers has been washed away, which was expected to be harvested over the next one month ahead. Preliminary estimate of the loss to state agriculture sector is at around Rs 90 crore.<sup>11</sup> Further, scenario in Uttarkashi is also very disappointing as thousands of buildings, homes and bridges have been destroyed. There is scarcity of food as people don't have ration to cook food, no road connectivity to mainland and no electricity. Around 120 villages of the region have been harshly affected and many have lost their cultivated land in this natural mishap<sup>12</sup>.

## **5.4 Loss to industry & business activity**

Small scale industries contribute significantly in the economic development of Uttarakhand. The heavy rains have caused extensive damage to nearly 14000 small scale units in the affected belt as business activity has been hampered. People who used to

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<sup>10</sup> Sphere India, dated 22-7-2013

<sup>11</sup> TheIka, dated 27-06-2013

<sup>12</sup> Report from Evangelical Fellowship of India Commission on Relief, dated 26-06-2013

run their businesses are in big losses as most of the rest houses, a number of lodges, hotel etc have been damaged. Many of the locals lost their houses and properties that were washed away and most were buried under the silt. Hence, going forward the major issue of restoring the business activity of such places is a big concern and demands greater attention.

## **5.5 Loss to infrastructure**

There has been extensive loss of infrastructure due to massive disaster. Most of the networks of roads and bridges have been damaged. More than 1300 roads and 175 bridges have been washed away in the rains.<sup>13</sup> As of June 2013, 96 hydropower projects were under various stages of implementation and 69 projects with a capacity of more than 9000 MW were proposed in Uttarakhand.<sup>14</sup> Many hydro power projects have been affected as most of the projects on Mandakini river have suffered severe damage. Kaliganga project with a capacity generation of 4 MW have been completely washed away resulting a loss of around Rs 40 crore.<sup>15</sup> Nearly 695 water schemes have been damaged throughout the state<sup>16</sup> and several educational institutes like ITI in Srinagar (Garhwal) have also been completely damaged in the calamity. It is estimated that the damage to road, power and drinking water supply networks have caused losses of more than Rs 1000 crore to the state.<sup>17</sup> State infrastructure is in worst shape and most of the affected areas are only accessible by air and establishing the narrow roads and the foot bridges is a crucial task. The biggest challenge that lies ahead is the restoration of the several bridges and roads which connects to the higher valleys including areas as Joshimath, Auli, Srinagar, Badrinath and the entire Kedar valley.

## **5.6 Loss to tourism**

Tourism industry which is considered as backbone of the state economy is significantly affected. Heavy floods in the state has ruined prospective tourism earnings/ value added by tourism industry in GSDP on account of the flood in all its riverbeds through which the services sector, specially the tourism industry was flourishing in the state in the last couple of years. Tourism was concentrated vastly along sides of rivers of Alaknanda, Bhagirathi, Mandakini and Dhauliganga in both Garhwal and Kumoan regions'. Massive damage has been resulted from infrastructure ruined including roads, buildings and houses. Further, state government has announced that there will be no

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<sup>13</sup> IBN Live, dated 19-06-2013

<sup>14</sup> Week@glance, dated 24-7-2013

<sup>15</sup> Economic Times, dated 30-06-2013

<sup>16</sup> Times of India, dated 30-06-2013

<sup>17</sup> Times of India, dated 30-6-2013

Char dham yatra for next two years which will affect the potential tourism earning of the state.

According to Uttarakhand Tourism Development Master Plan 2007-2022, domestic tourist visits in Uttarakhand during 2007 were about 21.7 million, while foreign tourist visits were 0.1 million. The domestic as well as foreign tourist visits nearly doubled to 42.2 million and 0.2 million respectively during 2012. Further, domestic and foreign tourist visits were expected to increase to 77.8 million and 0.4 million respectively during 2017. However, the devastation has negatively affected tourism industry of the state causing heavy losses. In light of the impediment caused to tourism sector, PHD Chamber anticipates that the tourism industry of Uttarakhand has lost prospective earnings of about Rs 12,000 crore in the current financial year on account of torrential rains that devastated the state.

