

IMAGINE that a jumbo jet is ready to take off with a huge load of passengers and cargo. A few of the passengers discover a time-bomb underneath one of the seats; they then look out the window of the plane and see that one of the wings of the plane is dangling in the air and might fall off at any moment. They inform the other passengers, and all leave the plane in panic. The airline management, instead of taking the plane off the runway for a thorough security checkup and for repairs, and then making other arrangements for the passengers, call in the police, and get many of the agitated passengers beaten up and their leaders arrested for creating a law and order problem. Nevertheless, the passengers persist in demanding that the flight not take off with them aboard. The management then takes aside a few leading protesters, offers them a free ticket each on a different plane and some bribe money to pretend to board the flight in order to break the unity and resolve of the protesters. Even so, the rest of the passengers continue sitting on a *dharna* saying that they will not move till the flight is cancelled and an enquiry ordered into the negligence. They demand a different plane for their trip, and that the management send the defective plane for a thorough check-up. The passengers are, however, forcibly rounded up and loaded onto the dangerous plane simply because cancelling the flight would mean having to give a refund to the passengers and consequently would result in financial loss to the management.

Such a situation seems inconceivable. No ordinary airline management would take such a risk. Even if it did not care about the lives of the passengers, it would not want to lose the plane in the inevitable crash.

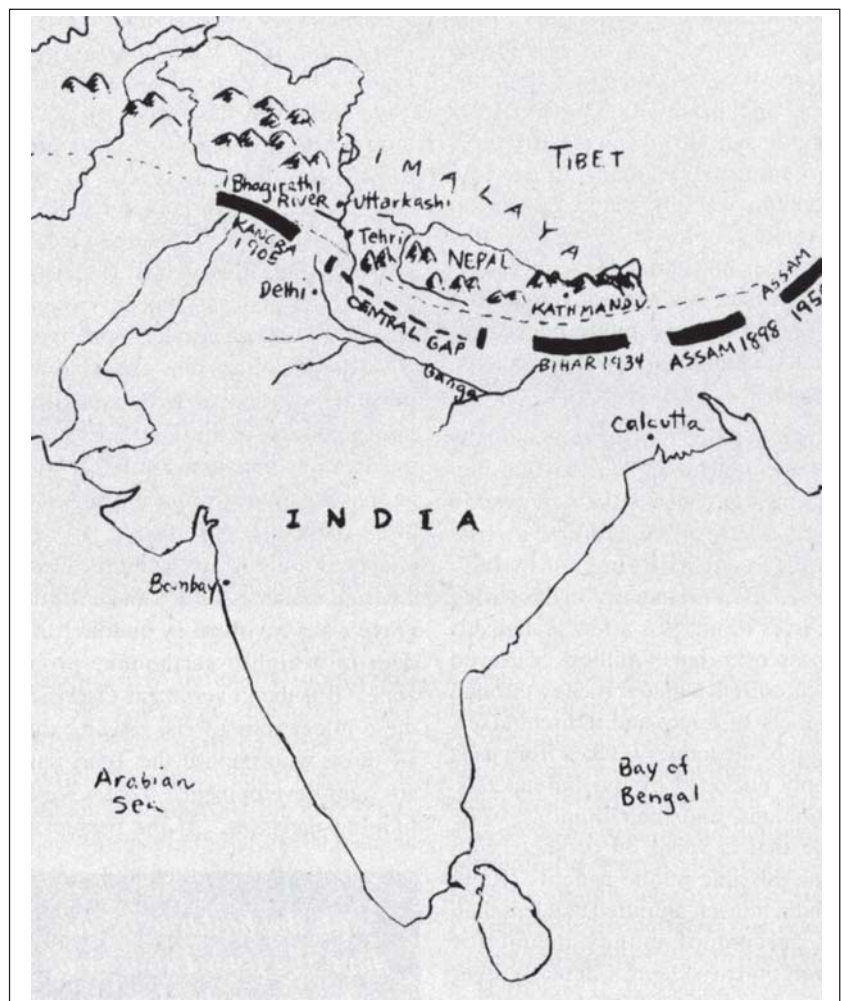
A Himalayan Catastrophe

The Controversial Tehri Dam in the Himalayas

Madhu Kishwar

However, what if the managers did not own the planes, but got ownership of the planes as well as the airline company by fraud and crookery from the investors, and began to help itself to huge commissions off the books on every ticket sold while making extra

money by kickback by buying substandard, nearly junked planes? Since the airline company executives themselves do not travel on these planes — only the investors do — and do not pay the insurance costs for harm to the passengers, they consider it



logical to scrimp on everything, including security measures, and do not care if someone plants bombs in the planes or even steals parts of the engines.

