

Joshimath: A “Himalayan” Disaster

If only the decision-makers cared to heed to the people's voice...

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Tip of the iceberg:

Land subsidence in the Uttarakhand hills seems to be taking its heavy toll, not merely in Joshimath and Karanprayag, where many structures have developed cracks, but it is also likely to affect the other towns, including Gopeshwar in Chamoli district (where Joshimath is situated), Ghansali in Tehri district, Munsiri and Dharchula in Pithoragarh district, Bhatwari in Uttarkashi district, Pauri Nainital and several other towns.

(<https://www.downtoearth.org.in/news/urbanisation/after-joshimath-it-could-be-karnaprayag-nainital-and-other-uttarakhand-towns-next-say-experts-87002#:~:text=The%20towns%20that%20could%20suffer,other%20towns%2C%20according%20to%20experts>).

The authorities have since declared Joshimath’s all nine municipal wards as “*landslide-subsidence zone*” under Section 23 of the Disaster Management & Prevention Act, 2005. Preventive/ relief measures may have to be taken soon in the other towns.

The official response, however, has been too little, too late!

Warnings ignored:

The Himalayas have formed as a result of collision of the continental crust of two tectonic plates, namely, the Indian Plate thrusting into the Eurasian Plate. The process of the resultant tectonic shifts is still continuing and, consequently, the Himalayan stretches are prone to frequent seismic disturbances. Climate changes resulting from global warming have also impacted the Himalayas, causing a retreat of its glaciers. For example, the rate of retreat of the Gangotri glacier over the last three decades has been more than three times the rates of retreat during the preceding 200 years. This has in turn caused glacial outburst floods and extreme weather conditions, including an

increasing frequency of cloud bursts (*Reports of Inter-Governmental Panel on Climate Change*)

These trends render the Himalayan terrain and ecology particularly vulnerable to anthropogenic interventions.

The cloud bursts and the floods that struck the hilly regions of Uttarakhand in 1998 (Ukhimath), 2001 (Phata), 2002 (Burakedar), 2012 (Asi Ganga & Ukhimath), 2013 (Kedarnath) and 2021 (Chamoli) need to be seen against the above background.

Arnold Heim, a Swiss geologist who investigated these parts more than eight decades ago, from a geologist's point of view, published a research paper, "Structural Studies in the Central Himalaya" in the Himalayan Journal (09) in 1936, pointing out that "*the Himalaya is the result of a huge flood of the earth's crust directed from the Angaraland of Central Asia towards the Indian Plain, and that this gigantic movement of the crust has not yet come to rest. The Himalaya thus, in the view of the geologist, is like a living organism*", an organism that has since been subject to all kinds of attacks and trauma in the recent decades, in the name of "development". Since the Himalayas are an evolving entity from the geological point of view, the rivers that originate from it are also subject to the accompanying changes. The course of each river there has evolved over the millennia. Any external tinkering with them is bound to have repercussions.

Forty years after Arnold Heim's investigations, when the local communities expressed concerns about the unregulated growth of urban agglomerations along the pathways to the holy sites, the government constituted a committee headed by the then Divisional Commissioner, Mahesh Chandra Sharma to recommend measures to address those concerns. The committee evidently consulted experts familiar with the local geology and cautioned the authorities that Joshimath was situated on a deposit of sand and stone, on an ancient landslide, not on the main rock and that undercutting by river currents of Alaknanda and Dhauliganga were also playing their part in continuing landslides. The Sharma Committee recommended restrictions on heavy construction work, blasting, digging to remove boulders for road repairs and felling of trees. (<https://www.cnbctv18.com/india/joshimath-1976-report-warned-that-village-was-on-ancient-landslide-human-activity-poses-danger-15610021.htm>).

Despite these ominous warnings, the authorities failed to regulate the construction of buildings,

heavy road construction work and the consequent deforestation. As if that was not enough, they launched huge projects involving massive construction work, including tunnelling, blasting, heavy vehicular traffic.

