

India's environmentalists halt dam

Tehri Dam is just the trigger, as development policy battle rages within the National Front government. Susan Maitra and Ramtanu Maitra report.

Work on construction of the cofferdam of the 260-meter-high Tehri Dam, located on the River Bhagirathi in northern Uttar Pradesh, has ground to a halt following an assurance given to the environmentalists by Union Minister of State for Environment Maneka Gandhi to review the project. The government's decision, considered a major setback to the prospect of finishing the dam, was announced on Jan. 4, the eleventh day of an indefinite fast by Sunderlal Bahuguna, the guru of Indian environmentalists who has long been demanding cancellation of the huge multi-purpose water project on environmental and safety grounds. Subsequently, Bahuguna, the recipient of many foreign awards and part of the international environmental movement, came to Delhi to lobby with Minister Gandhi and other officials.

The government's decision to stop the work on Tehri Dam has not, however, met with unanimous support. Protest rallies led by local unemployed youth have taken place near the dam site, giving the lie to environmentalist claims to speak for "the people." The demonstrators charge that the well-connected Mr. Bahuguna, with links in particular to the German Greens, is a mouthpiece of the local traders and businessmen. According to at least one spokesman of the Uttarakhand Kranti Dal, the local pro-dam group, Bahuguna's backers have received cash compensation in advance for relocating their businesses from areas that will be submerged by the dam—a windfall if the dam is now stopped and they can stay put.

The environmentalists have drawn the battle lines around the Tehri project because a certain sloppiness in its management has made it a vulnerable target. But the game is larger. The activists had articulated their aim to shut down all large dam projects and nuclear power projects last September, when more than 20,000 assembled at Harsud, Madhya Pradesh, to protest against the Narmada River Valley development scheme. The human chain and torchlight processions, led by the champions of civil liberties and environmentalists, were undertaken in the glare of a full international media mobilization.

Tehri Dam in dispute

The Tehri project was conceived in the 1960s and is a multi-purpose water management project which, when completed, may cost as much as \$1.3 billion. Soviet experts visited the dam site in 1987 to review the project. The

U.S.S.R. has promised technical and financial assistance for building the dam. The centerpiece of the project, and the environmentalists' bone of contention, is a 260.5 meter-high dam on the Bhagirathi, a Himalayan river which joins with the River Alakananda at Devaprayag to form the mighty Ganges. According to available reports, the high dam will have an electrical power generating capacity of 2,400 megawatts—a figure which is hotly disputed by the opponents. Available reports also indicate that some \$150-200 million has already been spent—although Mr. Bahuguna maintains the figure is more like \$25 million.

The "big dam" issue has been a rallying point for India's greens, self-styled scientists, social scientists, and legal eagles championing civil liberties for some time. In 1986 V.D. Saklani, president of the Anti-Tehri Dam Movement and a lawyer who likes to masquerade as a scientist, filed a writ petition in the Supreme Court to stop construction at Tehri. The group was joined by the World Wildlife Fund and the Indian National Trust for Art and Cultural Heritage (INTACH). Boosted by plentiful media exposure, the opponents have pushed their case aggressively, citing various reports and studies. One such report claims that the seismic activity in the area is too high. A study prepared by the Department of Geology of Garhwal University, claims the high sedimentation carried by the Bhagirathi and 18 other rivulets that join it, will help to raise the bed of the main river, someday washing away towns and villages located along it.

Other ecologists argue that the benefits that completion of the Tehri Dam promises to the people, including irrigation water for 27,000 hectares of land, are not commensurate with the long-term ecological damage it ensures. One ecologist claims that the dam will not only submerge the Tehri town and 23 villages around it, and partially submerge 72 other villages at the maximum flood level of the dam, but will also involve relocation of more than 8,600 families.

A report by the Comptroller and Auditor General (CAG)—an independent body directly responsible to the President, but similar to the U.S. Congress's General Accounting Office—claims the project has become economically non-viable. The CAG report, an accountant's evaluation of a long-term multi-purpose developmental project, claims that the earthquake safety factor adopted in design of the dam (0.15G) may be too low, and that its upward revision will further hike costs. According to CAG, the power generation

cost has gone up nearly 10 times from original estimates. The revised power cost is also an underestimate, CAG claims, citing computation errors. It is no surprise that following the release of the CAG report, some anti-Tehri economists claimed that the government-calculated benefit-cost ratio of 3.5 was highly exaggerated; it should be 0.56, INTACH claims.