Sounds like a nightmare. And most people would turn around and say, this could not possibly happen! Why would investors willingly hand over their money to a bunch of crooks who not only fleeced them outrageously but also behave as if they are not merely the managers but also the owners of the airline and have no accountability to the investors. As it happens, these crooks are able to stay in control by soliciting and obtaining more and more investments from gullible people by hiring effective propagandists, touts, thugs and hoodlums who alternately cajole and threaten people into believing that management is acting in the investors' best interest! And those investors who don't succumb are either packed off to jails or beaten to a pulp or declared insane.

If you think that this is an unlikely scenario, you are sadly mistaken. Our country's government does exactly what I described the airline management as doing — in fact, worse. It is frequently endangering the lives of not just a few planeloads of passengers but of millions of us who fill its coffers with our money through a variety of direct and indirect taxes. Much of the money it takes from us is simply pocketed by our bureaucrats, politicians, and their minions. The little that is spent on projects with some possible public benefits (Rajiv Gandhi himself admitted that less than ten percent of money meant for development schemes actually ever gets to be spent for "development") is almost all put into wasteful and often even dangerous schemes. The

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controversial Tehri dam project is one such example.

A Dangerous Dam

The Tehri dam project was first conceived in 1949 and was sanctioned by the Planning Commission in 1972. It is located in the outer Himalaya in the Tehri-Garhwal district of Uttar Pradesh. It is planned to be the fifth highest dam in the world — 260.5 meters high and spread over an area of 45 square kilometers in the Bhagirathi and Bhilangana valleys near Tehri town. The dam, when finished, will completely submerge Tehri town and nearly 100 villages will be totally or partially submerged. Nearly one lakh persons will be permanently uprooted from their homes because of the dam. Ever since the dam was sanctioned in 1972, local people have been opposing the dam and offering resistance to its construction. Many scientists and environmentalists have pointed out the grave risks involved in building this dam in a highly earthquake-prone zone. But the government dismisses these allegations of risk, saying that all those who oppose the Tehri dam are "anti-development". That is really fudging the issue. If the project is really going to be beneficial to the

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people of this country, the government ought to have no objection to holding public hearings and a thorough open review of the project, so as to allay the fears of the hazards and drawbacks.

This mammoth dam is located in a seismic fault zone — that is to say, this area is earthquake-prone. Between 1816 and 1991, the Garhwal region has witnessed 17 earthquakes, the latest one being the Uttarkashi earthquake of October 1991. The design of the dam is of 1969 vintage when scientific knowledge and understanding about earthquakes (and the plate tectonic theory upon which it is currently based) was far more limited.

Even though, over the years, some of the parameters of the project were altered substantially, there was no change in the basic design, especially in the width of the structure, as this had already been fixed in 1978 when work on the diversion tunnels had commenced. This means that the dam is dangerously underdesigned. To claim the dam is safe without changing the width of the dam (and completely rebuilding the diversion tunnels), is illogical. Tearing out and rebuilding the diversion tunnels, which have been operating since their completion in 1986, is economically nonviable, as is building a dam that is 2,000 meters or more in width. Even if that were possible, there is no guarantee that it would not collapse in an earthquake of Magnitude 8 Richter Scale or greater. The Uttarkashi earthquake of 1991 served as a warning that an earthquake could be of longer duration than has been taken into account by the project engineers.

In this context, it is noteworthy that no recognised seismologists have been associated with the Tehri project. Dr Vinod Gaur, the only seismologist

of international eminence associated with the high level committee appointed to evaluate the dam, expressed strong reservations about the safety of the dam. Professor James Brune, an acknowledged international authority on earthquake rock attenuation, whose formula the Tehri project engineers claim to have used in their estimate of the safety of the dam, has gone on record to say that his formula has been misused and that if they construct this dam it will be one of the most unsafe dams in the world. The International Commission on Large Dams has declared the site "extremely hazardous". Instead of proving publicly that anticipated risks have been covered, the government arbitrarily fudged their figures for political convenience rather than carry out experiments to empirically determine and update realistic estimates.

The Himalayan mountains are known to be young and fragile. With continuous blasting and massive deforestation, they have become even more unstable. Landslides occur frequently in this region. Many scientists, therefore, believe that the mountains will not be able to bear the burden of such a mammoth structure. Even if the structure withstands the shock, there is every possibility of the fragile mountain slopes giving rise to huge landslides disgorging into the reservoirs, causing dam failure and major floods. Some of the mountains near the dam have been assessed by geological surveyors to be very unstable without vegetation cover. In case the dam collapses due to an earthquake or a design fault, the devastation will be unimaginable. The huge reservoir built at such a height will be emptied in 22 minutes. Within 63 minutes Rishikesh will be under 260 meters of water. Soon after Haridwar



Photo: RAGHURAI

will be totally submerged. Bijnor, Meerut, Hapur and Bulandshahar will be under water within 12 hours. Thus the dam is potentially dangerous for large parts of north-western India, and large areas in the Gangetic plains could be devastated in the event of a mishap.