50,000 MW Hydroelectric Initiative (2003):

In May, 2003, the Centre and the States launched the so-called “50,000 MW Hydroelectric Initiative” at the national level, including a large number of hydroelectric projects in Uttarakhand and the other hill States, for tapping the power potential of the numerous tributaries to River Ganga and the other major rivers. This has led to a proliferation of hydroelectric projects, particularly in the Bhagirathi-Alaknanda river basins in Uttarakhand.

As per information available from the apex court's judgement in Anuj Jain vs Alaknanda Hydro Power Company [WP(CA) 6736/2013], in the Bhagirathi and Alaknanda basins alone, as in 2013, there were 69 hydroelectric projects with a capacity of 9,020 MW, out of which 17 projects of 2,295 MW were operational, work in the case of 26 projects of 3,261 MW for had been suspended and another 26 projects of 3,464 MW in the pipeline. According to the CEA (https://cea.nic.in/wp-content/uploads/hpi/2022/01/status_hydro_initiative_01.pdf), as at the end of January, 2022, there were 2 projects of 327 MW under construction, and another 31 projects of 5,351 MW in the pipeline.

Irrespective of these figures, the fact remains that the number of projects taken up in the two river basins was truly mind boggling, with the associated movement of heavy vehicles, tunnelling, blasting, influx of outsiders on a large scale etc. That such a huge number of projects should be taken up, without any respect for the carrying capacity of the terrain and its fragility, is inexplicable. Had the authorities interacted with the local communities, who were better aware of the potential hazards, they would have perhaps refrained from going ahead.

The hydroelectric power plants taken up in Uttarakhand feed more electricity into the northern grid than into the homes of Uttarakhand residents. The bulk of the electricity that flows into the grid feeds the air-conditioners in Delhi and the other cities in north India, that too, after some portion of it lost in transmission. According to the CEA's Load Generation Balance Report of 2021-22 (https://cea.nic.in/wp-content/uploads/l_g_b_r_reports/2020/LGBR_2021_22.pdf), Delhi

consumed as much electricity as in the three resource-rich States of Himachal Pradesh, Uttarakhand and Jharkhand taken together. In the ultimate analysis, the projects in Uttarakhand are meant more for urban consumers in Delhi and other paces, than for the majority of the consumers of Uttarakhand itself. Such large projects involving huge civil works are usually the contractors' delight. Many of those projects are promoted by private companies who, along with the contractors, are the ones that profited from the cost-plus tariff system that yielded high returns.

These hydroelectric projects are only a part of the story of large projects in Uttarakhand.

On the eve of the State assembly elections in December, 2016, the Prime Minister launched the Char Dham highway project, connecting the four holy sites of Kedarnath, Badrinath, Yamunotri and Gangotri, involving 889 km of road works, with the associated blasting etc., more as a measure to win elections, than in response to the wishes of the local people

(<https://timesofindia.indiatimes.com/india/prime-minister-narendra-modi-lays-foundation-stone-of-char-dham-highway/articleshow/56197582.cms>)

Similarly, a massive project, involving 60km of ropeways in the same area of Uttarakhand was launched, without the initiative coming from the local people

((<https://www.financialexpress.com/infrastructure/parvatmala-yojana-centre-receives-250-ropeway-project-proposals/2941788/>)

Such projects disrupt the lives of the local communities and introduce undue disturbance to the vulnerable Himalayan terrain.

Development: For whom?

“What the caterpillar calls the end, the rest of the world calls a butterfly” said Lao-tzu, the great mystic philosopher of ancient China.

We live in a world of perceptions. What is visible to one is not necessarily visible to the other. This is indeed the essence of the ongoing debate between the “development” protagonists and the “environment” activists. Each has ready answers, without trying to find out what the questions are.

The conflict between “environment” and “development” is illusory, the creation of the way we appreciate either of these two concepts.

In the specific case of hydroelectric development of the Bhagirathi-Alaknanda basins, the ambitious hydroelectric initiative, looked upon as a major leap in “development” by the decision-makers in Delhi and Dehradun, if perceived from the point of view of the local communities residing in the hills for generations, would appear otherwise, disastrous for the local ecology, disruptive of their lives and intrusive from the point of view of their religious and cultural practices.