The environmentalists also got a boost from Alexander Fink, the Russian chief project engineer. "The design insufficiently ensures the reliability of the structure, especially considering the height of the dam and the fact that a densely populated area lies behind it," Fink wrote.

Hiding the facts

Although the environmentalists are hogging the media, protagonists of the Tehri project claim the opponents are deliberately spreading untruths. They point out that there is no doubt that high dams can be built in active seismic zones, and cite the Nurek Dam in the Soviet Union as a prime example. They also point out that large dams such as Bhakra Nangal in Punjab and the Pandoh in Himachal Pradesh are located closer to the seismic zone than Tehri.

Another spurious argument flaunted by the opponents is the charge that the reservoir filling process itself can induce earthquakes and that many such accidents have happened before. Dam experts state categorically that this vulnerability depends upon the permeability characteristic of the rocks underneath and the nature of the seismic faults in the region. Moreover, present-day technology, which was not available earlier, allows us to *induce* small seismic movements so as to prevent one, large reservoir-induced seismic activity—a practice that is now well established.

Meanwhile, the environmentalists' claim that local people oppose the dam has proven false. The day the Tehri work was stopped, hundreds of local students marched near the site, accusing Bahuguna and INTACH of conspiring to stop the Tehri Dam at the behest of "a superpower that does not want India to progress."

The northern part of Uttar Pradesh, part of an area known as Uttarakhand, is mountainous and underdeveloped. Migration of able-bodied young men and women to the urban areas in the plains in search of jobs has left a pall in the area. Resentment has even spawned the beginnings of a movement to carve out a separate state of "Uttarakhand." Problems in the area have been exacerbated by various environmental measures, including the Forest Act, which does not allow the locals to enter what is proscribed as "forest area," but has permitted the forests to be ravaged by timber mafias.

Now the larger issue of economic development policy will have to be faced squarely by the new National Front government. On one side is Environment Minister Maneka Gandhi, an avid environmentalist and political lightweight whose link to the Nehru family (she is the widow of Nehru's grandson Sanjay Gandhi) pushed her into the limelight. Fol-

lowing her break with the late Mrs. Indira Gandhi, Maneka Gandhi made animal rights her major political platform and became recognized as a spokesman for snaildarters and stray dogs both here and abroad. It is doubtful that Maneka Gandhi can, even if willing, detach herself from those who gave her prominence when she was languishing in the political wilderness.

On Jan. 31, Union Minister for Energy Arif Mohammad Khan publicly blasted the "so-called environmentalists" campaigning against large power and water projects. Khan was inaugurating a symposium on the ecological aspects of water resources development and power projects in New Delhi. "While a development process without taking into account environmental concerns is self-defeating," Khan said, "the demand made by some so-called environmentalists for completely putting a stop to development in the name of environment is also equally harmful." Khan scored the fact that "ill-informed" reports projected in the press were leading people to believe that sustained growth was possible "without these key water and power projects." Poverty itself is a threat to the environment, the Union Energy Minister reminded his listeners. Only when basic needs are met by the development process could the message of environmental preservation be conveyed effectively, he said.

The energetic young energy minister—who had parted ways with the Congress (I) and Rajiv Gandhi on principle when Gandhi bowed to the fundamentalist lobby on the issue of the Muslim Women's Divorce Bill in 1986, and who worked closely with Commerce Minister Arun Nehru and Prime Minister V.P. Singh to bring about the National Front electoral victory last fall—had already taken up the cudgels in December, with blunt statements that coal and nuclear power would have to be the near-term bedrock for India's power expansion. Further, Khan's relative Aslam Khan, who is Uttar Pradesh Forest Minister, has reportedly locked horns with the environmentalists and Maneka Gandhi over reform of the dysfunctional Forest Act in that state.

As for Prime Minister V.P. Singh, even before the government was formed, he had stated his commitment to the Narmada Valley project and vowed there would be no "second opinion" on its implementation. However, by placing Maneka Gandhi in the cabinet and by putting Ramakrishna Hegde in charge of a planning commission stacked with academics and social scientists with a distinctly "small is beautiful" bent, he has made matters difficult for himself.

The opposition Congress (I) jumped into the fray recently, with a letter to Prime Minister V.P. Singh from Hari Kishan Shastri, a former Congress (I) Member of Parliament and son the late Prime Minister Lal Bahadur Shastri, charging Maneka Gandhi with lobbying with the help of the visiting West German Minister for Economic Affairs Hans Peter Repnik to pressure the government of India to stop building the Sardar Sarovar Dam, the keystone of the Narmada Valley development scheme.