The Death of Ganga

With the building of the dam, the river Ganga will become a dead river. Ganga is not just any river; it is a unique symbol of our ancient

civilisation and culture. Ganga water has the quality of remaining fresh for many years and is, therefore, part of many sacred rituals, including the pouring of a few drops of Ganga *jal* into the mouth of a dying person. People come from all over the country to perform *asthi pravah* in the Ganga at Haridwar. If the Ganga is made to flow through tunnels dammed at Tehri (and also at Bhaironghati Thala dam) as proposed, this sacred river will lose the quality of freshness and purity it is revered for. Only open, flowing

water is able to support life, as it gets rejuvenated by contact with an oxygenated atmosphere. When water is dammed, its quality deteriorates. Water collected in a huge stagnant reservoir 260 meters high cannot oxygenate itself. Fish, water plants, and other aquatic life are also crucial for keeping the water fresh. But when water is made to flow through narrow, closed tunnels, as is inevitable with mega dams, there is no possibility of life surviving in such waters. Already, the building of the Farakka barrage over Ganga near Calcutta and the building of tunnels to control and divert Ganga waters at Tehri have obstructed the movement of fish from the sea to the Himalaya during the summer for laying eggs and their return to the sea during winter.

In 1807-08, Rapier had observed that at the Sangam of Devprayag, he had found five to six foot long fish jumping out of the water to grab at *rotis* being fed to them by pilgrims. Today, the polluted Ganga has very few fish left. Consequently, all efforts to clean up the river with fancy modern technology have failed. By the time Ganga reaches the plains, we start pouring so much filth in it, including sewerage and industrial waste, that it resembles a dirty drain rather than a holy river. Even in the Himalayan mountains, serious environmental imbalances being created by deforestation are causing a threat to the river. Scientists have found that the glacier that feeds Ganga is receding at an alarming pace due to unchecked pollution being created

even in that pristine environment. If big dams such as the one at Tehri are built so high up close to Ganga's very source, this river will become a dead river by the time it reaches Rishikesh and be impossible to clean over the rest of its route. Thus, the Tehri dam is a major civilisational assault on the people of India and not just on the people of Tehri who will be uprooted from their homes.

Environmental Fallout

The government claims that it has reviewed the safety and environmental aspects of the dam. However, most of these reviews were done by those involved in building the dam, those on the payrolls of the dam builders. Nevertheless, even some of the government's own evaluation

The Many Unsafe Dams in India

A majority of India's dams are "unsafe by present standards", according to a leaked internal World Bank memo, the International Rivers Network, a non-governmental environmental organisation, has said.

Of the 25 dams surveyed under an ongoing World Bank dam safety project, it said, none had been designed to hold back the amount of water which it was now calculated could enter their reservoirs during heavy storms. Two of these dams could be hit by floods seven times greater than they were built to survive. The dams surveyed, the Network says, include two of India's largest — Hirakud and Gandhi Sagar.

The author of the memo, Mr William Price of the World Bank's Asia Technical Division, says that for these dams, the consequences of a dam failure during a major flood would have to be described with some adjective beyond 'disastrous'.

The Network said: "The 25 dams assessed by the World Bank team make up less than three percent of the total number of dams in the four states covered by the project." The memo reportedly states that the problems found at the 25 dams may be "only the tip of the iceberg".

The Network continued: "India's worst dam disaster to date, the failure of the Machhu II dam in 1979, killed at least 2,000 people. Machhu II collapsed during a flood which was over twice as strong as that which the dam was built to contain. Mr Price points out that "there is no comparison" between the remote areas downstream of Machhu II and the "highly populated valleys" below Hirakud and Gandhi Sagar, and that the failure of either dam, Hirakud especially, would "dwarf the Machhu disaster".

"Furthermore, Machhu II was a relatively small dam, 26 metres high. Hirakud is 59 metres high and can hold back 8.1 billion cubic metres of water - 80 times as much as Machhu II. Gandhi Sagar is five metres higher than Hirakud and its reservoir is only marginally smaller. Although clearly, hundreds of thousands of people are at risk downstream of the 25 dams surveyed in India, none of the findings of the World Bank team have been made public."

The Network recalled that the world's worst-ever dam disaster, in Henan province of China, in August 1975, was caused by the failure of two dams with a combined capacity of 600 million cubic metres of water. Between 86,000 and 230,000 people were killed when the dams burst during an exceptionally heavy flood, according to Chinese documents.

The campaign director for the Network said: "The World Bank should insist that inundation maps are published and evacuation plans prepared for all future dams that it funds in India and elsewhere.

