

World Bank Hypes Nam Theun 2 as Project Deadline Looms

by Shannon Lawrence

In late August 2004, the World Bank launched a series of international "technical workshops" on the controversial Nam Theun 2 Hydropower Project in Laos. The workshops, held in Bangkok, Tokyo, Paris and Washington, DC, were organized ostensibly to provide input into the technical studies being prepared on Nam Theun 2, and were billed as an "unprecedented" consultation exercise for the Bank.

However, participants noted that despite the World Bank's claims that it "has not yet decided" to support Nam Theun 2, the Bank acted as a strong advocate for and defender of the project at the workshops. This very public promotion of Nam Theun 2 calls into question the credibility of the Bank's proclaimed desire for meaningful debate on the dam's risks and benefits.

The future of the \$1.3 billion project hinges on World Bank support in the form of more than \$100 million in political risk guarantees and other financing. Despite more than a decade of project preparation, a large number of studies are incomplete and many questions remain unanswered. Yet the

World Bank appears to be rushing to appraise and approve the project before a May 2005 deadline for financial close expires. The deadline is specified in the Power Purchase Agreement between the developers and the Electricity Generating Authority of Thailand.

Workshops a Sham

Well in advance of the workshops, civil society organizations noted that this process could not constitute a credible consultation, as key project documents and analyses were either not available, or were to be released with insufficient time for review. There was little advance notice for some of the workshops, and only a cursory "interim" economic analysis for the project was released after two of the workshops had been held. In Bangkok and Tokyo, the moderators were criticized by civil society organizations as biased and for failing to facilitate an equitable debate.

Civil society organizations raised a number of concerns at the workshops that went unanswered by the proposed funders and

developers of the project. Questions about the Lao government's lack of capacity and respect for human rights, the poor track record of the government in implementing existing hydropower projects, the lack of assessment of alternative poverty reduction options for Laos, and critical gaps in the project's social and environmental plans, were not properly addressed.

Nam Theun 2 will forcibly displace 6,200 indigenous people and impact more than 100,000 villagers who depend on the Xe Bang Fai River for fish, agriculture and other aspects of their livelihoods. The ecology of two major river systems in Laos will be permanently altered. The project is being developed by Electricité de France and two Thai companies in cooperation with the Lao government, and will generate foreign exchange for Laos by selling the power to Thailand. The World Bank and other donors claim that the revenues will be used for poverty alleviation activities, but critics are skeptical based on the Lao government's track record. ■

The author is with Environmental Defense.

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Guatemalan Government Agrees to Reparations Talks After Dam Occupation

by Monti Aguirre

A thousand Mayan villagers displaced by Guatemala's Chixoy Dam occupied the dam's hydroelectric facility on September 7, threatening to shut down electricity production unless their demands for reparations for damages and losses were met. Chixoy Dam provides some 60% of the country's electricity.

"We demand the provision of fertile lands, appropriate housing, sustainable economic projects, and educational grants for our children and grandchildren who live in extreme poverty, and the restoration of electricity to our communities," said community leader Carlos Chen. "With this we will be able again to provide for our families and guarantee them better, more dignified living conditions."

According to local newspapers, Guatemalan President Óscar Berger said of the dam occupation, "This is not the way to negotiate and solve conflicts. We are willing to listen and address the demands presented as long as they are prudent and are within legal frameworks and the rule of law."

After 29 hours of peaceful occupation of the dam site by the villagers, the government agreed to work toward negotiations on providing reparations for damages caused by the dam's construction.

Chixoy Dam was completed in the early 1980s, a time when Guatemala was engulfed in a brutal civil war. Half the population of Rio Negro, one of the dam-affected communities, was massacred because of their opposition to resettlement.

The occupation was just the latest move by affected people and massacre survivors in their extensive efforts to demand reparations for past wrongs and remembrance of their trauma. The occupation was in response to the dam owners refusing to restore electricity service to dam-affected communities, in vio-



Photo: Bert Janssens

Affected people take over Chixoy Dam.

lation of an agreement brokered to bring some benefits to the communities.

A committee representing 18 communities affected by the dam signed an agreement on September 8 with national electricity utility INDE, the Guatemalan Mission of Verification of the UN, and the Ombudsman's Human Rights Office. In the agreement, INDE agreed to review the documentation it has on Chixoy, to expedite any remaining resettlement obligations, and to give copies of their documents to the communities.

The government also agreed to the communities' demand to form a working group – comprised of representatives of the displaced communities, the Government of Guatemala, the World Bank, the Inter-American Development Bank, the dam owners, and human rights organizations – to begin discussion and negotiation for reparations. The working group, which will be facilitated

by the Ombudsman's Human Rights Office, is to start negotiations on reparations for the Chixoy communities.

A Sorry History

Chixoy Dam was largely financed with loans from the Inter-American Development Bank and the World Bank. Designs were approved and construction began without notifying local people, without a comprehensive survey of people to be affected, and without a plan for compensation and resettlement of the 3,400 mostly Mayan residents of affected villages.

In the years since the dam was completed, the massacre survivors from Rio Negro and the people from neighboring communities have lived in conditions of appalling poverty, violent repression and psychological trauma. Housing is substandard; inadequate

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Fighting the Good Fight

The development of dams in indigenous peoples' territories has been almost universally a story of broken promises, damaged livelihoods, drowned cultural sites and spiritual loss. But where tribal people have access to legal assistance and the rule of law, some peoples are beginning to see the tides turn in their favor.

In a lush valley in the US Pacific Northwest, for example — where 70 miles of river have been locked behind two large dams for nearly 100 years — the Elwha River is about to be set free, and with it long-suffering salmon fisheries and the tribal people who depend upon them.

The largest dam removal project in history begins in 2008 with the decommissioning of the two Elwha dams: the 108-foot-tall Elwha Dam and the 210-foot-tall Glines Canyon Dam. There have been hundreds, even thousands of dams removed in the US, but none of them nearly as large as these.

After decades of negotiations, the City of Port Angeles, the National Park Service and the Lower Elwha Klallam Tribe signed an agreement allowing the \$182 million Elwha Restoration Project to go forward. Elwha River dam removal was approved by Congress in 1992, but bureaucratic inertia and a lack of urgency within government agencies has postponed final agreement until now.

The Elwha River flows from the 7,000-foot-high snow-capped peaks of the Olympic Peninsula in Washington State and empties into the Strait of Juan de Fuca. Most of the area lies within the Olympic National Park. Before the dams were built, the river teemed with bountiful salmon runs while coursing through a thickly forested valley. Upstream, mature salmon and steelhead spawned and died, serving as a major source of nutrients for the entire ecosystem. Tribal rituals and festivals were built around the salmon.

Built illegally without any means for fish passage, the two dams on the Elwha River decimated fish runs. With salmon unable to make the journey upstream, the upper river has been starving for nutrients.

Today, fisheries biologists estimate that the river's current annual wild run of fish is about 1% of its historic level. The two dams had a devastating impact on the Lower Elwha Klallam Tribe, who relied upon the river for cultural and physical sustenance. In 1855, when the tribe signed the Treaty of Point No Point with the US government, they retained the right to fish the Elwha River in perpetuity. Yet by blocking fish passage to more than 90% of the historic fish habitat in the watershed, the dams effectively negated the Tribe's treaty rights to fish there. The dams also flooded numerous areas of spiritual and cultural significance to the tribe, including the creation site held sacred by the Elwha people.

The decommissioning of the Elwha dams will set the stage for future large dam removal projects. Several years of studies serve as a roadmap for successful Elwha dam decommissioning. Such a large amount of sediment (some 18 million cubic yards of sediment is estimated to be behind the dam wall) has never before been released into a river. But now scientists have an excellent opportunity to watch a river ecosystem rebuild itself, and watch the salmon come back.

And for the tribal community, a 90-year long struggle in the face of the Elwha dams finally moves closer to resolution. To the Elwha Klallam tribe, dam removal provides an opportunity for cultural reconciliation and economic renewal — and an opportunity to reverse nearly a century of injustice.

Another Western tribe now fighting a longstanding dam that impacts their lands and culture can take heart in the story of the Elwha. The story of the Winnemem Wintu Tribe (see p. 11), now working to prevent the raising of the giant Shasta Dam through spiritual and legal actions, is at first blush an unfair fight for which it is hard to imagine a happy ending for the tiny tribe. But undoubtedly, the Elwha Klallam Tribe had its moments of doubts over the course of its long struggle, as did Guatemala's Maya Achi communities devastated by the construction of Chixoy Dam (see p. 1). Today, these peoples have prevailed. Our hopes for a similar outcome for the Winnemem Wintu and other aggrieved indigenous peoples will never falter. Their brave, spirited stand will no doubt inspire many more generations of peoples facing impossible odds.

