

Economic Development and Environmental Degradation in Uttarakhand

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Abstract

Economic development is often seen as a kind of universal cure of all problems. At the same time, economic development may be the cause of environmental degradation because it represents a negative externality of economic activity. At present almost all people in the world are concerned with the quality of the natural environment; deterioration of which can result in decline in the national welfare through adverse effects on human health and ecosystems.

Economists, ecologists and government decision makers have long been interested in the relationship between economic growth and environmental quality. The argument is often made that economic growth is bad for the environment. On one side environmental degradation reduces economic productivity and growth and on the other side, economic development leads to environmental degradation. In order to address the question, we can study the relationship between economic development and environmental degradation in the context of the newly born State, Uttarakhand.

Keywords: Economic Development, Environmental Degradation

Introduction

The newly born state Uttarakhand came into existence on November 9, 2000 with area of 53,485 sq km. Nine of its 13 districts are mountainous while the two are partially plain and remaining two predominantly plains. Its inner mountain region is remote, fragile, marginal but rich in biodiversity.

The traditional economy of Uttarakhand was largely dependent on natural resources. It was based on subsistence agriculture, forest resources, artisanal craft and mining. During the statehood agitation, Uttarakhand was conscious about the mountain character of the region. The village women started to demand that their separate statehood should pursue a green development path so that denuded sloped would be reforested and afforestation and watershed development would revive the rain-fed rivers.

After new statehood government of Uttarakhand started conventional model of development with the single-minded goal of increasing wealth through industrialization by establishing State Industrial Development Corporation of Uttarakhand Limited (SIDCUL) in the major towns. It does not recognize the special character of the mountain state. The union government also announced economic concessions to promote industrialization but that too did not addressed heterogeneity of the state properly. This policy measures resulted in double digit annual growth rate as well as rapid extension of roads, new airports, helipads, ropeways etc. We can see these growth patterns in the following charts.

Table1. Gross and Per Capita Income of Uttarakhand

S.N.	Year	Gross Income (in lakh rupees)	Per Capita Income (in lakh rupees)
1	2004-05	2228773	24726
2	2005-06	2695179	29423
3	2006-07	3267103	35111
4	2007-08	4027885	42619
5	2008-09	4863207	50674
6	2009-10	5804720	59584
7	2010-11	6750644	68292
8	2011-12	-	-

Source: Directorate of Industry, Uttarakhand

Table2. GSDP of Uttarakhand and India on constant prices (2004-05)

Year	Uttarakhand	India
2005-06	14.34	9.48
2006-07	13.59	9.57
2007-08	18.12	9.32
2008-09	12.65	6.72
2009-10	18.13	8.59
2010-11	10.02	8.91
2011-12	9.36	6.69
2012-13	7.45	4.47
2013-14	8.43	4.74
2014-15	9.34	-

Source: Ministry of Statistics and Programme Implementation 19 August 2015 ([www.statistictimes.com/economy/gdp-growth....](http://www.statistictimes.com/economy/gdp-growth...))

Table3. Quality of Life Indicators in Uttarakhand (as per households)

Category	2001	2011
Drinking water in premises	44.8	58.3
Electricity	60.3	87.0
Toilets in premises	45.2	65.8
Television Sets	42.9	62.0
Computers	-	11.0
Telephones	9.9	74.6
Two Wheelers	11.9	22.2
Four Wheelers	2.7	6.2

Source: Mohanty, 2012

Table 4. Sectoral Share of GSDP during 1993-94 to 2013-14 (on constant prices)

Sector	1993-94	2004-05	2013-14
Primary	40.1	23.48	10.26
Secondary	23.4	27.02	37.83
Tertiary	36.5	49.50	51.91
Total	100.0	100.0	100.0

Source: 1993-94: Trends in Agricultural Practises in Uttarakhand, Ganga Basin, Part-1

Table 5. Establishment of Industries in Uttarakhand

S.N.	Item	2008-09	2009-10	2010-11
1.	Established Industry			
	A. Number of Industries	147	203	211
	B. Capital Investment	11667	23747	27962
	C. Number of Employees	58762	79697	81633
2.	Functional Industry			
	A. Number of Industries	147	203	211
	B. Capital Investment	11667	23747	27962
	C. Number of Employees	58762	79697	81633
3.	Small Industries			
	A. Number of Industries	34084	35955	37928
	B. Capital Investment	329880	485568	628048
	C. Number of Employees	118915	142780	162453

Source: Directorate of Industry, Uttarakhand

In the above data we can see that all the growth indicators have increased rapidly in recent years, but there is serious imbalance in the structure of economy. In about two decades, from 1993-1994 to 2012-2013, the sphere of the Primary Sector has declined by 72 percent and growth in the Secondary and Tertiary Sectors has increased. Agriculture showed the lowest growth rate among all the sectors during 2004-2013. It has fallen down from 16.7 percent in 2004-2005 to 7.8 percent in 2012-2013 (on constant prices).