Bhagarathi ki Pukar

committees have expressed grave doubts about this dam. In February 1980, the Environmental Appraisal Committee appointed by the Ministry gave its verdict:

“Taking into consideration the geological and social impacts accompanying the project, the cost and benefits expected, and after a careful examination of the information and data available, the Committee has come to the unanimous conclusion that the Tehri project, as proposed, should not be taken up as it does not merit environmental clearance.” Mrs Gandhi, the then Prime Minister, asked that experts should “have another look in depth” at the Project. In her note to the Department of Science and Technology on March 18, 1980, ordering a review of the Project, she wrote: “It seems that large areas of very fertile land are being submerged without any commensurate gains... these decisions have been taken over a period of time but there is great local distress and a feeling that contractors and other such groups will be the main gainers.” The Expert Group constituted by the Ministry of Science and Technology headed by the late Shri Sunil Roy rejected the Tehri dam project in October 1986. According to T.N. Seshan: “The recommendation was before Rajiv Gandhi. Gorbachev came with an offer of aid. There had to be a project to absorb that aid, a project gigantic enough to befit the Soviet might. Tehri was ideal.” (See *T.N. Seshan, An Intimate Story p. 126*) After the Soviet aid of Rs 2,000 crores with Soviet machines and engineers came to take charge, Tehri dam got a new lease on life and Tehri Hydro Development Corporation (THDC) was formed to implement the project. Seshan was against giving clearance to the Tehri dam when he was Secretary, Environment in 1987.

The Tehri dam is a major civilisational assault on the people of India and not just on the people of Tehri who will be uprooted from their homes

The Ministries of Environment and Forests have been given scant regard in clearing the Tehri project. The Environmental Appraisal Committee constituted by the Ministry of Environment rejected the dam in February 1990. The Minister of State for Environment recommended its abandonment in January-February 1992. (In 1990, the Ministries of Environment and Forests were persuaded to grant conditional clearance because of a deal whereby the Ministry of Power would give

Rs 300 crore for the greening of the Himalayas. Even this small conditionality has not yet been honoured.)

A White Elephant

The Tehri dam project builders claim that it will irrigate 2.7 lakh hectares of land and generate 1,000 MW in Stage I, 1000 MW in Stage II, and 400 in Stage III — a total of 2,400 MW of power. However, we know from previous government projects that no power plants built under government control ever function as planned. Most of them are run so inefficiently that they don't even yield 25 percent of their installed capacity. Many independent scientists believe that under the best of circumstances, the project will not generate more than 350 MW of power and this pitiful amount of electricity can easily be produced through the use of much less invasive technology and at much lower costs. Similarly, 2.7 lakh hectares can more efficiently be irrigated through a variety of medium and small scale irrigation projects. Tehri dam was conceived in 1949 when 350 MW of energy potential seemed a lot. However, in today's context to take such enormous risks for this amount of electricity is absurd especially



Aftermath of Tehri earthquake 1991

considering the economic and human costs involved.

The government claims that the dam will have a life span of 100 years. The life of the dam is dependent on the annual rate of sedimentation in the reservoir and the total dead storage capacity. According to the Reservoir Sedimentation Committee Report, 1985, there is a big difference between the assumed and the actual rate of sedimentation. It is well known that the Himalayan rivers, especially the Bhagirathi, carry an unusually high rate of silt because of glacial factors and extensive soil erosion due to deforestation. The rate of sedimentation will certainly keep rising. Thus the actual life span of the dam is not expected to be more than 30-40 years. Its life was originally assessed at over 100 years on the basis of a figure computed without adequate data of siltation of eight hectares/100 square kilometers, but actual silt measuring stations set up later revealed the rate to be 22 hectaremeters/100 square kilometers, which reduced the projected life of the dam by one third. This makes the project even less viable from a purely economic point of view. The Planning Commission has laid down that the cost-benefit ratio of any project should not be lower than 1:1.50. Even at 1988 calculations the investment return of 1:0.56 was low. With the sharp continuing escalation in cost, even by its own measures the project will soon turn out to be economically nonviable and indeed a white elephant instead of a sound investment.

In 1972, the estimated cost of the dam was Rs 197 crore. By 1989, it had risen to nearly Rs 3,008 crore. At 1992 prices the cost escalated to Rs 5,500 crore. By the time it gets seriously under way the cost will have gone up much higher without any increase in

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the dam being calculated at no more than 30-40 years, the astronomical amount being spent on it represents a criminal squandering of scarce public funds.