Willow Lune

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Monsoon Travels

by Ann Kathrin Schneider

As I fly from India's capital of Delhi to the northeast of the country, I overlook a landscape covered by a brown stream, a watery world with a few trees sticking out and the occasional bit of road meandering above the water. It is unclear where the roads come from, where they lead. The gentleman sitting next to me asks what I am planning to do here in Assam at this time of year, during the flood season, when traveling is almost impossible. I vaguely respond that I am doing some research on dams and rivers. He appears slightly amused.

His comments and the disorienting view of the flooded country disturb me. I hope that the campaigners from the local Center for Organization and Research Education (CORE) will be able to accompany me on my trip further north. I am planning to visit two dam sites, one of which might be funded by the World Bank.

As I leave the airport terminal, someone calls my name. It must be the person wearing a "Rivers for Life" T-shirt.

While people in mainland India fear nothing more than a weak monsoon, those who live in the northeast of the country fear the annual rains. Strong rains cause rivers to swell and embankments to break. The floods destroy houses, wash away crops and force people to move on to the highways and seek shelter under blue plastic sheets.

This year's monsoon hit northeast India very badly. There are daily reports of the embankments of the Brahmaputra River breaking and washing away hundreds of villages and fields. Girin Chetia, from the North East Asian Development Society, estimates that this year's floods affected close to 11 million people in the northeast, rendering more than 400,000 families homeless.

If the dam lobby has its way, this water-rich region is to become India's powerhouse. The government's ambitious plan to drastically increase India's power generation through 2012 rests on the northeast's powerful rivers. The government wants to build more than 160 large dams in the region, utilizing the Himalayas' massive outpouring of water to create more than 50,000 MW of hydropower. And the World Bank, after having avoided granting any loans for dam building in India for the past 16 years, is now eager to provide the necessary cash. The Bank has indicated that it considers the costly and environmentally questionable

hydropower projects as the best solution to the country's energy problems and trusts the Indian government that the new dams will have fewer negative social and environmental impacts than past dam projects.

The government has promised local people that the dams will also mitigate damages from the floods. More and more people are, however, starting to doubt the government's intentions and fear that the dams will have a single purpose only: power generation for mainland India.

Neither the World Bank nor the Indian government has come up with strategies to address the fact that the majority of India's population cannot afford electricity at all. Girin Chetia, who distributes relief packages to uprooted people in the northeast, is worried that more dams will increase local poverty and worsen the annual hardship experienced by the local population during the monsoon season. "This year, 400,000 families lost everything because their houses and villages were flooded within hours," he says. Due to the heavy rains, dams further north had to release water quickly to prevent downstream dams from bursting, thereby sending floods of water downstream in a matter of hours. Local people, who can normally predict when their villages will be flooded by natural rainfall, had no idea that the water was coming. In their frantic efforts to escape the dam floods, many had to leave all their belongings behind.

"The government tells the people that the dams will reduce the floods. But in reality, they will increase sudden floods and make it more difficult for people to prepare for and cope with them," says Girin Chetia.

Dams not only increase the insecurity of the people downstream, but also reduce their capacity to provide food for themselves and their families. Many depend on fishing and riverbank cultivation for a living. Both activities will be endangered by dams. With more dams, the rivers will carry less water and fish. The remaining water will be too low and too



This year's floods in Assam did more damage than previous years, and local aid workers say dams make the problem worse for rural communities.

unpredictable to irrigate the rice fields.

"What the people really need help with is the preparation for the floods. And they need access to electricity. The new dams will not do anything against the floods, and they will not improve the people's access to power. The dams generate electricity for big cities like Mumbai and Calcutta. The people here will only bear the costs, they will not reap any benefits," concludes Girin Chetia.

Girin Chetia is not the only one who questions the government's plan to construct hydropower projects while dismissing cheaper energy-saving and energy-generation projects. Many in the region feel that the government and international donors should first address the immense energy losses in the electricity system before spending millions in aid dollars and government funds on costly dams in the ecologically and seismically unstable Himalayan region.

However, there are also local people who believe they can reap benefits from the construction of hydropower projects close to their homes. In Rayeng, a village that will be submerged by the Middle Siang Dam in coming years, a villager told me that he was in favor of the construction of the dam. He was eager to receive the monetary compensation he was promised and also looking forward to earning money in future by selling the valuable timber from the reservoir region. The dam construction company had promised him a chain saw if he would not obstruct the construction of the dam.

While the floods provided less of an obstacle to my travels in North East India that I had feared, I learned time and again that the dam builders had traveled the region ahead of me, leaving behind a trail of promises that would be difficult to counter and easy to break. ■

The Road to Harsud

by Arundhati Roy

Since India's Independence, Big Dams have displaced more than 35 million people in India alone. What is it about our understanding of nationhood that allows governments to crush their own people with such impunity? What is it about our understanding of "progress" and "national interest" that allows (applauds) the violation of people's rights on a scale so vast that it takes on the texture of everyday life and is rendered virtually invisible?

But every now and then something happens to make the invisible visible, the incomprehensible comprehensible. Harsud is that something. It is literature. Theatre. History.

Harsud is a 700-year-old town in Madhya Pradesh, slated to be submerged by the reservoir of the Narmada Sagar Dam. The same Harsud where in 1989, 30,000 activists gathered from across India, held hands in a ring around the town, and vowed to collectively resist destruction masquerading as Development. Fifteen years on, while Harsud waits to drown, that dream endures on slender moorings.

The 92-metre-high Narmada Sagar is the second-highest dam of the many large dams on the Narmada (the Sardar Sarovar in Gujarat is the highest). The reservoir of the Narmada Sagar is designed to be the largest in India. In order to irrigate 123,000 hectares of land, it will submerge 91,000 hectares! This includes 41,000 hectares of prime dry deciduous forest, 249 villages and the town of Harsud. According to the project report, 30,000 hectares of the land in the Narmada Sagar command was already irrigated in 1982. Odd math, wouldn't you say?

Those who have studied the Narmada Sagar Project have warned us for years that of all the high dams on the Narmada, the Narmada Sagar would be the most destructive. The Indian Institute of Science, Bangalore, estimated that up to 40% of the command areas of the Omkareshwar and Narmada Sagar could become severely waterlogged.

Villages die by night.
Quietly. Towns die by day,
shrieking as they go.



Harsud in ruins.

Photos: Angana Chatterji

In 1993, the Ministry of Environment and Forests estimated the value of the forest to be submerged as Rs 33,923 crore. It went on to say that if this cost was included, it would make the project unviable. The Wildlife Institute of India warned of the loss of a vast reservoir of biodiversity, wildlife and rare medicinal plants.

As always, all the warnings were ignored. Construction of the dam began in 1985, but the project stalled over finance and land acquisition. Further government support in May 2000 paved the way for the National Hydro-Electric Power Corporation (NHPC) to move forward.

The installed capacity of the Narmada Sagar Dam is 1,000 MW. What is produced –

firm power – depends on actually available water flows. The detailed project report puts the actual firm power at 212 MW, coming down to 147 MW when the irrigation canals become operational.

According to the NHPC's own publicity, the cost of power to consumers will be about Rs 9 (US\$0.19). Who can afford that? It's even more expensive than Enron's electricity in Dabhol!

When (if) the project is fully built, the NHPC says it will generate an annual average of 1,950 million units of power. Madhya Pradesh currently loses 44.2% of its electricity – the equivalent of six Narmada Sagar projects, at a third the cost, with none of the social and ecological devastation.

But instead, once again we have a Big Dam with questionable benefits and unquestionably cruel costs.

After the MoU for the Narmada Sagar was signed, the NHPC set to work with its customary callousness. The dam wall began to go up at an alarming pace. At a press conference on March 9, 2004, Yogendra Prasad, managing director of the NHPC, boasted that the project was ahead of schedule. He said that because of better management, the costs of the project would be substantially lower. Asked to comment on the objections being raised by the activists of the Narmada Bachao Andolan about rehabilitation, he said the objections were irrelevant.

"Better management," it now turns out, is a euphemism for cheating thousands of poor people.

Those building the dam have willfully violated the terms of their own MoU, which legally binds them to comply with the principles of the Narmada Water Disputes Tribunal Award (NWDTA). The Award specifies that in no event can submergence precede

continued opposite

rehabilitation. They have violated the state government rehabilitation policy. They have violated the terms of several international covenants that India has signed, including the Universal Declaration of Human Rights. Not a single family has been resettled according to the NWDTA or the Madhya Pradesh rehabilitation policy.

There is no excuse, no mitigating argument for the horror they have unleashed.