**Table 9 Projected tourist visits in Uttarakhand (Million)**

Year	Projected Tourist Visits	
	Domestic	Foreign
2007	21.7	0.1
2008	24.9	0.1
2009	28.5	0.2
2010	32.6	0.2
2011	37.4	0.2
2012	42.2	0.2
2013	47.7	0.3
2014	53.9	0.3
2015	60.9	0.3
2016	68.9	0.4
2017	77.8	0.4

Source: PHD Research Bureau, compiled from Uttarakhand Tourism Development Master Plan 2007-2022

PHD Chamber conducted a preliminary survey to know the viewpoint of various stakeholders of tourism industry of the state. According to inputs received from the various stakeholders in the tourism sector of the state of Uttarakhand, May-June months are the peak season for tourists' arrivals for the hilly state. The current season is found to be the worst tourist season due to this devastation. A large share of the respondents opined that this damage has not only hit char dham yatra but impaired other hill stations of the state too. They revealed that floods in Uttarakhand have brought down the business to around 20% in various hill stations of Uttarakhand where 100% occupancy level used to remain during this peak season. They feel that the State is in a bad shape as floods having caused extensive tourist infrastructural damage. Majority of the respondents were of the view that this natural calamity will show long lasting impact as people are now apprehensive of coming to the state due to heavy loss of lives which is visible from the heavy cancellation of bookings faced by local hoteliers, travel agents who will suffer the huge losses in the current financial year. The important

cities which are visited during the peak season are Haridwar, Rishikesh, Gangotri, Yamunotri, Badrinath and Kedarnath, Srinagar, Rudraprayag, Harsil, Gaurikaund among others. It is estimated that the average number of tourists footfall in the select cities are 1.48 crore for the year 2013-14.

**Table 10 Number of anticipated tourists arrival in select cities**

Cities	Total anticipated tourists (in Crores) <sup>^^</sup>
Haridwar	2.678
Rishikesh	2.254
Char Dham*	1.453
Uttarkashi & others <sup>^</sup>	0.245
<b>Average</b>	<b>1.657</b>
<b>Average #</b>	<b>1.48</b>
<b>Average #</b>	<b>1.48</b>

Source: PHD Research Bureau, compiled from Uttarakhand Tourism Development Master Plan 2007-2022

Note: \* Char Dham includes Gangotri, Yamunotri, Badrinath, and Kedarnath, ^ Uttarkashi & others includes Srinagar, Rudrapragyag, Harsil, Gaurikund, Gopeshwar, Dev Pragyag, Gaumaukh, Joshimath, Karnpragyag & Valley of flowers, ^^ Total anticipated tourists pertains to 2013-14,# We have considered 10% slowdown in the economy and hence we have reduced 10% tourists arrivals in the state to 1.48crore

The average numbers of days<sup>18</sup> of stay are 7.96 days i.e. 8 days per tourist arriving in the state. Further, the average per capita expenditure per day in Uttarakhand is estimated<sup>19</sup> to Rs.1119 in 2008. Hence, in the analysis, average per capita expenditure per day for 2013-14 is calculated by using the CPI inflation on Y-O-Y basis. It is estimated that the average per capita expenditure per day during 2013-14 in Uttarakhand is Rs.1969.

**Table 11 Calculation of average per capita expenditure (per day)**

Year	CPI inflation* (%)	Average per capita expenditure (per day)
2007-08	6.2	1119
2008-09	9.1	1221
2009-10	12.4	1372
2010-11	10.4	1515
2011-12	8.4	1642
2012-13	10	1806
2013-14	9 <sup>^</sup>	1969

Source: PHD Research Bureau, Compiled from RBI

Note: \* Data pertains to annual average variation for industrial workers; ^data for the month of May 2013

On the basis of anticipated tourists flows and per capita tourists expenditure, the state was expected to generate Rs 23313 crore value added<sup>20</sup> in its GSDP from the tourism

<sup>18</sup> Uttarakhand Tourism Development Master Plan 2007-2022

<sup>19</sup> Ibid

<sup>20</sup> Value added is defined as the economic contribution in terms of revenue generated by the tourism industry

sector. Revenue<sup>21</sup> realization from April to June 15<sup>th</sup> 2013 in the state is estimated by taking monthly share of tourists arrival which is estimated (till June 15<sup>th</sup> 2013) to be 23.5% as mentioned in the table 12. Revenue realization is estimated as 23.5% of the total anticipated value added by the tourism sector i.e Rs.23313 crore which is equivalent to Rs. 5478 crore.

