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## The Environmental Impact of Tourism on Mountain States in India

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### ABSTRACT

*The Mountainous regions of India are suffering a great environmental impact due to the increased tourism. This paper plans to explore the different Mountain States as case studies, showing the impact that tourism has had on the environment of these particular states, which include Himachal Pradesh, Jammu and Kashmir, Uttarakhand and Sikkim.*

**Keywords:** Tourism in Indian States, Impact of Tourism, Mountain States in India, Tourism Policy, Environmental Damage Due to Tourism

### HIMACHAL PRADESH

Himachal Pradesh is one of the bigger attractions of tourism in India for a number of reasons such as a serene environment, scenery and caters to a wide range of potential visitors. It appeals to pilgrims with its shrines, to adventure-seekers with sports such as golf, mountaineering, ice skating etc, available. It is also home to popular handi-crafts such as Pashmina shawls and native tweeds known as Pattu. All these things make Himachal Pradesh an ideal tourism hub, and this has been seen in the rapid rise of tourists that the state has had from 2010 - 2019, only stopping due to the Covid-19 pandemic.

Himachal is one of the states in the Himalayan region, and, along with Uttarakhand, bears the biggest burden of the environmental damage as a result of tourism. In Dharamshala, 200 kilos of dry waste is segregated every single day and Dharamshala alone generates 25 tonnes of waste every year. Due to there not being enough land for composting, the biodegradable waste is taken to the Sudher village. However, this has caused a protest amongst residents in the Sudher village, since the open waste is at risk of releasing harmful and toxic chemicals into the soil and the air. The polluted soil is carried into rivers due to rainfall, and hence the rivers also get polluted. Carbon monoxide, sulphur oxides and benzenes are just a few of the harmful chemicals that are also released into the atmosphere due to the waste.

Here is an image of the waste collected by the Waste Warriors in Dharamshala:



Photo credits: Waste Warriors.

So how is this caused by tourism? For starters, the Council of Scientific and Industrial Research (CSIR) pointed out that all that tourism does is bring waste along with it. A large percentage of the waste comes from eateries which have grown in number due to increased tourism. There is also increased pressure on the soil, causing soil erosion and natural habitat loss. Additionally, there is a strain on water, and sources of water, which are heavily being used by restaurants, hotel chains and places of accommodation for the incoming tourists. The building of hotels and infrastructure has also brought in deforestation. In the years between 2001 and 2021, Himachal Pradesh has lost 4.82 kilos hectares of its forest and tree cover. In order to accommodate more tourists, there had to be proper transportation routes. More than 80,000 trees have been cut in order to build highways, hotels and power plants. All the power projects and creating a toll on the state as it is now causing water bodies to dry up and is being put at risk for landslides. In December 2022, Urni village in Kinnaur was hit by a landslide. In the Kinnaur region, there have been more than 3,000 hydropower projects currently happening, which has been causing cracks in people's houses and led to this landslide.

Himachal's government has come up with their tourism policy, last updated in 2019, to combat the problems of the environmental damage, and has come up with clauses on sustainable tourism, and sustainable tourism specific to Himachal Pradesh. It states that the state of Himachal Pradesh has been working to fulfil the aims of having sustainable tourism while also generating economic growth, as stated by the Ministry of Tourism, Government of India. The policy states, in clause 1.2 Sustainable Tourism in Himachal Pradesh, that while the state has relied majorly on tourism for economic growth, the number of tourists has increased from 6.55 million in 2004 to 19.6 million in 2017. A tourism policy will aim to increase economic development, minimise social inequality and to reduce poverty, all in a sustainable manner. The policy highlights the Sustainable Development Goals (SDGs), which have been created by the United Nations as goals to achieve future international development, and the policy looks at goals specific to Himachal's future development. It identifies Goal 8 on devising policies that will allow sustainable tourism to create jobs and promote local culture and products. It also identifies Goal 12 in developing and implementing tools to monitor sustainable development for sustainable tourism to generate jobs and promote local products and culture (Niti Ayog, August 2018).

Since the pandemic, the Himachal Pradesh government has directed funds and resources towards beautification of towns, eco-tourism, lakes and is largely promoting caravan tourism in areas where there are less hotel accommodations; thus avoiding the added damage that comes with more hotels being built.

