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Why Uttarakhand should choose a more sustainable path to development in a post-Covid world

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Apart from mitigating climate change, forest conservation can solve problems such as out-migration, under-employment and human-wildlife conflicts in the state.



Uttarakhand's decision in November to denotify 87 hectares of reserved forest to allow the expansion of the Jolly Grant airport outside Dehradun has once again put the spotlight on the modalities of the proposed development in this Himalayan state. So far, the innate connection of healthy forests with rural well-being, disaster management and water security has not yet entered the development narrative in the state.

Uttarakhand can scarcely afford to lose more forest. The state still has a high proportion of its land area under forest cover (45.4% as of 2019) but forest cover exists only on 24,495 sq km (70.7%) of the 34,651 sq km of legal forest land, according to the Forest Survey of India.

Further, only 72.9% of the state's forest area is recorded as very dense forest or moderately dense forest in 2017 and the rest (27.1%) belongs to open category (with a canopy of 10% to 40%), which is very likely to be degraded.

While overall forest cover has seemingly remained stable, there is evidence of an increase in degradation over the past two decades. Open forests with tree canopy density of 10% and more but less than 40% increased from 5,568 sq km in 2006 to 6,442 sq km in 2017.

Damage by infrastructure projects

Governments in Uttarakhand have seen large-scale infrastructure in the form of hydro-electric projects, resorts and highway. Yet, this focus has resulted in immense damage to forests over the past three decades.



Degraded oak forests close to the town of Mukteshwar, Kumaon. Oak forests are failing to regenerate due to lack of sufficient protection, exacerbated by climate change effects such as low soil moisture. Photo credit: Ghazala Shahabuddin

In 2012, the Wildlife Institute of India assessed that the 300 dams proposed in the Alakananda-Bhagirathi basin (potentially providing 9,563 MW of electricity) would damage parts of two World Heritage Sites, a National Park and a Wildlife Sanctuary, including habitats of innumerable globally endangered animal species.

Highway expansion, such as along the 900 km of Char Dham routes to pilgrimage sites, is another recent source of forest fragmentation and loss. There is now evidence of large-scale slope destabilisation, due to cutting and dynamiting, resulting in landslides. Indiscriminate dumping of excavated rocks is destroying forests and streams, and massively expanding disaster risk.

The role of healthy forests and other natural ecosystems in Uttarakhand's economy cannot be overstated. Historically the livelihood of the majority of Uttarakhandis has been intimately connected with forests. Organic agriculture (unrecognised as such) is still practised traditionally in mid-hills of Uttarakhand, where the farmer depends on natural leaf manure from the forest rather than synthetic fertilisers.

Forests are also intimately connected with water availability. The loss and degradation of hardwood forests have also led to extreme water scarcity, which is exacerbated by climate change. Innumerable perennial streams have dried up or become seasonal due to these factors, according to local people. In regions receiving more than 2,000 mm of rainfall annually, such chronic water scarcity points to a complete lack of water conservation measures in the face of increasing use.

Tourism in the state

The importance of a healthy forest cover and water supply for sustaining the steady flow of tourists to the state also often goes unrecognised. It is estimated that as against a state population of 1.1

crore, as many as 2.7 crore tourists visited Uttarakhand in 2012. Tourism and allied livelihoods such as hospitality, taxi services, homestays, roadside eateries, shops and guiding activities provide incomes to a large proportion of local people, bringing in as much as 4.4% of the Gross State Domestic Product (not counting indirect employment).

However, tourism requires healthy mountain ecosystems comprising forest cover, clean air and plentiful water. Most of all, tourism requires freedom from weather-related disasters that can easily turn a holiday into a nightmare.

The restoration and protection of forest cover must therefore be a priority for the Uttarakhand government. In my research in the mid-hills of Kumaon, I found widespread regrowth of oak and other trees on abandoned agricultural terraces and community-conserved patches, showing the potential of rootstock and coppices to grow with just protective measures.

Uttarakhand is fortunate in having a well-established network of village forest institutions (van panchayats) that are already empowered to use and manage forests, a legacy of the pre-Independence times. Given the high levels of under-employment, direct cash transfers to van panchayats in return for forest protection may not be a bad thing. Cash transfers may be possible via Compensatory Afforestation Management and Planning Authority which has been created at the Centre for offsetting forest loss due to development projects.

Additionally, community reserves, already mandated by the amendment of 2003 to Wildlife Protection Act (1972), should also be created in and around inhabited areas, as these areas too support considerable biodiversity. In this context, the immense tolerance of local communities towards wildlife should be mentioned- thus the potential for community reserves is huge.

In parallel with an emphasis on forest conservation, enhanced incentives for existing food processing, organic agriculture, renewable energy, aromatic crops and nature-based tourism can continue to keep people linked to their forest lands and cultivation. Some progress has been made on these fronts, but a lot more is needed.

For instance, solar energy capacity in this intensely solar-rich state is currently only a meagre 300 MW. Due to the relatively high literacy rate (78%) and a per capita income above the national average (Rs 1.98 lakhs as of 2018-19) in the state, such income-enhancing interventions are far easier in Uttarakhand than other states.

Land use change

Finally, a stronger implementation of land use laws is sorely needed in Uttarakhand. Rapid conversion of cultivation lands to resorts, cottages and even gated apartment complexes is seen during the last 10 years to 20 years.

Laws are needed to restrict change of agricultural land use to non-agricultural and of forest land to other uses. Expanding towns have also started to impinge on their forests for fuelwood and recreational sites. A study by Kyoto University published in 2017 estimated that forests and green areas within Nainital town had decreased by as much as 43.7% from 2005 to 2010.

As thousands of people return to their lands during Covid-19 pandemic, the state government has a valuable opportunity to adopt forest conservation for and by the hill people, as a critical ingredient of development.



This will go a long way towards solving many of the socio-economic problems that Uttarakhand has traditionally grappled with such as out-migration, under-employment and human-wildlife conflict, apart from meeting urgent commitments towards climate change mitigation.

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