On the outskirts of Harsud, you pass row upon row of cruel, corrugated tin sheds. Tin roofs, tin walls, tin doors, tin windows.

And then, under the lowering, thundery sky, Harsud ... like a scene out of a Marquez novel. A town turned inside out, its innards exposed. Personal belongings, beds, cupboards, clothes, photographs, pots and pans lie on the street. Live electric cables hang down like dangerous aerial roots.

Perched on the concrete frames of wrecked buildings, men are hammering, sawing, smoking, talking. If you didn't know what was happening, you could be forgiven for thinking that Harsud was being built, not broken. But then you notice that the old, grand trees – mahua, neem, peepul, jamun – are all still standing. And outside every house you see the order in the chaos. The doorframes stacked together. Iron grills in a separate pile. Tin sheets in another. Ambika Jewellers, Lovely Beauty Parlour, Blood and Urine Tested Here. On more than one house, there are insanely optimistic signs: "This house is for sale." The local cartoonist is exhibiting his work on a pile of stones. Every cartoon is about how the government cheated and deceived people. Parents are distraught and children are delighted because their school building has been torn down. Many children will lose a whole school year. The poorer ones will drop out.

The people of Harsud are razing their town to the ground. Themselves. The able-bodied are frenetically busy. They're tearing apart their homes, their lives, their past, their stories. They're carting the debris away in trucks and tractors and bullock carts. People have arrived from nearby towns. Trucks, tractors, dealers in scrap-iron, timber and old plastic throng the streets, driving hard bargains, mercilessly exploiting distress sales. Migrant workers camp in makeshift hovels on the edge of town. They are the poorest of the poor. They have come from Jhabua, and the villages around Omkareshwar, displaced by the other big dams on the Narmada, the Sardar Sarovar and the Omkareshwar. The better off in Harsud hire them as labor. A severely malnourished demolition squad. And so the circle of relentless impoverishment closes in upon itself.

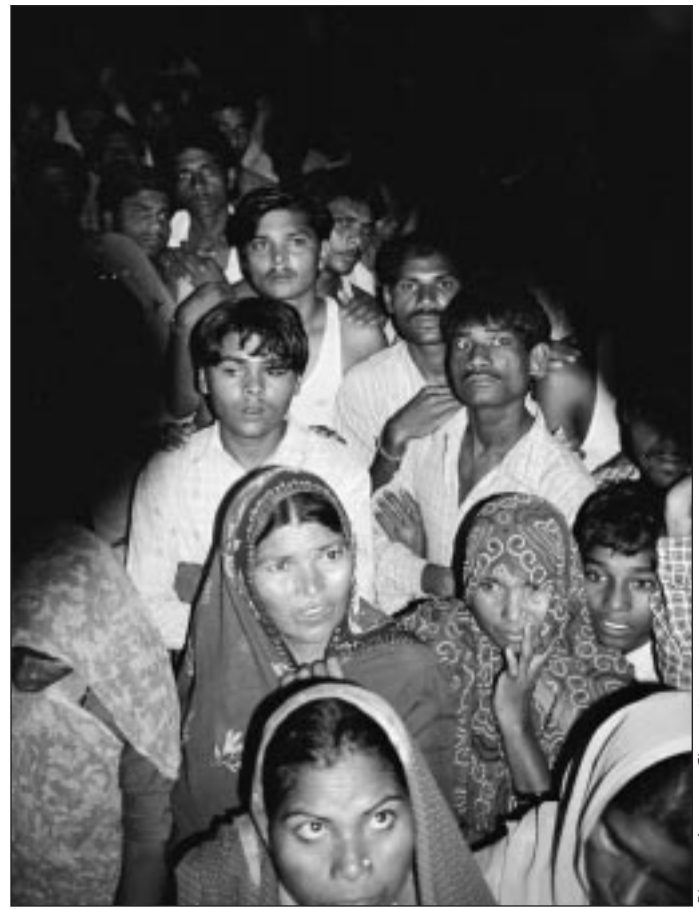
There are no proper estimates of how many villages will be submerged in the Narmada Sagar Reservoir, when (if) the monsoon comes to the Narmada Valley. The Narmada Control Authority website uses figures from the 1981 Census! In newspaper reports, government officials estimate it will submerge more than a hundred villages and Harsud town. Most estimates suggest that this year 30,000 families will be uprooted from their homes. Of these, 5,600 families (22,000 people) are from Harsud. Remember, these are 1981 figures.

When the reservoir of the first dam on the Narmada – the Bargi Dam – was filled in 1989, it submerged three times more land than government engineers said it would.

Then, 101 villages were slated for submergence, but in the monsoon of 1989, when the sluice gates were finally closed and the reservoir was filled, 162 villages (including some of the government's own resettlement sites) were submerged. There was no rehabilitation. Tens of thousands of people slid into destitution and abject poverty. Today, 15 years later, irrigation canals have still not been built. So the Bargi Dam irrigates less land than it submerged and only 6% of the land that its planners claimed it would irrigate. All indicators suggest that the Narmada Sagar could be an even bigger disaster.

Oddly enough, after the 1989 rally, when the anti-dam movement was at its peak, the town of Harsud never became a major site of struggle. Like most people, they believed that dams were not intrinsically bad, provided displaced people were resettled. So they didn't oppose the dam, hoping their political mentors would see that they received just compensation. Villages in the submergence zone did try to organize resistance, but were brutally and easily suppressed.

In the absence of organized resistance, the media in Madhya Pradesh has done a magnificent job. Local journalists have



Harsud faces etched with anger and sadness at public hearings with an independent commission.

Photos: Angana Chatterji

doggedly exposed the outrage for what it is. A normally anaesthetized, unblinking public has been roused to anger. Every day, groups of people arrive to see for themselves what is happening, and to express their solidarity. The state government and the NHPC remain unmoved.

Can it really be that 30,000 families have nowhere to go? Can it really be that a whole town has nowhere to go? Ministers and government officials assure the press that a whole new township – New Harsud – has been built 12 km away. On July 12, the government announced: "Rehabilitation of Harsud town which was pending for years has been completed in six months."

Lies.

New Harsud is nothing but mile upon mile of stony, barren land in the middle of nowhere. A few hundred of the poorest families of Harsud have moved there and live under tin sheets. (The rest have placed themselves at the mercy of relatives in nearby towns, or are using up their meager compensation on rented accommodation.) In New Harsud, there's no water, no sewage

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Big Hydro Takes Center Stage in Brazil's Energy Development Plans

Will Lula's Government Leave Rivers High and Dry?

by Glenn Switkes

The government of Luis Ignacio "Lula" da Silva took office in January 2003 amid widespread hopes it would promote a social and environmental platform that could make Brazil a leader in the global movement for sustainable development. But early in Lula's term, his government made austerity concessions to the International Monetary Fund, freezing social and environmental spending, and began to promote a vision of development based upon construction of large-scale infrastructure projects.

This business-as-usual approach has begun to galvanize opposition from the environmentalists and social movements that campaigned for Lula's election. In August, the Brazilian NGO association ABONG and Inter-Redes, a network of NGO coalitions, notified the government they would no longer facilitate forums on Brazil's national development plan, because the government had failed to take the interchange of opinions seriously.

Contentious debate has developed not just over whether Brazil – a middle-income nation with widespread poverty – can afford to prioritize environmental protection and social equality, but also over the government's plans to continue expanding the nation's dependency on hydropower, which currently accounts for more than 80% of the nation's electricity. Brazil has the richest supply of freshwater resources on the planet, and it has been argued that hydroelectricity is the cheapest form of electrical energy available – a statement that is true only if social and environmental costs are not integrated into the price of energy.

Over one million people have already been displaced by hydro plants in Brazil.

Brazil's Movement of Dam-Affected People (MAB), which has engaged in dialogue with the Lula government, now states that "our discussions with the Mines and Energy Ministry have failed to achieve results" and that "the government tends to support the companies, and to deny its commitments to dam-affected communities." MAB spokesperson Gilberto Cervinski asks: "Why isn't the government interested in solving the problems of the dam-affected? In whose interest are the new planned dams?" MAB has now

increased its mobilizations in communities affected by or threatened by new dams, indicative of the fact that serious conflicts lie ahead.

Listening to Industry

Despite the fact that Brazil now enjoys an electricity glut, the Brazilian Association of Infrastructure and Heavy Industries estimates the country will require investments of up to US\$5.5 billion annually in new energy generation over the next eight years to avoid future energy shortages. The Lula government's initial priority in terms of energy policy has been on halting the privatization of energy generators and distributors, which had been promoted by Lula's predecessor; and returning energy planning to the state-controlled electric power bureaucracy. Lula's alternative to privatization of electric companies is a plan, supported by the World Bank and Inter-American Development Bank, to provide incentives for Public-Private Partnerships (PPPs), with Brazilian state electric companies participating as majority partners in the consortia bidding for projects. Key issues are still to be resolved, such as the mechanisms that will guarantee investors an adequate return on investment, including the possibility of tax breaks or other government subsidies; the manner by which consortia will be formed, and how financial dealings between private and public companies will be monitored.