The manufacturing subsector recorded the highest growth rate 41.4 percent between 2004-13, but it also caused widespread pollution. The Uttarakhand Environmental Protection and Pollution Control Board (UEPPCB) issued notices to 374 Industrial units for environmental pollution in the State. These included manufacturing sectors like Tata Motors, Hindustan Unilever, Hero Honda, Bajaj Auto, Nestle, etc.

The rapid growth of tourism and commercial activity in Haridwar and other holy cities has caused serious air pollution due to particulate emission from motor vehicles (Joshi and Semwal, 2011). Illegal construction of hotels, restaurants and commercial centres has expanded on river banks.

Development of hydropower has serious environmental impacts. There is significant deforestation due to construction of roads, colonies, housing and offices, etc. Quarrying for construction materials, blasting for tunnels cause air, water and noise pollution. The Union Ministry of Environment and Forests estimates that about 45,000 hectares of forest land has been diverted non-forest uses in Uttarakhand. About 40 percent of this has been for road construction, HEPS and transmission lines. 75 percent of the diversion has occurred after the formation of the state.

While Uttarakhand has largely maintained its forest cover and so a modest increase in the cover, the protection of forests remains a constant challenge. Encroachments, illegal tree felling and unregulated collection of forest products are also responsible for destruction of forests. Every summer, hundreds of hectares of forests are affected by forest fires. Fires lead to loss of human lives and wildlife species and also cause damage to the ecosystem. Almost every forest fire is caused by human beings. Some areas are set on fire by local communities to reduce grass on the forest floor. Many fires are caused by travellers throwing cigarette buds on roads passing through forests. Many wildlife corridors have been choked due to unplanned development and this also contributes to increase in human-wildlife conflict. The Ministry of Environment and Forest Data reveals that over 30,500 hectares of forests have been diverted to non-forest use in Uttarakhand.

Thus, economic development after formation of this new state has generated wealth in the state. Industries and jobs have increased mainly in the plains. The faster growing economic sectors of the state have brought some growth to the mountain areas but have also seriously endangered ecological sustainability. Climate change and uncertainty of rain are critical issues in this disaster prone state. Winter

rain has almost disappeared and inner Himalayan peaks get much less snow than earlier. The frequency of extreme weather events is increasing. Highly uncertain weather in recent years has increased the vulnerability of agricultural production in the rain fed cultivation areas. Uncertainty of rain gives birth to another type of disaster like The Kedarnath Disaster of 2013.

The following table shows the uncertainty in temperature and rain in Uttarakhand in recent years:

Table 6. Rain (in mm)

S.N.	District/Centre	2008	2009	2010
1.	Dehradun	2457.2	1624.7	3253.3
2.	New Tehri	1087.6	521.8	1526.2
3.	Pantnagar	2196.4	1013.5	1984.9
4.	Mukteshwar	1513.3	1315.1	1701.3

Source: State Meteorology Centre, Dehradun

Table 7. Temperature (in centigrade)

S. N.	District/Centre	2008		2009		2010	
		Max	Min	Max	Min	Max	Min
1.	Dehradun	38.7	1.6	41.9	3.7	41.2	3.0
2.	Pantnagar	40.2	-0.6	42.0	0.8	41.0	0.6
3.	Mukteshwar	28.9	-5.4	30.3	-1.7	29.9	-1.3
4.	New Tehri	32.0	-2.4	34.2	1.6	34.0	1.6

Source; State Meteorology Centre, Dehradun

Objective of the Study

The main objective of the study is to analyse the current development pattern of Uttarakhand and its effect on environment of the state.

Methodology

The paper is based on secondary data, mainly books, research papers, reports, articles, etc.

Conclusion

On the basis of the above data analysis, we can say that the haphazard rapid development of Uttarakhand after formation as a new state has been at the cost of environmental degradation and minimization of welfare of the society as it has damaged health and life by pollution, climate change and uncertainty of temperature, rain, etc. This shows the close relationship between economic development and environment.

Suggestions

The environment must not be degraded further but improvement will be welcomed. If an environmental resource is damaged in one area, a resource of equal or greater value should be generated elsewhere. Ecologically sustainable development is the basic pre-requisite for disaster mitigation. Equitable development will reduce the vulnerable population. Safety and sustainability has to be built in hydropower development, tourism and related activities like roads and building construction. The first priority of green development should be for improving forest cover in a manner that enables livelihoods to grow. We need to grow more trees in the hills and provide the infrastructure, roads and buildings as per hill requirements.

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