In Amartya Sen’s words, “*development can be seen...as a process of expanding the real freedoms that people enjoy*” (*Development as Freedom: Amartya Sen*). This is perhaps the true test of whether a given project or an activity qualifies to be called a “development” activity. This, in fact, is also the basis for the idea of a “*public hearing*” being made a mandatory **prior** requirement for appraising any project, before it can be cleared, either from the point of view of the Environment (Protection) Act of 1986 (EPA86) or, from the point of view of “social impact assessment” (SIA) under the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act of 2013 (LA2013). Under Article 19 of the Constitution, a citizen is entitled to be informed adequately of the implications of a project, before it is taken up, especially if such a project is going to impact his/ her life.

There is a great deal of haze surrounding the term, “development” these days. The whole approach to development, as viewed by the planners in India can be summarised as a “*decide-announce-defend*” or DAD approach as it is known (<https://lup.lub.lu.se/luur/download?func=downloadFile&recordId=2172946&fileId=2172960>), in which decisions are taken top-down, first announced by the planners and, when those affected question it, not only do the decision makers try to defend their decisions obstinately but also brand those who question, as “naysayers” of development, “*urban nexals*”, “*anti-nationals*” and so on, conveniently ignoring the three primary requirements in a functional democracy, namely, ***discussion, dissent and debate***.

A senior Niti Ayog official, reflecting the mood of the government of the day, recently went to the extent of saying that “*too much democracy*” came in the way of speed of reform.

(<https://www.thehindu.com/business/Economy/reforms-are-difficult-as-india-has-too-much-of-democracy-says-niti-aayog-ceo/article33281237.ece>).

He should have known that democracy and development are the two sides of the same coin.

“Development” and the judiciary:

When project-affected communities fail to get relief from the executive, out of necessity, they approach the courts for relief. Before the courts, the executive usually justifies the necessity of going ahead with the project without interruption, on the ground that it is a part of “development”, an all encompassing term, irrespective of what kind of costs it inflicts on the local communities. When the courts passively accept such a justification, without questioning the way the executive has defined the term “development”, those seeking relief feel helpless.

The adivasis of Chhattisgarh, affected by land acquisition for the Parsa coal block mining project, under the Coal Bearing Act of 1957, have challenged land acquisition before the apex court. Parts of the project lie in the Scheduled Areas of Chhattisgarh, where prior consent of the local adivasi Gram Sabhas is mandatory under the PESA Act and the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, abbreviated as “Forest Rights Act” (FRA). Apparently, such a prior consent of the adivasis had not been taken in the instant case.

Whatever be the urgency involved in mining coal there, it cannot be in violation of the laws meant to safeguard the interests of the adivasis. However, when a plea was put forward on behalf of the adivasis to stop the mining activity, pending adjudication in respect of their rights, the apex court is reported to have observed that it would *“not come in the way of development, even as it is committed to determining people’s rights, as existing under the law”*

(<https://www.hindustantimes.com/india-news/wont-come-in-way-of-development-sc-refuses-to-stall-raj-adani-mining-project-101671215985275.html>). Such mining activity disrupts the lives of the adivasis and they need urgent protection. In the case of the Vedanta bauxite mining project in Odisha, the apex court had pronounced a landmark judgement in April, 2013, emphasising the decision of the local adivasi Gram Sabhas on whether the company should be permitted to go ahead with its mining activity or not, would be final, as per the provisions of the PESA and the FRA. Applying the same norm, had the apex court considered the plea of the adivasis in Chhattisgarh and stopped mining activity in the Parsa coal block as an interim measure, the local adivasi communities would have felt considerably reassured of their rights.

These days, it has become customary for the executive to justify its undemocratic decisions on dubious grounds of “*strategic*” importance, “*national security*” and so on. If the courts accept such a justification in a routine manner, without subjecting it to the strictest scrutiny, the affected citizens have nowhere to go.