The government also plans to change the way dam projects will be offered in concession. Under the new model, winning bids for the right to build dams will no longer be based on the highest offers for royalties to be paid to the government, but rather on the lowest declared cost for energy that will be sold to the national grid. Such a system could result in developers trying to cut expenditures on "external" costs such as social and environmental mitigation efforts.

The Lula government's initial offering to investors of new hydroelectric projects, scheduled for early 2005, is expected to include 17 large dams, with a total installed capacity of 2,817 megawatts (MW). However, economic and environmental problems may limit the government's ability to proceed on schedule. Recent controversy has centered on Brazil's



Photo: Wilson Dias/ABR

President Lula inaugurates an energy project.

environmental licensing process for new dams. Some 45 large hydroelectric projects with a total installed capacity of about 13,000 MW are currently in the licensing phase, with 24 facing what Brazilian Mines and Energy Minister Dilma Roussef terms "complex" environmental issues. Citing the possibility of new electricity blackouts in 2007-09 if these dams are not built, Roussef called for the licensing process to be sped up. Paulo Godoy, president of the Brazilian Association of Infrastructure and Heavy Industries, was more assertive, attacking the "lethargy and indecision" of environmental authorities.

In order to avoid long delays on the licensing process for projects that have serious environmental and social problems, the Lula government says it will only offer new dam projects in concession after they have completed environmental impact studies, and after a complete analysis of their environmental and social feasibility has taken place. Absent in the new electricity sector model are measures for a thorough assessment of alternative options for meeting Brazil's electricity needs.

The 17 dams projected for concession in 2005 include one new dam in the Amazon region that is sure to attract close scrutiny: the 256 MW Dardanellos Dam proposed near the headwaters of the Aripuanã River.

The largest project to be offered is the 480MW Ipueiras Dam on the Tocantins River. Dams are also proposed in Goiás, Rio Grande do Sul, Paraná, Rio de Janeiro, and Minas Gerais states. None have yet completed environmental studies, and each project will have to undergo analysis by federal or state licensing authorities, public hearings, and also likely legal challenges, if recent experiences are any indication. Brazilian environmental authorities also say they intend to institute a plan to assess the impacts of dams on the river basin level, which may further complicate the environmental licensing process.

How Delays Happen

In order to better evaluate the reasons for delays in the environmental licensing process, IRN and the Brazilian NGO and Social Movements Forum reviewed the full licensing process for several of Brazil's most controversial projects, including Estreito (1,087 MW), a hydropower dam proposed by a consortium of Tractebel, Companhia Vale do Rio Doce, Alcoa, BHP Billiton, and Camargo Correa. The dam would provide energy primarily to aluminum smelters and other metal processing plants, providing little relief for Brazil's chronic energy shortages.

A review of eight volumes of documents showed that environmental studies for the Estreito project had serious flaws, which the consortium was reluctant to admit. Brazil's Institute for the Environment and Renewable Natural Resources (IBAMA), the federal environmental licensing authority, found studies on fauna to be inadequate and even questionable (for example, the consortium found impacts on river dolphins to be "positive" in nature, since the dam would restrict

their migration and therefore make them easier to protect), and told the consortium to carry out three new fauna collections. The company carried out only one, saying that results were similar to initial studies and indicating that further collecting expeditions were unnecessary. IBAMA disagreed, and demanded additional studies on fauna. IBAMA also found that impacts on water quality were insufficiently addressed, as were the dam's potential effects on the Apinajé indigenous reserve, located only 40 kilometers from the dam site.

Earlier this year, in light of new data presented by the consortium at IBAMA's request, and following complaints by local populations and officials that studies had not been made available far enough in advance to permit them to prepare for the 2002 public hearings on the project, IBAMA scheduled new hearings on Estreito, provoking legal challenges by the consortium.

Another significant problem facing the project has been controversy regarding the number of people who will have to be relocated or compensated to make way for the dam. Official studies for the project say 14,000 people will be directly affected, but organizations representing affected people say the number may be much greater. This has led to lawsuits that have further delayed decisions on licensing. IBAMA publicly admits it lacks the capacity to carry out independent evaluations to assess the accuracy of estimates on social impacts made by the consortium. The Brazilian government has pledged to hire additional technical staff at the agency, with help from a new loan from the World Bank.

According to Mayron Regis of the Carajás Forum, "Obviously, IBAMA needs additional

staff to review complex projects like hydroelectric dams. But there is also a climate of confrontation resulting from economic interests who want to short-circuit legitimate processes intended to protect the environment and the rights of local populations. There needs to be a clearer standard for environmental licensing, which contemplates multiple uses of water, the cumulative impacts of various projects on a river like the Tocantins, and is capable of better analyzing alternatives for providing the energy needed for the country's development."

A Better Way

NGOs say the first priority should be improved energy efficiency programs and other demand-side management measures, dam retrofitting, and cutting transmission losses as first steps for improving Brazil's energy situation, as well as better incentives for new renewable energy supply. Brazil has an estimated wind-energy potential of 143,000 MW, excellent potential for solar power, and enormous biomass potential for both fuels and the production of electricity.

A new study by WWF-Brazil reveals that Brazil could increase its electric power capacity by 10% without new hydroelectric dams – and for a fraction of the cost – by retrofitting existing dams to produce more power. The study, coordinated by professor Célio Berman of the University of Sao Paulo's Electrical Energy Institute, reveals that Brazil could add some 8,000 MW of effective generation capacity to its current 82,000 MW of installed capacity by investing some US\$1.8bn to renovate 67 hydroelectric projects. These projects are all more than 20 years old; 31 of them have been operating for more than 40 years. Renovation costs

range from \$100-700/kW, compared to \$2,100/kW for building new capacity, according to the study. Construction time for renovation is 3-6 months and investments are paid off within four years, compared with a 30-year amortization period for building new dams.

Retrofitting existing plants is not just cheaper, it also avoids new environmental damage and reduces social conflict.

The study notes that in 2002, Brazil spent just \$4.2mn to increase capacity of old dams – just 5% of what the US spent. ■

Lula Government Criticized for Support of River Diversion Scheme

The Lula government recently announced that it would proceed with the \$1.5 billion project to divert waters from the São Francisco River in northeastern Brazil. The decision was made without consulting the River Basin Committee set up as a decision-making body on managing the river's water resources.

Luiz Carlos Fontes, the Executive Secretary of the 120-member São Francisco River Basin Committee, said: "We do not accept this unilateral decision. The government violated its agreement with the committee. The diversion project is expensive and unnecessary. The conflict lines are drawn."

The government's decision was announced just days before the Ministers of National Integration and the Environment were to have met with the committee to discuss the plan. According to news reports, the government plans to bypass the basin committee by seeking approval for the project with the National Water Resources Council and National Water Agency.

The São Francisco River diversion will channel about 3% of the annual flow of the São Francisco through 500 km of canals to regional rivers for irrigation and urban water supplies, as well as for industry. Opponents of the project, who say there is insufficient flow in the São Francisco to guarantee adequate supplies for all users, now threaten to take legal actions to halt the diversion project, which still faces the hurdle of achieving an environmental license.

Making Tough Choices on the Magpie River

by Juliette Majot

Soaring over the massive spruce forest of Quebec's north shores, I am flushed by the adrenalin of not knowing what to expect. I'm on my way to see what may be lost if a dam is built on the Magpie River. Lovers of the Magpie River were going all out to familiarize a collection of activists and media with the controversy surrounding plans to dam it.

Expecting the unexpected is Eric Hertz's specialty. He thrives on adversity. When we are unable to board float planes and face an overnight weather delay, he pumps us up for the trip. Magpie River rapids, he explains, have a unique and desirable quality: they start out easy and get bigger and tougher as we move downstream. Finally, they culminate in a "Class 5 plus," which in river-running language means not just big, but big and difficult. Hertz makes the first mention of what will become known as "The Choice." "Once you see that last rapid, you may not want to run it. And that is your choice. That is the beauty of it. There is no reason to do this if it frightens you."

This wasn't a megaproject, as too many are, that would forcibly displace communities, wipe out fisheries and carry a price tag nearly equivalent to the country's GDP. This was a relatively small dam that would wipe out a single, beautiful rapid in a Canadian province where hydropower is ... popular. What if I would not fully grasp the importance of the river's integrity? After all, maybe I wouldn't feel that the value of the Magpie as a healthy flowing river exceeded the value of producing 40 megawatts. What about regional development? What about the jobs that might be generated along with the electricity? What about the people who want those jobs, and therefore want this dam?

