

TOURISM HAS BROUGHT ECONOMIC PROSPERITY TO THE HIMALAYAN REGION, BUT THE ENVIRONMENTAL COST HAS BEEN CATASTROPHIC

Relevant for: Environment | Topic: Environmental Pollution - Air, Water, Soil & E-waste

The 10 States of India's Himalayan region attract droves of tourists whose environmental impact has been devastating | Photo Credit: Getty Images/iStockphoto

To say Kangra is enchanting would be trite. The sunlit valley stretches beyond cumulus clouds, flanked by the jagged Dhauladhar range on one side and rolling green hills on the other. Birches, chir pines and deodars sway in the wind.

As our small aircraft starts its descent, we get a glimpse of River Beas flowing below and the expansive Pong dam's reservoir. But all this beauty is deceptive — the Indian Himalayan Region is facing an as yet unrecognised existential crisis: mountains of solid waste.

Tourism in this region generates some eight million tonnes of waste every year. Added to this is the one million tonnes of annual waste generated by the urban population. By 2025, it is projected that 240 million tourists will visit the hill States every year: it was 100 million in 2018. If the problem of solid waste disposal is not addressed scientifically, the fragile ecosystem of the Himalayas will pay a price the country can ill-afford. Given that all our major glacial rivers originate in these mountains, it's not difficult to envisage the catastrophic implications.

The Himalayan region comprises 10 States, of which Uttarakhand and Himachal Pradesh bear the biggest brunt. Although the local population density is not very high, these States attract vast numbers of tourists — campers, trekkers, mountaineers, backpackers and pilgrims. And the waste they generate now impacts the ecology crucially.

Unlike the plains, usable land is scarce in the Himalayan region, with habitations either on the ridges of mountains or in valleys such as Kangra and Kullu. While hillocks of garbage can rise in the peripheries of cities on the plains, hill towns have no such space. What is mindlessly thrown out remains on the slopes forever, turning into major polluters of land, water and air.

From Kangra airport, I drive up to the office of Waste Warriors, an NGO based in Dharamshala, which works in Uttarakhand and Himachal Pradesh to educate and train people in solid waste management. Etoshi Chattejee, 33, heads the team. She was a software professional before joining the NGO. Shashank Prabhu, 24, is an electrical engineer from Karnataka and Nidhi Sharma, 29, from Shimla, has a degree in social work. Together, they work with the municipal corporation, district authorities, colleges, schools and households. This committed team organises workshops to train and create awareness, and works in two of the 17 wards in Dharamshala town. It also collects non-biodegradable waste for segregation, processing and recycling.

Documents they hand me have some astonishing information: cigarette butts take 12 years to decompose; plastic bottles 450 years; glass bottles thousands of years; cardboard two months; newspapers one month, juice cartons five years; cans 200-500 years; and polystyrene foam cups — never. My education begins.

Later in the afternoon I head to Rakkar village on the outskirts of Dharamshala. Here, on leased land, is the NGO's dry waste segregation centre, where some 200 kilos of dry waste is

segregated every day. Much of the material is shredded or made into pellets before it's taken for recycling elsewhere. I see paper, cardboard, cloth, glass, ceramic, metal and plastic. Together, they tell the story of modern living and patterns of consumption.

The municipality has recently allotted the NGO a new site, near a mountain stream, much nearer town, to set up a new material recovery facility for non-biodegradable and recyclable waste processing. Construction is on to set up a large galvanised iron shed. Dharamshala generates 25 tonnes of waste every month. The main waste, the biodegradable kind, is handled by the municipality. Composting, by various means, is the ideal means of disposal. Once done, biodegradable waste can be used as manure to fertilize the soil. But compost pits need land, and the magnitude of the problem dwarfs the efforts. So the bio-degradable waste is transported to a dumping ground in Sudher village.

This has, in turn, led to protests by Sudher villagers, who are facing the brunt of the pollution. Open dumping is unscientific, especially in the sub-zero Himalayan conditions. Cold prevents decomposition. Since such dumps are open to the elements, they could release harmful gases such as methane and carbon monoxide. When bio-degradable waste mixes with water, it forms leachate, a toxic liquid that permeates groundwater. Open waste also releases toxic chemicals into the soil. Rainfall then carries the leachate to rivers and streams nearby. This is the primary reason of river pollution in the hills rather than industrial activity.

As for air pollution, open burning of waste is a major source besides particulate matter emissions. Pollutants such as dioxins, carbon monoxide, sulfur oxides, toluene and benzene are released into the atmosphere. Carbon and other light-absorbing impurities darken glacial snow and trigger melting. As for plastic, it needs segregation, processing and recycling, but in actual fact much of the plastic is burnt or dumped. Micro particles are carcinogenic and enter the food chain and cause enduring damage. Plastic also chokes rivulets and streams on the hill sides. The rivers of Himachal Pradesh — Ravi, Beas, Sutlej, Chenab, Yamuna, Ghaggar, Parvati, Devprayag, Baspa, Spiti and Tons — all copiously water the plains, but today, all of them are affected in various degrees.

Tourism has surely brought economic prosperity to the hills, accounting for as much of 7% of Himachal Pradesh's GDP. This is a conservative estimate because there are many ancillary activities too. Besides, Dharamshala is now firmly on the cricket map of India. The new stadium is spectacular, with the Dhauladhar range as its backdrop and the cupolas of the pavilion silhouetted against its peaks. Some 25,000 spectators can be seated here, and people turn up from Delhi, Punjab and Himachal Pradesh for matches. Restaurants, hotels, resorts and homestays have come up.

But as the Council of Scientific and Industrial Research (CSIR) has pointed out, all this brings with it waste. A CSIR study finds that 55% of waste generated in the Himalayan region is biodegradable and comes largely from homes and eateries; 21% is inert such as construction material; 9% is paper; 8% is plastic; 4% is glass and ceramic and 3% metal.

In 2016, the Centre issued very progressive new rules for handling solid waste. Single-use plastic is now banned and the 'polluters to pay' principle has the potential to deter polluters. But the key lies in enforcement. As biodegradable waste constitutes the largest chunk, its disposal has to be scientific rather than resorting to open dumping or burning. Himachal Pradesh, according to the CSIR study, has 54 dumpsites but no operational landfill. Scarce land in the hills makes it difficult to create landfills.

I leave Kangra on a day when rain is lashing and fresh snow has fallen on the Dhauladhar. As I wait for the flight to be called, it occurs to me that Dharamshala town, with a population of about

60,000 and legions of visitors, is a microcosm of the problem of waste management in the country. Urban India produces approximately 52 million tonnes of waste each year. It is estimated that by 2047 we will be generating 260 million tonnes annually, requiring 1,400 sq.km. of landfill area.

Here, in the Himalayan region, at least there is the beginning of advocacy, awareness and action. But grave issues continue to loom in Kullu, Parvati, and Lahaul valleys, and in the Great Himalayan National Park, where tourist influx is very high. Even in the remote Kasol in Parvati valley, the ecosystem is under siege.

Himachal Pradesh has the advantage of literacy. People are change-embracing. Government agencies are willing to work with NGOs and experts to tackle waste management issues. Yet, as Etoshi, with her experience on the ground, tells me, entrenched social attitudes to waste and waste removal need to change fast. It is too big a problem to be tackled by waste collectors and street sweepers alone.

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