Who Pays, Who Benefits

The dam will submerge 4200 hectares of the most fertile flat land in the Bhagirathi and Bhilangana valleys without really benefitting the region in any way. Tehri Garhwal is among the poorest districts in the country. After the dam has outlived its supposed utility, the entire area will become a vast swamp. This project has no provision to provide electricity and irrigation to the villages of Tehri-Garhwal. The water is meant for irrigating the sugar cane growing land of western Uttar Pradesh, which already has adequate water to irrigate about 90 percent of its land. This can be compared to 12 percent irrigation capacity in the Himalayan villages. Some water will be supplied to Delhi where the average per capita consumption of water is 250 litres a day as compared to 10 litres a day for the villagers of Tehri region. Women in the Himalayan villages have to walk miles to fetch water from distant rivers and disappearing streams, adding a great deal of burden to their already difficult lives.

The Tehri dam will facilitate a massive water transfer from the

Himalayan region and leave it even drier than it is now. Already trees are not growing there because of lack of moisture on the mountains due to deforestation and drying up of water sources. Any further destruction of the ecology of the Himalayan mountains will be truly disastrous for the rest of the country because our ecological well-being is tied up with that of the Himalaya. People like Sunderlal Bahuguna are right in demanding that if the government is serious about "development", then the people of Tehri region should be made "partners" in that development and not simply sacrificed for the enrichment of the already well off. He recommends that instead of one risky and gigantic project, power generation from numerous schemes along the Ganga and other Himalayan rivers should receive top priority. Though the capacity of these schemes may in sum be less than that of the present project, they will have the advantage of being permanent, non-invasive and inexpensive. There are favourable conditions in the Himalaya for this. Bahuguna is not off the mark when he says that these mini and micro hydel schemes would produce enough power for local needs, reducing the drudgery of hill people and helping re-green the Himalaya. Electricity generated from the bigger rivers may be exported. As water is a precious resource of this region, a royalty of 20 percent should be levied on the electricity exported and this money distributed among village panchayats of the region. This will ensure that resources from regions inhabited by the poor are not simply robbed for the benefit of the already wealthy, and that the former are made "partners in development".

Shoddy Rehabilitation

As with other similar "development" projects the government has done very little to



A long shot of Tehri town, Bhagirathi river and the dam site, Photo: RAGHU RAI

ensure proper rehabilitation and compensation for nearly a lakh of people who will be forever uprooted from their villages and homes on account of the dam, with little hope of rehabilitation, as no alternative land is available. There is no appreciation of the emotional and psychological trauma caused by forcibly driving people away from their homeland where their families have lived for centuries. The rehabilitation package is poorly conceived and even more shabbily implemented. So far the rehabilitation funds have been used up without proper procedures being followed. It is widely alleged that funds meant for rehabilitation have been used by THDC to give bribes to some of the leading opponents of the dam so as to divide the resistance

movement, and that many of the local politicians (of virtually all political parties) have been given big pay-offs to neutralise their opposition. However, no proper survey has been carried out to determine the number of people requiring rehabilitation, nor has any well worked out rehabilitation package been offered to the people. Money has been arbitrarily offered and given to some people but many

The building of mega dams facilitates the legalised robbery of water - the most valuable resource of the hill regions

have not even been informed that their villages will be submerged. The manner in which money has been distributed selectively has only served the purpose of dividing the people with a view to breaking the movement rather than as part of a sincere attempt to implement a proper rehabilitation scheme. Most people are likely to be left destitute after their lands are snatched away from them. Such big dams destroy the village communities and the hundreds of thousands who are uprooted are never properly rehabilitated. The 13,500 ousted families of Pong dam in Himachal Pradesh are still homeless. Despite the powerful anti-Narmada movement, the government has failed to work out proper rehabilitation schemes for all those who are being ousted in the Narmada valley.

The Seismic Gap in the Himalayas

The geological stage for this human drama was set some 180 million years ago, with the breakup of the supercontinent of Gondwanaland. One of Gondwanaland's fragments was a crustal plate that carried what is now the Indian subcontinent. Over the next 130 million years, this plate tracked steadily northward, erasing the ocean that then separated India from Eurasia. The oceanic crust was subducted — forced down into the underlying mantle.

But continental crust is too light and buoyant to be subducted. So when India itself finally bulldozed into Eurasia 50 million years ago, it hit a wall. Both continents had to give. On the Eurasian side of the collision zone, the crust was thickened and squeezed upward, creating the high plateau of Tibet. On the Indian side, a great slab of rock was sheared off the leading edge of the subcontinent, along a thrust fault that dipped gently northward towards Eurasia, like a beach towards the sea. As India ground forward the slab was forced back up onto the subcontinent. Eventually that fault became inactive; at that point another “detachment” fault formed underneath and parallel to the first one, and another slab was shoved underneath the first, lifting it up. Over millions of years, those two slabs became the Himalayas.