It is easy for people tacitly to allow the destruction of things they've never seen, which is why the trip's organizers want us to make the Right Choice about The Rapid: run it, remember it, and help save it. We will

spend four days on this river, paddling its lakes, riding its rapids, climbing its waterfalls, swatting its mosquitoes and comprehending the details of its possible demise as a world-class whitewater river. The rapid about which we need to make "The Choice" could disappear under a reservoir in a couple of years. With secret contracts guaranteeing power purchases by HydroQuebec for the next 25 years, a company called HydroMega Services Inc. plans to build a 40 MW dam near the mouth of the Magpie.

But not if Alain Saladzius and Anne-Marie Saint-Cerny have anything to do with it.

This is Personal

Certain that without voluble public outcry, a provincial plan calling for 36 dams on 24 rivers would quietly go through, Alain Saladzius and Anne-Marie Saint-Cerny launched Operation: Adopt-a-River in 2002.

The campaign was designed to attract media attention to rivers that most people had never heard of by using spokespersons that most people *had* heard of. Celebrities publicly adopted rivers, leveraging their fame and media status for the cause. Today,

plans for all but three of the original 36 dams have been shelved. Saladzius is a man with an unfinished mission. Along with Saint-Cerny and others, he has launched a new organization, Fondation Rivieres, and the campaign to stop the Magpie dam is at the top of its priorities.

Saladzius is one of seven paddlers in my boat. River rafting, it seems, does not come particularly naturally to him. While fellow paddlers hop nimbly from one end of the raft to the other, Saladzius and I both lumber across it, driving our shins into the water bottles and bags of rafting paraphernalia that are carabinered to the raft lines. Paddling directly across from him is Saint-Cerny, an optimistic (but never naive) sprite who considers the celebration of her 50th birthday here as an invaluable gift. In the rapids, they put their backs into it and grin broadly as we catch an eddy and turn around to watch our fellow rafters follow us down. Heading toward us are rafts full of activists, photographers, journalists, and eco-tourism professionals who will soon be joined by one carefully chosen celebrity with river-saving credentials a mile long.



Alain Saladzius, founder of Adopt-a-River, on the Magpie.

Photo: JC Fortin/Photonature



Photo: JC Fortin/Photomature

Portaging over the falls

Here Comes Our Lunch

Day two, mid-day, and we have found our rhythm when we approach an unrunnable section of the river. We emerge onto a smooth rock face on the other side of the falls. I am so tired I almost don't see where I am: the rock outcroppings, the waterfalls, the rising sea of spruce. There is blue sky and distant clouds. I catch my breath. Sitting down and contemplating the color of lichen, I am just about back to normal. And then the helicopter arrives.

We hear it first, and are reminded that in the wilderness, all sounds mechanical are out of the ordinary. It propels into view just over the trees, nose down, coming right at us, moving along the river, fast, and I think how much fun it must be to fly like that. Downstream and below us, the helicopter perches on an impossibly jagged rock, deposits a few passengers, and heads up river.

"Bobby Kennedy sure knows how to make an entrance," someone says, and there he is on the next rock over, replacing the makeshift lunch table as our new center of gravity. Kennedy has been working to save rivers for decades. Chief Attorney for the Natural Resources Defense Council, Chief Prosecuting Attorney for the Hudson River Riverkeeper and President of the Waterkeeper Alliance, he has been a key actor in protecting the Hudson River, one of the most successful river clean-up efforts in the world. Under the Waterkeeper Alliance umbrella, Riverkeeper groups now number 123 in the US and 8 in Canada. These are local grassroots groups that monitor the

condition of their rivers, identify violators of river protection laws, and do something about it.

Thwak, thwak, thwak, thwak, again the chopper appears over the waterfall, rounds the river bend, this time towing, at the end of a long cable, a fully laden, bright blue oar boat. "Here comes our lunch," someone says. It is flying through the air, right at us.

We All Live in a Yellow Rubber Raft

"I don't think this dam makes sense," says Rejean Porlier. We're sitting on a rock and I've managed to catch him before he grabs a fishing pole and disappears to catch a trout for this evening's hors d'oeuvres. (Porlier is a good fisherman and we will also find that he is a great and generous schlepper.) His union, which is one of four at HydroQuebec, neither trusts nor supports provincial government plans to encourage private development of public goods – both the river and the energy it can produce.

Porlier shares his distrust of private hydropower development with many Quebecois, who view the public nature of electric utility HydroQuebec as sacrosanct. With the provincial government its single shareholder, and with exclusive rights to all public hydro potential, HydroQuebec annually contributes an estimated C\$965 million to government coffers each year, money that supports education, medical care and other social services. And while there are clearly other reasons for a HydroQuebec union to support HydroQuebec ownership and development of hydropower, the union view is

not isolated. In Quebec, where the political drive for separation from Canada remains a compelling issue, HydroQuebec is the single most powerful economic engine to make it possible. And the idea of a river being a public good is one that goes much further back than does HydroQuebec.

Part of Our Culture

"A trip down the Magpie is not an expedition for us. It is part of the Innu culture," says Reginald Vollant, a member of the Innu people, and now curator of Shaputuan, the Innu Cultural Museum in Sept-Iles. According to Vollant, the Innu community has always believed in sharing resources as long as they are used respectfully. With a good part of the Magpie watershed the subject of long and unpredictable land claim disputes, his mention of sharing is not empty rhetoric. He thinks that fishermen, hunters and rafters can learn to live harmoniously with nature, and that the Magpie River is best left undammed.

The Innu community is not united on the issue, and Vollant sees the struggle ahead as both difficult and necessary, united or not. When the Innu community did unite in opposition to the St. Marguerite Dam in the mid-1990s, the project moved ahead anyway. The defeat was discouraging, he says, and made it harder to believe that the Innu voices matter. It also undermined trust in the commitment of outside organizations. "We didn't see enough of them in the St. Marguerite fight," he says. Still, he believes that the Magpie Dam can be defeated and that opponents can and should work together. "This river doesn't belong to Quebec," he says. "It belongs to the planet."

The question of ownership – provincial, federal, First Nation – is hotly debated in Canada and could be a crucial factor in efforts to protect the Magpie permanently. Currently only 0.5% of Quebec's area is permanently protected, compared with an average of nearly 10% of the total area of the other Canadian provinces.

"To ensure protection of all or part of the Magpie watershed by declaring it a national park, the land and water that runs through it would have to be ceded to the federal government," explains John O'Driscoll, President of the Canadian Parks and Wilderness Society, Montreal Chapter. Under O'Driscoll's quiet demeanor lies a sharp intellect that fuels committed activism and growing impatience with the provincial government's handling of conservation issues. When he isn't analyzing maps, critiquing government actions, or spending time with

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his wife and kids in the parks and wilderness he loves, he works as an emergency room doctor. "I know I'm impatient," he says. "That's why I chose emergency room medicine. I like to see a problem and get it solved, and Quebec has a problem. It is going to lose the very wilderness that enriches it," he says.

Daniel Green of Sierra Club Canada agrees. Wickedly funny in two languages and with a database for a memory, Green both entertains and informs. "Every river in Quebec has been measured in megawatts, and I've got map to prove it," he tells me. Immediately after the river trip, Green publicly announced Sierra Club Canada's call for a federal/provincial management plan to protect the Magpie. If such an agreement could not be reached, he said, the Club would call for protection through national park designation, even knowing how difficult such a campaign would be. With this announcement the Sierra Club Canada has declared its intention to weigh in heavily to protect the Magpie.

And so have many of the organization representatives on this trip. Their arguments aren't just environmental. Many of them think there are better economic opportunities for the region if the dam is stopped. One of them is Jean Charles Fortin, president of Aventur Ecotourisme Quebec, a professional association of outdoor adventure companies. "JC," as we call him, isn't just a talented outdoorsman; he is among three professional photographers on the trip who manage to keep their cameras above water. "If we lose the rivers and the wilderness, Quebec will lose a burgeoning ecotourism industry," insists Fortin.

Until now, the only economic argument that local communities have heard has come from the dam developer, HydroMega Services Inc., which argues that the dam will provide jobs and income to a region badly in need of both. The argument has garnered local support, but opponents insist that ecotourism is a better economic and environmental option. While the dam would provide an estimated 170 full time equivalent jobs during the one-year construction period, only two jobs a year would be provided once the dam was completed.

Local municipalities would receive 30% of the profits over a 25-year period. Because the details of the power purchase agreement between HydroMega Services Inc. and HydroQuebec have not been publicly released, opponents can only estimate profits based on knowledge of existing agreements that are publicly available.