## **UTTARAKHAND**

A part of the Himalayan region, Uttarakhand is home to beautiful scenery of rivers, villages, snow-capped peaks and well-known culture, which is why it is one of the main tourist attractions in India. It draws tourists from a number of places and for a number of reasons. Data from Uttarakhand's draft tourism policy shows that 44.2% of domestic tourists visit the state for religious regions, while 43.6% visit for sightseeing or general holidays. Another new and emerging attraction is adventure tourism, which we also saw in Himachal Pradesh, and the state has

created new infrastructure to accommodate this increasing demand of sports such as trekking, paragliding, skiing, rafting etc.

Uttarakhand's topography makes it vulnerable to climate disasters such as flash floods, droughts and landslides. Due to the high temperatures in summers, water vulnerability is becoming an increasing problem, as regions near Haldwani are already at low water resources, and water vulnerability Dehradun and Bagheshwar are only moderate, approaching the low category. (Uttarakhand Water Vulnerability Index (State Climate Change Centre (SCCC)). The fact that more tourists keep entering, is causing a larger strain on water resources which are needed to accommodate tourists.

In Uttarakhand, the Char Dham Yatra, which is a pilgrimage route, has generated a lot of environmental damage. One of the stops is Kedarnath, which has piles of garbage from the tourists on the pilgrimage. Since there are not enough and proper sanitation facilities, it is not possible to manage the extent of the plastic waste that is being dumped by tourists. Additionally, many of the plant species are on the verge of extinction due to increase in human activity in the regions where they grow, and this is getting more attention from environmental activists.

The Uttarakhand Tourism Development Board gives data on the massive growth in tourist numbers - both in domestic and foreign tourists. For domestic tourist arrivals, numbers went from 105.4 lakhs in 2001, to 390.6 lakhs in 2019. For foreign tourist arrivals, numbers went from 0.5 lakhs in 2001, to 1.6 lakhs in 2019. Both see a significant amount of growth in numbers and this shows how tourism had to be accommodated quickly, and we see how this goes on to affect the environment of Uttarakhand.

In recent news of August 2022, a petition was filed in the High Court, which blamed the state government for being negligent with its solid waste management laws which led to the High Court conducting an environmental audit of 30 peaks and 10 trails before they could be opened up to tourists. Another example is of the Nainital river, which is dropping in its levels every day due to the excessive use. The water is used by the locals as it is, however on top of this, it also goes to the hotels. Due to tourist influx, more hotels are being built and thus more water is being drained out of the lake. The water levels have been decreasing by an inch every day, which means that around 16 million litres of water from the Nainital lake is being taken out and used, out of which the vast majority is for hotels.

The Tourism Policy of Uttarakhand looks less at sustainable tourism and more on how to further benefit from tourism by wanting to create new tourist destinations and focusing on making disaster-resilient infrastructure. The policy addresses the need for better solid waste management and also states that ecotourism or wildlife tourism will be done without harming or disturbing the environment. The state government has also reformed Environmental Registration Enablers, which is a list of procedures and documents required for businesses, which includes a Consolidated Consent and Authorisation form on Water/Air Consent and Hazardous Waste Authorisation. This helps take a step towards sustainable tourism in Uttarakhand and businesses will now need to be mindful of their actions so as to not violate state government regulations.

An image of the waste pollution in the Ganges river:



“From polluted Ganga to drying springs: 5 environmental challenges before Uttarakhand.”

*Hindustan Times*, 5 June 2019.

### **JAMMU AND KASHMIR**

The next state being looked at is Jammu and Kashmir. It is a tourist hub for adventure sports, pilgrimages and religious visits, or simply for its scenic places with beautiful flora and fauna, and snowfall.

The main cause for the pollution and environmental damage is the lack of proper management. The Amarnath and Mata Vishno Devi pilgrims cause a lot of pollution and damage since they use their own transportation and add to waste by their food and clothes. Another large area of concern is water pollution. Municipal solid waste is simply dumped into waters, and there is again no proper management of sewage waste. With Jammu and Kashmir's rapid increase in tourism, the waste and pollution has only increased. The Dal lake, a very popular tourist attraction, has succumbed to pollution as its once-clear waters are now victims of eutrophication, sewage disposal, floating fields etc; all at the hands of tourists and bad management of the tourists. The lake has also decreased in size from 22 sq km to now 15 sq km, out of which only 11 sq km actually contains water, and this has happened in order to accommodate more tourists as people have started settling around the lake.