Today India still piles headlong into Eurasia, and the Himalayas are still under construction. The active detachment fault is around 1,500 miles long and between 60 and 120 miles wide; from the plains of northern India it dips north underneath the mountains. Most of the time the fault is stuck. But every so often, after enough elastic energy has built up in the fault to force the blocked continent forward, it slips 30 feet or more all at once. That generates a great earthquake: a quake of magnitude eight or greater.

There have been four such quakes along the detachment fault in just the past 100 years. The quakes — a magnitude 8.7 in 1897, in Assam; a magnitude 8 in 1905, in Kangra; a magnitude 8.4 in 1934, in Bihar; and a magnitude 8.7 in 1950, again in Assam — each ruptured a different segment of the fault. But one segment, located between the Kangra and Bihar rupture zones (roughly between the longitudes of Kathmandu and Delhi), has been strangely preserved. Between 300 and 500 miles long, it is called the Central Himalayan seismic gap.

Most seismologists believe quakes are more likely to occur in seismic gaps, where they haven't occurred recently. If so, the Central Himalayan gap is more than due. According to the available historical records — mostly Portuguese and English records from India's colonial days — it has not had a great quake for at least 300 years. Notes scribbled on some Nepalese religious tracts indicated that a big quake did strike Kathmandu in June 1255. The quake killed one-third of the population of the country, including its king. Assuming it ruptured the detachment fault in the Central gap (which isn't certain), and assuming it was the last major quake in that segment (ditto), then 740 years' worth of strain has built up in that gap.

Last year seismologists Roger Bilham of the University of Colorado in Boulder, Roland Burgmann of Stanford, and their colleagues determined the amount of strain in this seismic gap, using the Global Positioning System, a network of satellites stationed around the globe that can pinpoint, within a fraction of an inch, the distances between receivers on the ground. The researchers found that India and Asia are converging at the rate of around eight-tenths of an inch per year. But nearly all that convergence is happening between central Nepal and Tibet, in the Himalayas themselves; Nepal and India are barely getting closer at all -- because the detachment fault that separates them is stuck. At the moment, the energy of the continental collision seems to be going into squeezing the rocks in the mountains; that is, it's being stored as elastic strain. Someday, says Bilham, the rocks will rebound, and the strain will be released as motion along the fault. If the last quake in the Central gap was indeed in 1255, some 50 feet of motion -- eight-tenths of an inch per year times 740 years — has built up and needs to be released.

What would it take to release all that strain? Hundreds of quakes comparable to the magnitude 6.8 temblor that devastated Kobe, Japan, last January, or the magnitude 6.7 that rocked Los Angeles in January 1994 — but if the Central Himalayan gap were prone to “minor” quakes in such numbers, they would be happening already. It's far more likely, says Bilham, that the strain will be uncorked by quakes of magnitude 8 or greater, as has been shown elsewhere on the detachment fault. Bilham estimates that four magnitude 8.2 quakes would do the job, or three 8.5's or a single 8.9. (The energy released by a quake increases by a factor of 30 with each added point in magnitude.)

Legalised Robbery

With such a bleak economic situation, Tehri Garhwal is heavily dependent on its “money order economy”. Men from these hill regions have to come to the plains to take on menial jobs because the wealth of

these regions is being exploited by outsiders and these regions have remained neglected in terms of even basic needs. The three most important sources of wealth of hill areas are forests, water, and minerals. The government appropriation of forests

from the village communities has already meant large scale continuing plunder of the forest wealth by bureaucrats, contractors and politicians who have built fortunes cutting trees and selling timber for the consumption of urban elites in the

plains. Similarly with the mineral wealth. The local people get nothing out of it, yet are forced to suffer the consequences of irresponsible mining. The building of mega dams facilitates the legalised robbery of water — the most valuable resource of the hill regions. This transfer of resources from the poor regions and people to the richer regions and people of the country is leading to large scale pauperisation of the already vulnerable rural communities and forcing them to join the army of destitutes flocking to urban centres in search of menial jobs.

Why then is the government determined to go ahead with this dam? Simply because any such mega project provides an opportunity for large scale money-making, through corruption and outright loot, by contractors, bureaucrats and politicians. Seshan called Tehri a “mine of gold” for such people. Many argue in favour of the continuance of the project on the ground that so much money (nearly Rs 650 crore) that has already been spent will go to waste. Apart from the fact that the feared risks ought to make money an insignificant consideration, we are fortunate that the THDC has so far been so busy squandering money and bribing people that it has actually done very little work on the dam. Huge expenditures have been incurred on maintaining a large wasteful establishment at Delhi, Rishikesh and at new Tehri town. Huge amounts have been spent on propaganda and publicity. Those who have bribed officials have been given highly inflated amounts of compensation while many have been cheated. Moreover, a good part of the expenditure has gone into building and broadening roads in the area to facilitate movement of heavy vehicles, in building a new township of Tehri

(for shifting the people from old Tehri town), complete with houses, office complexes and even shopping centres. This new township, which is at present unoccupied, can easily be put to alternative uses. Thus not all the money has gone to waste — except for those vast amounts that have been gobbled up by politicians, officials and contractors. Many of those who have received compensation are willing to return the money if they are allowed to retain their land.