**Table 12 Month wise breakup of tourists arrival in select cities**

S. No.	Month	Monthly share of visitors
1	April	8
2	May	9
3	June	13 (6.5 till 15 <sup>th</sup> June,2013)
<b>Sub-Total (till 15<sup>th</sup> June, 2013)</b>		<b>23.5</b>
4	July	9
5	August	9
6	September	8
7	October	8
8	November	8
9	December	8
10	January	7
11	February	7
12	March	7
<b>13</b>	<b>Grand Total</b>	<b>100</b>

Source: PHD Research Bureau, monthly tourists arrival compiled from Domestic Tourism Survey 2002-03 by National Council of Applied Economic Research

It is anticipated that still there is a scope of revenue generation of 25% from the cities of Haridwar, Rishikesh among others in the select segment of cities which is estimated to be Rs 5828 crore as mentioned in table no. 10. Hence, taking into consideration the revenue realized and scope of revenue generation, anticipated revenue loss is estimated to be about 51.5% of the total value added by the tourism industry of the state i.e. Rs 12006 crore. However, the anticipated revenue loss may exceed cumulated to more than Rs 20000 crore in the next fiscal 2014-15 and more than Rs 25000 crore in the 2015-16 since the chardham yatra will not take place for next two years as declared by the state government.

## **5.7 Loss estimation by different agencies/organisations**

Infrastructure has been extensively damaged in Uttarakhand due to heavy rains. Large scale damages have been caused to micro industries, PWD and department of hydro electricity. PHD Chamber of Commerce and Industry has estimated a loss of around Rs

<sup>21</sup> Revenue is defined as income generated by the tourism industry of the state in terms of travel (to and within state), accommodation, food & beverages, entrance fee, guide services, purchase of souvenirs, shopping, entertainment, among other misc. expenses.

12000 crore to tourism sector of the state in the current financial year. Further, estimated losses of PWD and department of hydro electricity stands at about Rs 800 crore. Kaliganga hydro project has suffered a loss of Rs 40 crore in the disaster. Nearly 14000 small scale units have been affected severely. While the insurance claim after the devastation has been estimated at around Rs 3000 crore.

**Table 13 Loss in Uttarakhand floods**

S. No.	Status of damage	Number/Square Miles/ INR
<b>Lives and livestock damage</b>		
1	No. of people evacuated <sup>22</sup>	110000
2	No. of missing persons <sup>23</sup>	5748
3	No. of dead persons	900
4	No. of horses & mules washed away <sup>24</sup>	2500
5	Approx. animals killed in Rudraprayag, Tehri and Uttarkashi <sup>25</sup>	5000
<b>Infrastructural damage</b>		
1	Area affected of the state <sup>26</sup>	37000 Square miles
2	No. of micro industries & business units affected <sup>27</sup>	14000
3	No. of affected villages <sup>28</sup>	4000
4	No. of houses damaged <sup>29</sup>	2232
5	No. of damaged roads <sup>30</sup>	1307
6	No. of drinking water schemes damaged <sup>31</sup>	695
7	No. of hydel projects damaged <sup>32</sup>	245
8	No. of damaged bridges <sup>33</sup>	175
<b>Estimated monetary damage</b>		
1	Estimated loss of tourism industry <sup>34</sup> (2013-14)	12000 Crore
2	Estimated total loss in Uttarkashi district <sup>35</sup>	3000 Crore
3	Uttarakhand insurance claim estimated <sup>36</sup>	3000 Crore
4	Estimated losses of PWD and dept. of hydro electricity <sup>37</sup>	800 Crore
5	Preliminary estimated agricultural loss <sup>38</sup>	90 Crore
6	Damaged caused to Kaliganga project <sup>39</sup>	40 Crore