Public hearings- A farce:

Both EPA86 and LA13 provide for public hearings to be conducted before environment clearance can be granted for a project and land can be acquired for it. Work on a project cannot start unless the necessary environment clearance is granted. Though the courts have laid down norms in unambiguous terms on the manner of conducting public hearings, in reality, public hearings are reduced to a farce, an avoidable irritant to be tolerated. At many public hearings, there are more police personnel than the public. Dissenting voices are usually kept out and those that nod their heads let in. The environment appraisal reports meant for the public are usually tailor-made for the project promoter, unintelligible to the public. Many projects start without clearance and the Environment Ministry ever ready to grant post-facto clearances.

(<https://www.newindianexpress.com/cities/chennai/2017/jul/17/moefs-lifeline-to-erring-builders-raises-eyebrows-1629300.html>)

There are large projects in India, the construction of which is consciously allowed to go on without clearances. For example, construction work in the case of the Polavaram multi-purpose project in AP, which displaces more than a lakh of adivasis in Andhra Pradesh (AP), Odisha and Telangana, is allowed to proceed without a valid environment clearance. Since submergence is in the Scheduled Areas of the three States, prior consent from the Gram Sabhas should have been taken before starting the project. AP has conveniently ignored this requirement, as well as the need to hold genuine public hearings, and is going ahead. More than anyone else, it is the contractors who are pushing the project forward. The irony of the Polavaram project is that those affected get little benefit from it.

Similar is the case with the Jakhol Sankri hydroelectric power project (44MW) on the Supin river in Uttarakhand. Shri (late) Vimal Bhai of Matu Jansanghatan, a crusader on behalf of the people for over four decades against ill-conceived projects (<https://www.indiawaterportal.org/articles/public-hearing-green-clearance-sham>), had described how farcical had been the public hearings held for that project.

“pandemonium prevailed at the public hearing held on June 12, 2018 amidst tight police security. People stalled the proceedings for three hours raising slogans of 'Cancel public hearing, dam company go back'. People vociferously demanded cancellation of the public hearing, alleging that

they had not been consulted. The prevailing sentiment was that the government and the project proponent should have furnished access to project information. If the real public hearing had occurred, people could have raised their issues and had them dealt with, and public protests could have been avoided. People want the government to listen to their long-standing demands on forest rights and other development work first. The dam can wait”.

Public hearings for most Uttarakhand projects were held more or less on similar lines, defeating the rationale for holding public consultation, as required by the EPA and the series of regulations issued under it. People are the main stakeholders in such projects. To ignore their concerns is anything but democratic.

The High Power Committee (HPC) for the Char Dham Pariyojana:

When the Prime Minister launched the Char Dham project on December 27, 2016, he said that it was meant for “development” of Uttarakhand and it was for those going to the State for “Kedarnath, Badrinath yatra” (http://timesofindia.indiatimes.com/articleshow/56197582.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst).

The apex court, before whom the project had come up for adjudication, appointed a High Power Committee in 8-8-2019 under the chairmanship of Shri Ravi Chopra of People's Science Institute to look into the implications of the project and suggest further action. The HPC, considering the environmental implications of such a highway, submitted its report to the apex court on 13-7-2020, proposing a highway with a restricted width. The government however pointed out the necessity of further widening the major segment of the highway, in line with strategic considerations, which the apex court finally accepted.

While pronouncing its order in December, 2021, the apex court observed, “*making the Project environmentally compliant should not be seen a “checkbox” to be obtained on the path to development, but rather as the path to sustained development itself. Thus, the measures adopted have to be well thought out and should actually address the specific concerns associated with the Project. Understandably, this may make the Project costlier, but that cannot be a valid justification to not operate within the framework of the environmental rule of law and sustainable development. In its bid to make the project more environmentally conscious, it is also imperative that the MoRTH (Ministry of Road Transport and Highways) and MoD (Ministry of Defence) be transparent in the measures they adopt, in order for them to be held publicly accountable by spirited citizens”*

While such an order certainly addresses the strategic need of the country and strikes a “balance” vis-a-vis the environment, there can be no escape from the fact that it is going to cause disturbance to the fragile geology of the region, which in turn may compound the problem of disasters, rather than mitigate their effect, unless extraordinary ways to find technological solutions are found to mitigate the environmental implications. Involving the local communities, as rightly pointed out by the apex court, even before decisions were taken in the first instance, would have led to more sustainable outcomes in the specific case of Char Dham.