Corruption Charges

Of the many serious allegations regarding corruption, two charges are being enquired into by the CBI. One involves the misuse of funds by the THDC, by siphoning off the bulk of the money and using sub-standard material for building the dam, roads and other public works. The rate of corruption varies from state to state. In Maharashtra it is believed to be in the 80:20 ratio — that is 80 percent of the money is gobbled up by those in charge and only 20 percent is actually spent on the projects it is meant for.

In Gujarat it is believed to be 60:40. In Uttar Pradesh and most states of the North it is likely to be 90:10! A government which cannot build roads capable of surviving one single monsoon in the very capital of India cannot be trusted with such a mega project involving such a heavy risk for millions of people in northern India. The dam will be like the Sword of Damocles hanging over our heads.

Local Resistance

The people of Tehri have been paying a heavy price for resisting this dam for more than two decades now. They are now worn out and demoralised from this long drawn out struggle because, despite their concerted efforts, their pleas are being ignored. Since the Planning Commission first sanctioned Tehri dam project in 1972, there has been continued resistance to the building of the project. As a result, work could start only in 1978, and that too, only by the government taking draconian, repressive measures. Armed police took over Tehri town and a large number of people were arrested and



Sunderlal Bahuguna camping at the dame site, Photo: RAGHU RAI

sent off to jails. In response to local protests, a petition committee of Parliament was constituted in 1978 but it failed to submit its report before the dissolution of Parliament in 1980. When the dam work was revived in the late 1980s and Bhagirathi waters were directed into diversion tunnels, the local agitation got activated again. The protesters took hold of the site and stopped the machines at work.

However, though the work was often disrupted, the government neither abandoned the project nor agreed to the demand that the project be subjected to an open and independent review taking into consideration all the environmental, safety and other hazards involved in the dam. Instead of scientifically responding to the various objections, the official response was to go on asserting that the Soviet technology was fool-proof as the Soviets had already built the 300 meter high Nurek dam in a seismic zone. However, the October 1991 earthquake of 6.6 M on the Richter scale reinforced the fears of people opposed to the dam and they captured the dam site and stopped the gigantic earthmovers from carrying on with their work.

PM's Repeated Betrayals

After 75 days of stalemate, the protesters were arrested and packed off to jails. Sunderlal Bahuguna went on an indefinite fast which lasted 45 days. (See **Manushi** No. 70, May-June 1992) The issue was discussed in Parliament, blasting on the dam site was stopped and the Prime Minister consented to get the project reviewed. Bahuguna vowed that he would camp on the banks of the Bhagirathi till such time as the government actually honoured its promise about an independent review. After waiting for nearly three and a half years for the

review and when repeated reminders to the government to honour its word elicited no response while the work on the dam continued, Bahuguna was compelled to undertake another indefinite fast beginning April 13, 1995, which lasted for 49 days until June 27, 1995, seriously imperiling his health.

During this period, concerned citizens got together in Delhi to form the Tehri Action Group (TAG) for the purpose of exercising political and moral pressure on the concerned ministers related to the Tehri dam project to undertake an honest review. We at **Manushi** are active members of TAG. On June 5, 1995, the then Environment Minister, Kamal Nath, was *gheraoed* by members of the TAG demanding that he take steps to get the dam stopped since none of the conditions imposed while granting environmental clearance had been met by those in charge of building the dam. Kamal Nath admitted that the project did not merit environmental clearance and assured TAG members that his ministry would forthwith appoint a committee to go into the question, but he too did not keep his promise. We were able to prevail upon several Members of Parliament from various political parties to meet the Prime Minister and support the demand for a thorough review. In addition, we were even able to persuade a few prominent Congress leaders to request an independent review.

It was only on the 49th day of Bahuguna's fast that the Prime Minister finally relented and sent Uttar Pradesh Governor Moti Lal Vora as his special emissary requesting Bahuguna to give up his fast on the assurance that a comprehensive independent expert review of the kind being demanded by him would be carried out. By this time, Bahuguna's life was in serious danger and his health seriously impaired. It is

now over six months since that assurance was given, but the review has not yet been ordered. In the meantime, the Energy Minister even denied in Parliament that the Prime Minister had at all made any such promise. The stalemate continues.

Need For Review

The Tehri dam controversy has raised several important issues regarding our system of governance.