Source: PHD Research Bureau

<sup>22</sup> Business Standard, dated 03-07-2013

<sup>23</sup> Business Standard, dated 30-7-2013

<sup>24</sup> Sphere India, dated 22-7-2013

<sup>25</sup> Sphere India, dated 22-7-2013

<sup>26</sup> The Economic Times, dated 30-06-2013

<sup>27</sup> CSR TIMES, August 2013, Vol 1 Issue 5

<sup>28</sup> One India, dated 02-07-2013

<sup>29</sup> dnaindia, dated 30-6-13

<sup>30</sup> IBN Live, dated 19-06-2013

<sup>31</sup> Times of India, dated 30-06-2013

<sup>32</sup> Business Line, dated 6-07-13

<sup>33</sup> IBN Live, dated 19-06-2013

<sup>34</sup> PHD Chamber of Commerce and Industry, dated 26-06-2013

<sup>35</sup> The Better India, dated 01-07-2013

<sup>36</sup> Business Standard, dated 8-07-2013

<sup>37</sup> The Indian Express, dated 29-06-2013

<sup>38</sup> TheLoka, dated 27-06-2013

<sup>39</sup> Economic Times, dated 30-06-2013



## 6. Conclusions

The Uttarakhand's flash floods have made a serious impact on the economy of the state. The growth trajectory of the state is likely to be dented in almost all the economic and industrial sectors. It will take years to roll back the physical, psychological, social, economic and ecological damage caused by the floods. The recent disaster has resulted in a cascading effect at almost all the economic fronts. It has severely harmed the human and cattle lives, agricultural production, infrastructure, industries etc. It is estimated that 11% of the GSDP has been washed away in the current year in terms of prospective tourism earnings due to floods that engulfed the state in mid of June month this year. However, the anticipated revenue loss may exceed cumulated to more than Rs 20000 crore in the next fiscal 2014-15 and more than Rs 25000 crore in the 2015-16 since the chardham yatra will not take place for next two years as declared by the state government.

Devastation will result in long term losses for the state as it has hit agriculture, industry and services sector equally. Industry sector has also suffered heavy losses as nearly 14000 small scale industries have been affected in the disaster. Although the state has witnessed growth in industrialisation but the devastation may hit the investments scenario in the state. The agriculture sector has experienced a negative impact as crops and cultivatable lands have been washed away by the floods with a loss of Rs 90 crore. Fertile land has been covered with heavy debris of mud and silt which are their main source of income. Loss of earnings for the people may adversely affect the performance of various socio-economic indicators in the state. Earlier state has well performed in terms of high literacy rate and low poverty indicators but the current situation is alarming for the overall performance of the state.

Tourism sector, the mainstay of the hill economy has been worst hit by the disaster ruining around 60% of total tourism prospects of the state. As the tourism economy supports local artisans and makers of traditional handicrafts, opens up jobs in the hospitality sector, and enables families to establish small businesses such as tea stalls, souvenir shops or grocery stores, is now adversely affected. The reconstruction of damaged tourist destinations is expected to burden the state government with huge amount in wake of rising input costs such as mounting prices of cement, iron, labour costs etc.

The connecting roads and pathways are severely damaged due to landslides and breaches due to flash floods. The centre point for most of the villages in the valley has been damaged or destroyed by the landslides. In addition, it has also disrupted the transportation and movements from the villages to markets, clinic and schools. Hydro power projects have been severely hit which is raising concerns on the future plans of boosting hydro power generation in the state.

## **7. Recommendations**

In light of the recent devastation which has resulted in the heavy losses to the state of Uttarakhand, PHD Chamber suggests measures to rebuild the infrastructure and strategic initiatives for revival of the economy. We look forward to a dynamic policy support, which, through effective interventions and reform initiatives, would pave the way for a higher and sustainable economic growth in the state. To enhance the growth and development in the state, PHD Chamber suggests the following measures.

### **7.1 Disaster Mitigation Measures**

The state should ensure measures for safe yatra for the pilgrims. There is a need to regularize the Chardham Yatra and special arrangements should be made for the pilgrims. Yatra should have adequate arrangement for medical checkups, registration, identity verification, record keeping of pilgrims and should have a proper control over the number of tourist visits. The state should evolve a regulation and registration to control tourist movement with bio-metric support at all important points within the state. In addition state should advise tour operators to get the tourists insured before entering the state. There should be adequate number of shops, eating stalls and mule stands in the Kedar valley keeping a track on the availability of sufficient space in the region so that it should not overburden the Kedar Valley.