**Here is a comparison of the Dal lake - before and after tourist damage.**



As we can see, the tourists bring along excessive dumping of waste and pollution, and the respective authorities are unable to manage the inflow of the tourists, nor are they being able to regulate their actions.

The tourism policy states that support will be provided for sustainable tourism, and one such project is Energy Auditing, which will be done on commercial buildings, and funding will be provided for the same by the government. The policy states that there will be new initiatives such as water harvesting and conservation and eco-friendly projects like Green Buildings. Additionally, the government plans to set up efficient sewage treatment plants to tackle the sewage waste problem. The tourism policy was as recent as 2020, and hopefully action is being taken to restore the state to its original glory of lakes and valleys, rather than the waste-ridden state it is in currently.

### **Sikkim:**

Sikkim, a northeastern state of India, is another region part of the Himalayas, and here you can find beautiful landscapes, wildflowers and alpiners. Sikkim is even home to India's highest mountain, Kanchenjunga, at 8,586 metres. The rise in tourism has been rapid in Sikkim, as more and more people have started visiting the state. In 2019, the state recorded a total of 19 lakh tourists, and in fact, the numbers have been predicted to grow post-Covid. After lockdown in 2021, 3.07 lakh domestic tourists visited Sikkim between the months of October 2021 and March 2022. Numbers have only risen since then.

While tourism increased, this has brought in problems for the state. In a study conducted by Mishra and Jha, 2013, it was found that the tourism increase in Sikkim has had big impacts on its environment. There has been loss of agricultural land, which is lost due to the need for tourist accommodation and to turn into tourist hubs. For the same reason, there has been forest depletion, and thus wildlife flora and fauna lose their natural habitat. Water resources are also depleting, and plastic use is generating a lot of waste and pollution. Additionally, the tourists bring in transportation, and road accidents are leading to deaths in wildlife animals. The increased vehicles on roads are increasing air pollution, carbon dioxide emissions and contributing towards global warming. On top of this, the added infrastructure being built to promote tourism is causing fall-outs which are directly leading to

landslides in many places in Sikkim, and this not only affects the environment, but also has a social impact on the local residents of Sikkim and their homes and livelihoods.

In 2016, residents of the Lachen valley were in fear of the glacial Lake Shako Cho. Due to climate change from increased pollution, global warming and recent forest fires, the lake was on the verge of destroying the Heritage Valley of Sikkim, by melting at a rapid rate. The rise of tourism is a huge contributor towards climate change as it brings in pollution from more cars on the roads, heavy plastic use, and deforestation due to all the infrastructure that is being built to accommodate tourists and attract them to the state. In Sikkim, deforestation is a major problem. In the years between 2001 and 2021, the state has had a loss of 2.03 kilo hectares of forests and has disturbed 3.87 kilo hectares of forests.

To combat some of these problems, the tourism policy of Sikkim, released in 2018, addressed some Sustainable Development Goals. The policy highlights Goal 8 - inclusive and sustainable economic growth, Goal 12 - sustainable consumption and production, and Goal 14 - sustainable use of oceans and marine resources. These are the Goals that the government plans to focus extensively on, with the help of relevant infrastructure, technology and human resources. The policy also highlights the importance of clean and sanitary water for tourism, as well as the safety of both tourists and local residents.

## CONCLUSION

Tourism brings in a lot of economic growth and output for any country. In India, tourism and the tourism sector has been estimated to contribute to a large chunk of India's total GDP, and it generates around 250 billion USD just from tourism, and the numbers are expected to double by 2030. Majority of India's states bank on tourism as their main source of money and economic growth, however there needs to be a lot more priority on achieving this economic growth through more sustainable practices. Currently, there is tourism happening at the expense of the environment, and this can no longer continue because global warming is prevalent as it is, so small actions should be taken in states to ensure that tourism is not adding to the worsening of our environment. Better management of resources, waste management, implementing regulations, are all practices that need to be put into place, especially in states which have a large tourist footfall, which happen to be the Mountain states of India.

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