Following this, Shri Ravi Chopra, under whose chairmanship the HPC was required to oversee project implementation, submitted his resignation to the apex court, stating that in view of the latest apex court's order that moved away from the HPC's original position and the restricted role assigned to it, he would not wish to continue. The following paragraph in his resignation letter perhaps reflects the voice of the people of the hills of Uttarakhand:

“I have seen engineers armed with modern technological weapons assaulting the Himalayas. They have slashed through pristine forests, wounding vulnerable Himalayan slopes to widen highways. Ever-increasing numbers of tourists speed along them, their vehicles spewing noxious gases that cover the towering peaks ahead in an unsightly haze. The engineers exult and circulate photographs proving their conquest of Nature, little realising that they too are a part of Nature and cannot survive if their own natural environment is destroyed”

Environment regulations changed to suit projects:

While the idea of a public hearing was sought to be defeated by the authorities through procedural lapses, more recently, the Environment Ministry became more forthright, by doing away with the need for a public hearing altogether, by bringing in legislative and executive actions, to make it easier for project promoters to take up and implement projects, behind the back of the public.

It is ironic that the Ministry whose business is to protect the environment should, instead, promote business at the cost of the environment!

Democracy in a reverse gear!

Those who glorify the ancient culture of India and vehemently find fault with others for not appreciating it enough, seem to be ignorant of the well documented fact that democratic way of thinking had been at the core of the ancient culture of India since the 6th century BC, or even earlier, when the Buddhist sanghas were in evidence. Even where there were monarchies, there was self-governance at the village level.

When the Chola kings ruled the southern parts of the country during the 9th to the 13th centuries AD, *“there was remarkable autonomy at the village level. Chola officials participated in village administration more as observers than as administrators. The Cholas are best known for their local self government at the village level.....the Chola administration was based upon democratic principles. Major official activities were executed through Sabhas (Meetings). The members of Sabhas were elected from the people”* ([https://www.worldwidejournals.com/international-journal-of-scientific-research\(IJSR\)/recent_issues_pdf/2016/January/January_2016_1451903214__165.pdf](https://www.worldwidejournals.com/international-journal-of-scientific-research(IJSR)/recent_issues_pdf/2016/January/January_2016_1451903214__165.pdf)).

Though the Indian Constitution specifically provided for village-level self-governance (Article 40) in 1949, it took more than four decades for village-level elected bodies to acquire a Constitutional status. One would have expected democratically elected governments to move forward thereafter and decentralise governance, from the Centre to the States, and from the States to the Panchayats and Gram Sabhas, but to the misfortune of the people, the successive governments that followed have put democracy in the reverse gear.

The delicate federal relationship between the Union and the States is crumbling, moving towards a highly centralised unitary system of governance, in which the Centre intrudes into domains that belong to the States. Both the Centre and the States are marginalising the Panchayats and the Gram Sabhas, ignoring their Constitutional status and even violating the special laws applicable to the Scheduled Areas, such as the PESA, and the law that applies to forest dwellers, namely, the FRA, which have empowered the Gram Sabhas to take decisions. Where there are salutary provisions that uphold participative decision making, in the name of *“promoting ease of business”*, they are being diluted one after the other.

Imposition of decisions from above tends to erode the capacity of the village-level local bodies to innovate and find solutions that have relevance for them. In the instant case of the people of Uttarakhand, had the Centre and the State trusted the local communities to find development models that suit them, a more optimal, sustainable approach would have emerged. Instead of large

hydroelectric power plants, they would have perhaps come up with distributed electricity generation models like solar and wind devices, which would reduce the distribution losses and enable the consumers to become suppliers of surplus energy to the grid. Had the local bodies been given the freedom to decide on the kind of tourism and its volume, they would have opted in favour of a reduced tourist footprint, which would have rendered the Char Dham Pariyojana irrelevant. Similarly, the municipalities there would have heeded to the advice of the local geologists and imposed restrictions on unbridled urban proliferation. Excessive interference in decision making from above has come in the way of a development paradigm being chosen, that suits the local terrain and the local cultural practices.