#### **7.1.1 Early warning system**

State should develop a mechanism of early warning system to mitigate such tragedies in future. A system of early warning should be placed for forecasting and dissemination for all kinds of disasters, particularly those related to rainfall and landslides. Also focus should be given to create an active disaster management system covering most of the hilly terrain of the state. There should be a clearly defined monitoring system to give a prompt report of expected rainfall so that the downstream area people and administration can be alerted. State should also spread awareness among people and educate them to deal with such situations.

#### **7.1.2 Traffic control**

The state should take appropriate care of traffic in the hilly terrain of Uttarakhand. High traffic intensity roads should be given special consideration. There should be implementation of traffic management plan and adequate number of traffic police personnel should be deployed to ensure the smooth flow of traffic during chardham yatra. Traffic controlling can also be done by avoiding large number of heavy vehicles during yatra period and allowing limited number of pilgrims in one go. Considering, the

number of tourist visits in the state, a reliable record of the tourists with their respective vehicle details should be maintained. Also, a single nodal agency should be established under the government in order to create effective traffic mechanism.

### **7.1.3 Connectivity through rail, road and civil aviation**

In view of fast recovery of the state infrastructure, road connectivity should be a major concern. After the devastation transport linkages within the state and to the rest of the country are critical. Roads connectivity with other regions, villages and states has been damaged. The main concern is the connectivity of rural roads with urban areas and maintenance of the roads. Hence, there should be a special cell for supervision of road connectivity in the state vesting with all legal and financial powers.

Railways have a very limited network which needs to be improved. Variety of transport options need to be offered to provide varying levels of service to the tourists. Keeping in view the topography of the State, high cost of road construction and environmental problems involved therein, civil aviation also is a viable alternative for some difficult hill areas for which organised and planned efforts are required. There is a need for developing a wide network of airstrips and heli dromes in the state.

### **7.1.4 Rehabilitation cell**

Floods have caused large scale disaster in Uttarakhand as thousands of people have died and those who have survived are left with nothing. Large number of people affected by the floods depends on effective rehabilitation from the government. State should deploy its resources to rehabilitate the affected people in order to recover them from this nature's trauma. A special rehabilitation cell should be made to provide all necessary help to the people.

### **7.1.5 Medical support for pilgrims**

There should be arrangements for providing medical support to the pilgrims of chardham yatra in the Kedar Valley. Pilgrims throughout the Yatra should have easy access to dispensaries, health centres with adequate number of nurses and doctors. Further, special check up camps can also be placed at frequent miles of Kedar Valley to facilitate the pilgrims.

### **7.1.6 Food security**

Uttarakhand has a hilly topography and receives heavy rainfall which is a major hurdle to the connectivity in hilly regions. Food storage godowns may be built in the Kedar

Valley in order to meet food demand during yatra times when large population is in the region. Further, temporary depots can be arranged having sufficient foodgrains and potable drinking water along the route of chardham yatra.

### **7.1.7 Protection of rare species of plants**

Uttarakhand is blessed with rich resources of plants, species of medicinal plants and herbs. State should take effective measures to protect and conserve such plants from natural calamity. Establishment of botanical gardens and nurseries must be promoted to spread awareness about such plants.

## **7.2 Animal protection cell**

Catastrophe has killed large number of animals such as cattle and mules which are one of the major source of revenue generation in Uttarakhand.<sup>40</sup> Since a large number of working animals are congregated at major pilgrim locations in the state, their welfare measures need to be kept in mind while planning rehabilitation. Therefore, animal protection cell should be formed to keep a record of animals and measures should be taken to save the animal lives by taking proper care of such animals. The cell should also take into account government as well as non government representations. The cell should keep a track on the conditions of animals in the various regions where animals are used during the Chardham yatra. Carrying capacity of animals for each of the mountain pilgrimage places should be determined by the animal protection cell. The basis of calculating the carrying capacity should be based on the availability of shelters, medical, and feeding facility of the animals. Further, a referral veterinary hospital for animals must be developed to provide facilities for rescue and evacuation solutions in case of emergencies/calamities throughout the state.