"We estimate that the money that would come back to the community for selling this jewel of a river to HydroMega Services Inc. would total \$77 per person per year," says Saint-Cerny. She and many others think that promoting the Magpie as a world-class rafting destination isn't just a better idea for the environment, but a better economic opportunity for the community.

For Kennedy, the Magpie is a masterpiece worthy of international acclaim and protection. While he believes that experiencing wilderness is one way to renew the human spirit, he recognizes that the number of people who will ever directly experience the beauty and wildness of the Magpie will necessarily be limited. "I don't have to visit the Louvre and stand in front of the Mona Lisa to appreciate its importance to humanity. Quebec has a masterpiece in the Magpie River," he says. "For Quebec to build a dam on this river would be like finding the Mona Lisa in your basement and painting something else over it to sell it for a quick dollar at a yard sale."

At a packed Fondation Rivieres post-trip press conference, Jacky Cerceau, director of Hydromega Services Inc, could not disagree more. Literally backed into a corner after failing to disrupt the press conference earlier, Cerceau is now surrounded by cameras and microphones and arguing with ... just about everybody. "I believe that the dam and ecotourism can co-exist," he says, and once more expresses doubt that anyone can, or should, run the final rapid of the river. Personal testimonials to the contrary do not sway him, because as he sees it, the dam would improve the rapid by flooding it.

Cerceau, a former employee of HydroQuebec, is in this fight to stay and he is a formidable opponent. When Saladzius and Saint-Cerny released a report charging HydroMega Services with corruption and conflict of interest, Cerceau sued them for defamation of character. With no money to fight the suit, Saladzius and Saint-Cerny put the case to rest by signing retractions, but they did it publicly, in the eye of camera, making clear that they would continue to work with authorities to prove their case. The fight to save the Magpie is as much about how deals are made in Quebec as it is about whether a dam is a good economic deal for the province; as much about valuing honest business practices as it is about valuing a free-flowing river.

The fight to save the Magpie is also about the fight to successfully develop renewable energy. A recent independent report prepared by Helimax Energy estimated Quebec's windpower potential at 100,000 MW. In response, the provincial energy board asked

HydroQuebec to develop 1,000 MW of windpower this decade. According to Steven Guilbeault, director of Greenpeace Canada, the energy board's response, while welcome, didn't go far enough. "The conservative estimate of 100,000 MW could certainly be realized if HydroQuebec would change its ideology and develop the internal expertise to get it done," Guilbeault explains, swatting at a mosquito before loading back into his raft. It is our last day on the river, and we are headed to the top of last rapid where we will all make The Choice.

The Choice

Cade Harrison-Hertz has not been given The Choice, but if he had he would have run the rapid. No doubt about it. The descent's first videographer, he scrambles up the last craggy rock of the trip, sets up his tripod, attaches his camera and covers it with a small piece of dry red cloth hoping to protect it from the rain that has been falling all morning. Dressed in black lycra shorts, a black life jacket that looks like a flak jacket and a blue helmet, he is ready for action. Over the past four days he has documented every rapid, miraculously appearing just ahead of us, perched on ledges, straddling tree branches. His argument to run the rapid almost got his Dad's approval (his Dad is Eric, our outfitter), resting as it did on the premise that the rapid may disappear and he may never have another chance to run it. Whether it was Cade's small stature (he is 12 years old), or Eric's refusal to believe in the possibility of this rapid being flooded, The Choice is denied, and Cade shoots the video of all who were offered, and chose the rapid.

Running a Class 5 plus rapid is not something that lends itself to written description. Suffice it to say that we all made it through, we had no "swimmers" (rafter language for falling out of the boat), and my inability to describe the event in no way reflects the vivid memory of it. We all ran it, we all remember it, and as the organizers knew from the start, we will all do our best to save it.

For Cade, The Choice is evident and almost matter-of-fact. When questioned, he thinks carefully before responding, peering at the trees from behind long dark eyelashes. He has run 36 rivers, but none of them, he says, is like the Magpie.

"There is only one Magpie River, not two, not three. One. The purpose of the dam is to make money, and if there are better ways to make money than damming this river, then they will have dammed it for nothing. I don't like that," he says. "To tell you the truth," he says, "if they put this dam up, it won't be a river any more." ■

California Tribe Performs War Dance to Protect Dam-Threatened Sacred Sites

by Elizabeth Sabel



Photo: Sally Carlless

Winnemem Wintu spiritual leader Caleen Sisk-Franco (center), former (now deceased) leader Florence Jones (right), and Emerson Miles, tribal interpreter.

At California's Shasta Dam site, a very private Native American tribe decided recently to make a public statement. As curious on-lookers and supporters gathered to witness the Winnemem Wintu performing their "War Dance" for the first time in 117 years, tribal organizers moved through the crowd answering questions and politely enforcing the "no photographs" rule. During the four-day ceremony, tribe members fasted, danced and prayed for the protection of the sacred and historical sites that are being threatened by the US Bureau of Reclamation's proposed raising of the 602-foot-high dam.

As recreational motorboats sped by on the vast reservoir behind them, tribal dancers and singers huddled in a small ceremonial circle made of willow and Douglas fir branches, listening to their chief and spiritual advisor, Caleen Sisk-Franco. She told the tribe members that their purpose was to "ask people to open their hearts, open their minds" in order to "protect our sacred places." She said, "Our job here is to send our word out to the world."

The message the tribe wants the world to hear is that their history and culture is intrinsically linked to the McCloud River, one of several tributaries that feed the Shasta Dam's reservoir. The Winnemem (literally "Middle Water People," which refers to their relationship to the McCloud) is a traditional tribe that has lived and practiced their religion along the river for an estimated 1,000 years. Some 60 years ago, their world began

to disappear under the waters of the Shasta Dam, built primarily to take water to Central Valley farmers. The dam's reservoir flooded 15 of the river's 35 miles.

To make way for the dam the US government took the Winnemem's homelands. The Winnemem had to watch as their homes were bulldozed and their lands cleared. Bodies from 183 Winnemem graves along the river had to be exhumed. Many of their historical and religious sites were permanently submerged by the reservoir. The dam's wall blocked the then-abundant salmon runs, their main food source, from returning to the McCloud River.

As part of the 1941 Central Valley Indian Land Acquisition Act, the government promised the Winnemem funds to acquire replacement lands and the creation of a cemetery in exchange for the 4,000 acres the tribe had to sacrifice as a result of the dam. The government did provide a new cemetery for the tribe but has yet to fulfill its remaining obligations.

To complicate matters for the Winnemem, in the mid-1980s, around the same time the government initially proposed the increase in the dam's height, it also stopped acknowledging the tribe's federally recognized status. For the Winnemem, this resulted in a loss of benefits associated with their previous official status and made it much more difficult for the tribe to advocate for the protection of their religious practices and sacred places. Now, the Bureau of Reclamation is conducting a multi-million-dollar feasibility study in preparation for raising the dam. The raising of the dam is a cornerstone of the CALFED project, which like its predecessor the Central Valley Project, was created to meet California's growing demand for water and electricity. Proposed height increases range from 6 to 200 feet and would be implemented sometime after 2010.

"Raising Shasta Dam even six feet will flood most of our remaining sacred sites along the McCloud River," says Sisk-Franco. These sites date back hundreds of years and still play a vital role in Winnemem culture. The sites in jeopardy include Children's Rock, where young tribe members receive blessings to carry them through life; and Puberty Rock, where coming of age ceremonies are held. Also at risk of submergence are the tribe's burial grounds.

Tribe members went to Washington, DC in September to meet with government representatives in an attempt to get their federally recognized status reinstated. The tribe has also been attending public hearings on the proposed height increase and has met with the Bureau of Reclamation in order to urge the government to study alternatives to raising the dam's height. The Winnemem are proposing implementing better water management practices at the reservoir, improving upstream monitoring and examining conservation options.

According to Steve Evans, Conservation Director of the California-based Friends of the River, there is a false assumption that the state of California is already doing everything it can to conserve water. Evans states that we are not "doing half of the things we could do to create more efficient use of our water supplies." Friends of the River and other environmental organizations are hoping that Governor Schwarzenegger will sign into law AB2572, known as the Water Meter Bill, which would require water meters to be installed in all California cities. Water meters alone can prompt consumers to use an estimated 20% less water.