It is unfortunate that in a democracy concerned citizens should have to repeatedly risk their lives, undertaking risky fasts unto death, simply to get their voices heard by our supposed representatives. Today, there are no set procedures for evaluating the work of various development projects to decide whether they will actually benefit people or whether they are only going to facilitate loot and plunder of people's resources by those controlling the government machinery. Politicians and bureaucrats should not have the right to evolve development schemes without taking into account the interests of the people who inhabit the areas where the projects are located. It is indeed tragic that the decision regarding a review should rest in the hands of the Prime Minister sitting in far away Delhi, who has neither the expertise nor the capability to act as the final authority on the subject.

Such centralised decision making has been the undoing of India. Indian citizens are denied basic information regarding the project. Everything is shrouded in secrecy. Much essential information has been withheld from the public. For instance, the government is not willing to explain what alterations in the dam design have been incorporated to take into account the earthquake risks. The

least informed are the citizens of Tehri Garhwal. Many villages are not even aware that they are to be submerged.

On earlier occasions, when pressed for a review, the government appointed its own people along with those associated with building the dam to do a review. That is as absurd as a person accused of a crime being asked to investigate himself.

In order to crush local resistance, the government has used the standard intimidatory measures such as arresting and jailing people, beating up protestors, and imposing Section 144, which makes any assembly or meeting in the area illegal; all those participating in such a meeting can be arrested or attacked by the police. The construction site resembles a police camp even though the movement

against it has so far used non-violent satyagraha.

Even Bahuguna has not been spared physical attacks. On the 42nd day of his fast he was forcibly dragged out of his hut in the middle of the night in his underwear. The police did not give him time to wear clothes or take boiled water with him. He was dragged and brought to Delhi in a bruised, bleeding condition. On the way, in that weakened condition, he was made to sit on a bench for hours at Dehradun helipad without water in the scorching summer heat of June. On reaching Delhi, he was dumped in the casualty ward of All India Medical Institute. Then they tried to get the doctors to force feed him. Bahuguna had already given an affidavit that force feeding would kill him since he only used

nature cure methods all his life. The AIIMS doctors refused the government demand that they force feed him. Thereafter, the government just left him dumped in the AIIMS casualty ward which receives hundreds of severely injured, infected and diseased patients, thus exposing him to deadly risks. It was only on the fourth day after they had forcibly removed him from Tehri that the government agreed to take him back there.

It is precisely because our government refuses to heed democratic demands of peaceful minded citizens and instead uses such crude, high handed methods for dealing with non-violent Satyagraha that people are beginning to resort to terrorism.

✂

PETITION

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1. The Prime Minister
Shri Narasimha Rao
1 Race Course Road
New Delhi

2. N.K.P. Salve
Minister for Energy
42, Poorvi Marg, Vasant Vihar
New Delhi

3. Rajesh Pilot
Minister of State for the
Environment and Forests
10, Akbar Road, New Delhi

We, the undersigned, call upon the government to order an open and comprehensive review of the Tehri dam project by independent experts of renowned national and international stature. The review should cover the following aspects of the project:

- Seismological risks
- Safety of the proposed structure and whether it is appropriately designed.
- Threat to holy river Ganga
- Environmental hazards
- Adverse effects on the local economy
- Sociological and cultural fallouts
- Costs and benefits analysis of the dam over its probable life span
- Adequacy of rehabilitation measures
- Propriety of the expenditure incurred hitherto
- Evaluation of comparative benefits to those who are paying the price for this project and others.

Since any damage to the Himalayan region affects the environmental well-being of the entire population of this country, this issue is not merely a local issue, We join the people of Tehri in their demand for stoppage of all work on this dam until an expert honest independent review is completed, one that is open to full public scrutiny.

NAME:

ADDRESS:

SIGNATURE:

No democracy can yield simply because one man goes on a fast.. We simply ask for an open independent review not dominated by renowned experts of international calibre from the relevant disciplines. This review committee should be autonomous and bureaucrats and politicians.

We need to insist that the government follow responsive and democratic procedures, that they get uncoerced and informed consent from the local people before proceeding with such projects. As a matter of course, an open public hearing for each

and every proposed project must be held with all the necessary information available to concerned citizens. Projects should be started only after the government has proved its case that the project will be actually beneficial to people of that region and is environmentally safe. For each project approved after such a public process, all the local people who are adversely affected should receive adequate compensation and support, including monetary compensation, in order to facilitate their satisfactory rehabilitation. Finally, independent,

autonomous bodies must be allowed to monitor the need for and viability of such projects as well as assess the suitability of the design plans.

We call upon **Manushi** readers to join in the effort to persuade the government to order an independent review by renowned scientists and public citizens. Tear out, sign (and obtain additional signatures if you can) on the petition printed on page 15, then send it to the addresses mentioned at the top. (Please let **Manushi** know you have sent them your signed petition or, better still, send us a photocopy).□