Scientifically planned and designed night shelters need to be made at designated resting places for mules and other animals along the pilgrimage routes, especially Kedarnath, Badrinath, Gangotri, and Yamunotri. Veterinary clinics need to be made available along the routes. For every 1,000 working animals used, there must be 1 veterinarian of the Animal Husbandry Department posted in the region. Vaccination for Influenza, tetanus and rabies for the animals must be made compulsory and free of cost along with a strict deworming schedule to prevent outbreaks of diseases. Identification tagging by means of Radio Frequency Identification Technology should be done for all animals, bovine and equine. This will help in registration as per rules as it is sure way to settle claims for maintaining proper account of all working animals that are being used in the area. It will

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<sup>40</sup> We are thankful to People for Animals, Uttarakhand for providing valuable inputs for the study.

also help in understanding and making provision for seasonal migration of animal herders and their livestock.

### **7.3 Reviving economy**

#### **7.3.1 Infrastructure development**

The hilly regions have incurred heavy infrastructure losses in the catastrophe. Hence, it is essential to adopt different approach for road replacement to develop the backward hill areas. The main problem is the maintenance of the roads due to heavy rainfall; soil erosion and even snow fall in certain regions. The inadequate infrastructure in the hill areas may lead to poor development and increased disparity in terms of income and livelihood leading to large scale migration. Thus, it is essential to focus on the infrastructure development in the hill areas. This is one area which the state has to practically address in a focused manner. The sectors which can be benefited with good quality infrastructure in hill areas are tourism, horticulture and handicrafts etc. Promotion of educational and vocational skill development is also a promising area in hilly regions which will foster the inclusive development of the state.

#### **7.3.2 Power supply as an industry magnet**

Supply of uninterrupted power to the existing and upcoming industries of the State is one of the important factors in attracting Industrial Investment. Uttarakhand has huge potential for generating hydropower. However, due to uncertainties and delay in the execution of hydro projects and non-allotment of coal blocks linkages increases the need for the state government to explore alternate sources of power generation including gas, wind and solar energy. State Government must facilitate the creation of captive power plants by Private Players (including the SPV of the NIMZ) with full authority for generation, transmission and distribution. The units must be allowed to seek open access as per the regulations of the State Electricity Regulatory Commission.

#### **7.3.3 Policy support for builders**

As there has been massive infrastructural loss in the state and large scale reconstruction is needed to fill the gap. Builders should be supported by providing policy incentives in terms of tax holiday for fast pace of construction activity in terms of housing and infrastructure development in the state. Large population has been deprived of their houses in the catastrophe destroying large number of houses in the state. Professional builders and private players should be given various tax benefits to reconstruct houses for affected people at affordable costs.

#### **7.3.4 Promotion of MSMEs**

State should focus on promotion of MSMEs in the plain areas for the growth of economy with their effective, efficient, flexible and innovative entrepreneurial spirit. As MSMEs have major advantage of its employment potential at low capital cost it will help to encourage steady flow of investments in the state. Further, labour intensity of MSME sector is much higher than that of large enterprises it will play a critical role in providing employment opportunities which people must have lost due to disaster. It will help in industrialisation of rural and backward areas, reducing regional imbalances and assuring more equitable distribution of income and wealth.

The role of MSMEs sector would be crucial in terms of skill development and employment generation in the state going forward. The facilitation of MSMEs would enhance production possibilities and help to achieve higher growth trajectories for the industry sector. MSMEs have potential to play a key role in generating growth, especially pro-poor, more equitable and inclusive growth. Going ahead, MSMEs may emerge as the best vehicle to sustainable industrial growth in the industrial sector of the state and create domestic demand. The state government should provide easy water availability, power connectivity, physical infrastructure and other utilities linkages to boost the growth of MSMEs in the state.

#### **7.3.5 Promotion of MSMEs Exports**

The total exports from Uttarakhand as on date are to the tune of Rs 600 crore and are expected to grow upto Rs 1000 crore in the current financial year. Major exports of the state are from the pharma sector and potential regions of exports are South Africa, Russia and South Asian Countries. Going forward, the focus areas of exports from Uttarakhand lies in the geographical advantages of beautiful terrain suitable for services industry including tourism, organic produce and potential market for the rare spices and herbs. The proper planning and implementation involving industry will be the key to the development of the states' economy through exports. Infrastructural needs like roads, dry ports and power are vital. Skill development would play an important role in accelerating growth of exports and overall economy.