If the Winnemem's sacred and historical sites are submerged by the expanded reservoir they risk losing their cultural identity and the spiritual ties that hold the community together. The tribe is asking that alternatives to raising the dam's height are explored because, as late spiritual healer Florence Jones said, "Our children will need our religious ways, our language and sacred places to call themselves Wintu Indians in the future." ■

For more information, visit the Winnemem tribe's web site: www.winnememwintu.us or www.friendsoftheriver.org



DANGEROUS DAMS

INDIA: At least 28 workers were killed in early August when a tunnel under construction for Tehri Dam collapsed. Officials said monsoon flooding was to blame, but the industry magazine *Engineering News Record (ENR)* quoted a local engineer as saying: "Heavy rains are a regular feature in this area. The shaft was expected to withstand a much higher amount of rainfall than what has taken place. There must be some other reason, possibly some construction problem. I am also surprised the government is not taking the contractor to task for getting work done inside the tunnel in the midst of torrential rains."

A government inquiry into the disaster has been ordered, but observers doubt its independence, according to *ENR*. Two of the three members of the investigation team belong to the same bodies that had earlier declared the project to be viable and safe.

The BBC reports that this is the second serious accident on the dam. Sixteen laborers were buried alive under piles of earth three years ago.

More than 80 workers were in the tunnel when it caved in, and many were hospitalized. The dam – India's tallest – is being built in an earthquake-prone part of the Himalayas.

The project has been contentious for decades. More than 100,000 people are being displaced by the dam's 42-square-kilometer reservoir, which has now submerged Tehri town and threatens some 125 villages.

CHINA: Massive floods killed at least 200 people in China in early September, and left dozens more missing in southwestern China, prompting authorities to put the Three Gorges Dam on alert and halting river traffic through the dam's locks. Thousands were sickened by water contamination from the floods.

Days of continual downpours in Sichuan province led to huge flood crests passing through the Three Gorges along the flood-swollen Yangtze River, the official Xinhua News Agency reported.

The dam, which led to the forced resettlement of up to 1.9 million people, has been

Hydroelectric generation results in evaporation of water from reservoirs. According to the 2004 State of the World report by the Worldwatch Institute, the amount of water needed to meet energy demand is substantial. In the US, it is about 8.3 liters/kWh of electricity. Therefore, the average US family, using 10,000 kWh of electricity per year, is also indirectly consuming an additional 83 cubic meters of water – a volume equivalent to nearly 14,000 flushes of a water-efficient toilet.

touted by authorities as a means of stemming flooding along the Yangtze. But the recent floods led to hundreds of thousands of people being relocated from the area around the reservoir, Reuters reports.

In other news, in mid-September, the Chinese government sent anti-terror troops to the Three Gorges Dam site, according to Radio Free Asia. The troops arrived with helicopters, patrol boats, armored cars and bomb disposal robots to defend the project as part of a counter-terrorism program. The deployment was part of a "comprehensive anti-terrorism network" aimed at protecting major bridges, dams, and power stations, government media reports said.

While no mention was made of who China suspects might target the dam, Beijing was outraged in June at a US suggestion that

Taiwan could attack the project as a counter-measure should China invade the island.

The *China Times* didn't say how many troops would be stationed at the dam. But it suggested that attackers could conduct pinpoint strikes of key infrastructure projects like dams. Officials noted that such attacks would be magnified if staged during the summer flood season. "The extent of the damage could be worse than what tens or even 100 nuclear weapons can cause," according to Chinese news portal Sina.com.

China has recently stepped up high-profile military maneuvers in its "war on terror," staging anti-terror maneuvers in the Tibetan capital of Lhasa recently, Radio Free Asia reports.

UPDATES

UGANDA: A rivalry between competing hydro dams on the Nile has recently intensified. According to the *Indian Ocean Newsletter*, the Norwegian developers of the Karuma hydro project are pressing the Ugandan government to give them authorization to proceed, rather than wait for the Bujagali Dam to get underway. The 200 MW Bujagali project, mired in controversy for years, has been stalled since 2002, after corruption was discovered on the project. Norpak Power, the Norwegian consortium behind Karuma, has told the Ugandan government it will organize its own financing of the project with no need for a government guarantee.

In mid-September, Karuma got a boost when a member of Uganda's parliament, Sam Otada, petitioned Parliament to lobby the Government to give first priority to Karuma rather than Bujagali. Otada, who presented his petition to Parliament's natural resources committee, made the point that studies prepared for the World Bank by the Canadian firm Acres International had over-priced Karuma, thus leading to the false claim that Bujagali was Uganda's "least-cost option."

Development Today (DT), a magazine on Nordic and multilateral development aid, reported last December that, by Acres' estimate, Karuma would cost \$216 million more than Bujagali. But Acres inexplicably used its own design concept to cost Karuma, rather than the more detailed (and cheaper) proposal prepared by Norpak. The Acres report has never been publicly released, but was a key document in the World Bank's decision to support the Bujagali project in December 2001.

Ugandan authorities have been trying to resurrect Bujagali, and have short-listed five firms interested in building the project. However, financing for the controversial dam is still uncertain.

Local NGOs opposed to Bujagali believe Karuma may have fewer costs and more benefits than its downstream rival dam. It will inundate much less land than Bujagali, has potential to bring development to the long-neglected northern part of the country, and will not hurt Uganda's growing river-based tourism industry. Karuma appears to be less economically risky than Bujagali, and can be brought online more quickly and incrementally. However, these same NGOs are pressing for the development of the nation's abundant geothermal resources.

At press time, Uganda was experiencing drought-induced energy shortages that have reduced output at the two dams above Bujagali Falls by some 25 megawatts. The country is nearly entirely dependent on hydropower for its electricity needs.

LATIN AMERICA: In August, the Board of Directors of the Inter-American Development Bank took the highly unusual and controversial step of discrediting its own internal Independent Inspection Mechanism. The inspection panel had recently issued a report that blasted the bank's handling of the Yacyretá hydroelectric project (Paraguay/Argentina). The Board's statement noted that the inspection panel's report represented "only the views of the independent investigative panel," and countered that the bank did not, in fact, violate operational policies in administering the Yacyretá loan. The Board said it will direct bank staff to work with the binational company, EBY, to create a Project Termination Plan aimed at resolving ongoing social and environmental issues which prevent the raising of the Yacyretá reservoir to its design level. The Board said the plan should prioritize resolution of resettlement issues, which the inspection panel found highly inadequate, as well as issues of information-sharing and procedures for addressing grievances.

On another issue, the IDB's board has authorized an investigation of Brazil's Cana Brava hydroelectric project more than two years after populations affected by the project petitioned the bank's Independent Inspection Mechanism. The bank said difficulties in contacting representatives of affected communities accounted for the delay. But representatives of Brazil's Movement of Dam-Affected People (MAB) said that the delay was due to obstruction by the bank's private sector department, which

tried to avoid the inspection by questioning MAB's role as representatives of affected populations.

CHILE: Environmentalists reacted with alarm after the Spanish electric company Endesa announced plans to build five large hydroelectric dams in Chilean Patagonia, in one of the most pristine ecosystems on the planet. The dams, on the Baker, Pascua, and Futaleufu rivers, primarily fed by glacial runoff, would cost a total of \$2.8 billion, and would have an installed generating capacity of 2,800 MW.

Sarah Larrain, of the Sustainable Chile Project said, "Endesa is merely taking advantage of Chile's current electricity crisis (resulting from Argentina decreasing natural gas exports to Chile) to try to create the impression that it's a 'done deal'." Larrain joins other Chilean NGOs in calling for incentives for increasing the use of the country's wind, solar, biomass, small hydro, and geothermal resources for electricity generation.

BRAZIL: The \$1.1 million fund set up by NGOs in honor of the assassinated Amazon anti-dam leader Ademir Alfeu Federicci, better known as "Dema," with resources from the sale of illegally logged mahogany confiscated by Brazil's environmental protection service, is now operational. The fund will benefit community organizations in the Xingu river region undertaking projects of environmental protection, community forestry, and other actions that promote local development and social justice.

Dema was killed in August 2001. He had led the fight against dams on the Xingu River, as well as against illegal logging and violence aimed at rural workers.

A BETTER WAY

PHILIPPINES: The government here has vowed to become the world's top producer of geothermal power to curb a rising oil import bill and ease its crushing debt, Reuters reported in mid-September.

But the government energy investment wish-list carries a \$25 billion price tag set against a \$61 billion national debt and last year's \$3.5 billion budget deficit.

In his "energy independence agenda", Energy Secretary Vincent Perez acknowledged an urgent need to cap growth in last year's \$4 billion bill for crude oil.

"A stable, self-sufficient and vibrant energy sector is crucial to job creation, economic

"All of non-electrified Sub-Saharan Africa could be provided with energy from small-scale solar facilities for less than 70% of what OECD countries spend on subsidizing dirty energy every year."

From The Price of Power: Poverty, climate change, the coming energy crisis and the renewable revolution, by the New Economics Foundation (London), available for downloading from www.neweconomics.org

growth and stability, and for the future well-being of the Philippines," he said.