Village self-governance and village-level models of development are the need of the hour today for India's democracy to strengthen and flourish. This is urgently called for in the case of all the Himalayan States in particular and for the rest of the country in general.

When democracy and development converge:

The disasters that have struck in the recent times, one after the other, in Uttarakhand, Kerala, and other parts of the country should make the planners rethink their concepts and strategies.

This should serve as a wake up call to all those who think that they can wantonly impose their ideas of development on the people, especially on those that live in the Himalayas.

With specific reference to Uttarakhand and the other Himalayan States, in Arnold Heim's words, the Himalayas are a living organism. They and the rivers that gush down their slopes and valleys, are still evolving, ready to strike whenever under a threat, but benign and bountiful to those who belong to it and ever forgiving to all those that understand and work in harmony with it. Development strategies that are firmly based on this premise alone can succeed and survive.

The key to the development of the Himalayan communities, like anywhere else in the country, is to respect the idea of self-governance and participative decision making. Deeper the democratic processes, the better would it be for the quality of development.

As in the case of the Himalayas, there are other vast stretches of hilly regions in India, including the Eastern and the Western Ghats and the Aravali range, though they differ from one another in terms of their geological features. Each of these hilly regions has its own ecological significance. Each has its own rich bio-resources. Each of them contributes significantly to the richness of biodiversity that India is endowed with. The hills are home for a wide range of adivasi communities, with their

own unique cultures. The hilly terrains of India form the catchment for the rivers on which the people in the plains depend. Senseless degradation of the hills and the river catchments has already caused disasters of the kind witnessed in Kerala during the last few years and will lead to many more such disasters, unless corrective steps are taken at the earliest.

The Western Ghats Ecology Experts Panel headed by Prof Madhav Gadgil submitted a path breaking report to the Environment Ministry on August 31, 2011 on which the Ministry is yet to act.

Among several other policy measures, the Panel recommended an elaborate scheme of ecosensitive zoning of the Western Ghats where large projects should be avoided and, in particular, suggested that the governments should “*take a number of critical steps to involve citizens. These would include: proactive and sympathetic implementation of the provisions of the Community Forest Resources of the Forest Rights Act, establishment of fully empowered Biodiversity Management Committees in all local bodies*”. Though applicable to the Western Ghats, these recommendations are eminently relevant to the Himalayan region and the other hilly regions.

There is a tendency among the planners to overestimate the benefits of large projects and underplay the benefits of the environment that they degrade. If an objective social-cost social-benefit evaluation is carried out, many large projects may not pass the test, as their costs exceed the benefits. For example, large scale mining that is going on in parts of Chhattisgarh these days has already caused enormous losses to the forest resources, losses in terms of biodiversity, damage to the major river catchments, apart from the social costs to the adivasi communities there.

For example, the Report on the Economics of Biodiversity (also known as the Das Gupta Committee) [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/962785/The_Economics_of_Biodiversity_The_Dasgupta_Review_Full_Report.pdf.] evaluates the economic value of biodiversity. If the Environment Ministry stands committed to its Constitutional responsibility to safeguard the environment, it should expand the scope of environmental appraisals to include such aspects.

Epilogue:

While the decision makers are genuinely concerned about land subsidence in Joshimath and are taking emergent relief measures, past experience shows that memories are short and lessons that disasters teach are easily forgotten. If the planners at the Centre are truly concerned, they should institute a standing expert group to review the history of and the reasons for the disasters in the

Himalayan States and other States like Kerala, analyse the circumstances that led to them and the preventive measures that need to be taken, both in terms of the policies to be adopted and in terms of the projects in the pipeline. The purpose of instituting such a group is to keep reminding the decision makers not to be carried away by short-term compulsions, that compromise the long-term interests of the people. The group should function in a transparent manner, accessible to the public and open to ideas.

In Arnold Toynbee's words, "Civilisations die from suicide, not by murder."