#### **7.3.6 Accelerate industrial investments**

The vast natural resources add to the state's attractiveness as an investment destination, especially for tourism, agro-processing and forest-based industries. The state has managed to get good industrial investments during the last few years. There is a lot of scope to accelerate the investment volumes. Going forward, the perception about the state as an attractive investment destination needs to be built up in the minds

of investors across India and outside India. Road shows to promote industrial investments in the state may be conducted in the various parts of India and outside India.

### **7.3.7 Improving farm output growth**

An integrated approach should be adopted to facilitate development of agriculture and food processing industry in the state to generate more and more employment opportunities. Development of farm mandis and creating linkages between producers and buyers will boost the farm output growth. Special focus on seasonal fruits like Litchi, Apple, Plum, Peach, high-value herbal, medicinal and aromatic plantation etc, will help in improving income of the farmers.

More than three-fourths of Uttarakhand's total population depends on agriculture for their livelihood. The biggest challenge is the small and fragmented land holdings and poor irrigation facilities. Difficult terrain, unfavourable climatic conditions (for some crops), inadequate availability of inputs and technology, result in low agricultural yield as compared to the national average. An integrated approach should be adopted to facilitate development of agro & food processing industry in the state. Development of farm mandis and creating linkages between producers and buyers will boost the growth of farm output. Special focus on seasonal fruits like leechi, apple, plum, peach, high-value herbal, medicinal and aromatic plantation etc, will help in improving income of the farmers.

### **7.3.8 Encouraging service sector activities**

Services sector should be boosted in the areas of education, banking services and information technology as they are performing well in the state. The banking sector has been developed at a good pace during recent years. Progress in IT & ITES is also making ground in the state. Hence, emphasis should be given to maintain the growth momentum in this sector.

### **7.3.9 Boosting tourism**

There exist huge potential for tourism in the state, with demand emanating from both the domestic and international tourists. Tourism has to be of vital importance for the economy which can not be a success story without a robust infrastructure. The state has enormous resources for cultural, pilgrimage, adventure, wildlife, and leisure tourism. Therefore, tourist zones needs to be connected by roads, rails, and airports. The potential of tourism sector needs to be diversified to overcome the seasonality factor and to create employment for year-round tourism. Although tourism is worst hit by the

disaster but the state has to look forward to attract domestic and foreign tourist visits at the same pace to revive its tourism sector.

### **7.3.10 Promoting education**

Uttarakhand has some of the best schools and higher education institutes of the country. The literacy rate (Census 2011) of the state at around 79.6% is better than the national average at 74%. At this point of time, state should focus on generating revenue by focusing on its educational strength. The economic loss which is incurred by the state can be recovered by promoting its strong education sector. State should establish educational institutions and other vocational training institutes to impart best education which can further help in rebuilding its economy.

### **7.3.11 In summary**

Going forward, the state must adopt growth effective measures to attain stable and higher growth trajectory. The need of the hour is to revive the tourism sector of the state backed by variety of transport facilities for the tourists. As there has been massive infrastructural loss in the state and large scale reconstruction is required to fill the gap. The potential of tourism sector needs to be diversified to overcome the seasonality factor and to create employment for year-round tourism. Also, builders should be supported by providing policy incentives in terms of tax holiday for fast pace of construction activity in the state. In order to encourage steady flow of investments, state should focus on promotion of MSMEs in the plain areas for the growth of economy with their effective, efficient, flexible and innovative entrepreneurial spirit with its employment potential at low capital cost. An integrated approach should be adopted to facilitate development of agro & food processing industry in the state. In addition, services sector should be boosted in the areas of education, banking services and information technology as they are performing well in the state.



PROGRESS HARMONY DEVELOPMENT

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*Life ahead for Uttarakhand*  
*Rebuilding Infrastructure & Reviving Economy*

## Notes

## About the PHD Chamber

**P**HD Chamber is a 108 years old vibrant and proactive representative organization of business and mercantile community of northern and central India, serving their interest. This apex regional organization plays an active role in India's development and acts as a much needed link between government and industry, serving as a catalyst for rapid economic development and prosperity of the community in the region through promotion of trade, industry and services.

With its base in the National Capital, Delhi, the Chamber has Regional offices in States of Bihar, Chhattisgarh, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Madhya Pradesh, Punjab, Rajasthan, Uttar Pradesh, Uttarakhand and the Union Territory of Chandigarh.



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