The Department of Energy said the Philippines needs to install an additional 5,200 megawatts of power generating capacity by 2014 – about a third of existing supply – to meet rising demand. It says it wants to see renewable-based generating capacity double by 2013. Based on current plans, the nation could become the world's largest geothermal energy producer and the leading wind energy producer in Southeast Asia.

Currently, the Philippines is second in the world in geothermal energy production, after the US. It proposes to develop 10 new geothermal fields, for an estimated 300-470 megawatts of power.

As for wind power, a 25-megawatt wind-power plant is being built in the northern Philippines, and a 40-megawatt plant is planned. The government is seeking investors for an additional 16 wind-powered plants with a potential capacity of 345 MW. A US-based company has also set up a \$330 million solar PV factory in the country early this year.

Reuters reports that there is skepticism about the plans "as analysts wonder how investors will see past a poor record on managing energy finances to the long-term economic benefits," as well as about the political will to carry them out. The power sector accounts for a significant percentage of the national debt.

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system, no shelter, no school, no hospital. They get water from a tanker. Sometimes they don't. Most important of all, there's no work in New Harsud.

Of course, cash compensation is only given to the Head of the Family, that is: to men. What a travesty for the thousands of women who are hit hardest by the violence of displacement.

And this is what is being done to people from a town. You don't need to be a rocket scientist to imagine what is happening to the villages.

The people of Harsud have known for years that their town lay in the submergence zone of the Narmada Sagar Dam. Like all "oustees" of all dams, they were promised compensation and rehabilitation. There was no sign of either. Let's look at some basic facts.

The responsibility of surveying the submergence zone for the purposes of compensation and rehabilitation had been transferred to the NHPC. The responsibility for actual land acquisition and rehabilitation still rests with the government. The NHPC holds 51% of the equity in the project. Between the two "interested parties," they're in a hurry to get the job done and keep the costs down. One major budget head is compensation.

The first, most deadly sleight of hand involves the definition of who counts as Project Affected. The absolute poorest, in the villages, are sloughed off at this stage. Essentially those who are landless – fisher people, boat people, sand quarriers, daily-wage workers – do not qualify as project-affected. In some cases, whole villages have fallen prey to this process. For example, the 1982 detailed project report says that 255 villages will be submerged by the reservoir. The Narmada Control Authority now says only 211 villages will be eligible for compensation. Some 38 villages have been designated as not eligible for compensation.

The next lethal blow is when rates of compensation are fixed. The fortunate people who actually qualify as project-affected, asked, quite reasonably, to be compensated for their land according to the prevailing land prices in the villages in the command area of the dam. They received almost exactly half of that. As a result, farmers who had 10 acres of land will barely manage five. Small farmers with a couple of acres become landless laborers. It's called Better Management.

And it gets worse...

Patwaris and revenue inspectors descended on Harsud and the "notified" villages like a

terminator virus. Every single person we spoke to told the same story.

Basically, the patwaris and revenue inspectors undervalued everything. Irrigated land was entered as unirrigated. A five-acre farm became four acres. And so on. People had the option of challenging the award in a civil court (and spending more on lawyers' fees than the compensation they hoped to receive). The other option was to bribe the patwaris and revenue inspectors. The poor simply did not have the liquid cash to pay the going rate. So they fell out of the basket.

The state government knew that if it could break Harsud, the despair and resignation would spread to the villages. In order to create panic, they simulated a flood, by releasing water from the Bargi reservoir upstream. On June 23, the water in the Kalimachak tributary rose by a metre and a half. Still people did not move. On June 27, over 300 police and paramilitary forces staged a march through the terrified town. Companies of mounted police, the paramilitary and armed constabulary paraded through the streets.

On the morning of July 1, loudspeakers mounted on vehicles criss-crossed the town announcing that Rs 25,000 compensation grants would only be given to those who demolished their homes that very night.

Harsud broke

All night people smashed away at their own homes with crowbars, hammers, iron rods ... By morning it looked like a suburb of modern-day Baghdad.

The panic spread to the villages. Away from the gaze of the media, in place of the lure of Rs 25,000, the government resorted to good old-fashioned repression. In fact, repression in the villages had begun a while ago. In village after village, people told us in precise, heartbreaking detail how they had been cheated by patwaris and RIs. Fearing what lay in store for them, many had sent their children and their stocks of grain away to relatives. Families who had lived together for generations did not know when they would ever see each other again. A whole fragile economy had begun to unravel. People described how a posse of policemen would arrive in a village, dismantle hand pumps and cut electricity connections. Those who dared to resist were beaten.

The World Bank has singled out the NHPC for high praise. In December 2003, a team of senior World Bank officers visited the Narmada Sagar Project. In its Draft Country Assistance Strategy (CAS 2004), the Bank said:

"While for many years the hydropower business had a poor reputation, some major actors (including the NHPC) have started to improve their environmental and social practices."

Interestingly, this is the third time in six months that the Bank has singled the NHPC out for praise since January 2004. Why? Read the next sentence in the CAS:

"Given this ... the Bank will work with the Government of India to seek possible

continued opposite

Listening to Harsud

In August 2004, a three member independent commission held public hearings to inquire into resettlement and rehabilitation violations on the Narmada Sagar project. Panel members are Dr. N.C. Saxena, member, National Advisory Council, Government of India, and former secretary, Planning Commission of India; Angana Chatterji, Associate Professor of Anthropology, California Institute of Integral Studies, and Harsh Mander, former director, Action-Aid India. The Commission will submit its report to the National Advisory Council headed by Congress Party leader Sonia Gandhi. In early August, Chatterji and Mander visited Harsud, neighboring villages, and resettlement sites in Madhya Pradesh. They heard more than 1,400 people at public hearings, and held extensive meetings with the Narmada Bachao Andolan.

Chatterji described some of the panel's findings: "The prescriptions of the Land Acquisition Act and the Narmada Water Disputes Tribunal Award are being violated, along with the prerequisite that the state provide a minimum of two hectares of irrigated land to the landed and adequate cash compensation to others. The landless are not given agricultural land. Laborers are not provided livelihood opportunities. Seasonal migrants are often not included in compensatory schemes. Women have not been given co-title to new land. Submerging forests have not been assessed for livelihood resources they provide the disenfranchised. Police have been brutalizing citizens and the state has not undertaken measures for restorative justice. The 132 villages to be submerged must be rehabilitated prior to the completion of the dam, even if it requires halting construction of the 16 remaining gates."

new areas of support on a modest scale for hydropower development.”

Then again, on February 15, 2004, in a report that praises the NHPC for “completing projects like the Narmada Sagar within time and within budget,” the *Economic Times* quoted a World Bank official saying, “The NHPC is moving towards global corporate performance standards and is improving its financial performance. We have done due diligence on the corporation and are impressed by the performance.”

What makes the World Bank so very solicitous?

Power and water “reforms” in developing countries are the 21st century’s version of the Great Game. All the usual suspects, beginning of course, with the World Bank, the big private banks and multinational corporations are cruising around, looking for sweetheart deals. But overt privatization has run into bad weather. It has been widely discredited and is now looking for ways in which to reincarnate itself. From overt invasion to covert insurgency.

Over the last few years the reputation of Big dams has been badly mauled. The World Bank was publicly humiliated and forced to withdraw from the Sardar Sarovar Project. But now, encouraged by the Supreme Court judgements on the Sardar Sarovar and Tehri

Dams, it’s back on the block, and is looking for a backdoor entry into the industry. Who better to cozy up to than the biggest player in India’s hydropower industry – the NHPC? The NHPC which is eyeing a number of other dam projects (including the Maheshwar Dam) and aims to install 32,000 MW of power over the next 13 years. That’s the equivalent of 32 Narmada Sagars.

The World Bank is by no means the only shark in the water. Here’s a list of international banks who have financed NHPC projects: ABN Amro, ANZ, Barclays, Emirates, Natwest, Standard Chartered, Sumitomo. And a list of bilateral export credit and financing agencies who support it: COFACE France, EDA & CIDA Canada, NEXI & JBIC Japan, the former ODA (now DFID), UK, and SIDA & AKN Sweden.

What’s a few human rights abuses among friends?

On the Road Again

As we travelled further inland towards the reservoir, the road got worse and eventually disappeared.

As we approached the water, it began to rain. The sound of the water lapping against the shore was full of menace. The violence of what we had seen and heard robbed beautiful things of their beauty. There was a line

of froth that marked the level up to which the water had risen before it receded in the government-induced Bargi flood. There was a small child’s shoe in it.

We arrived at a village that looked as though it had been evacuated some years ago. Broken houses had been reclaimed by trees and creepers. A herd of feral cows grazed in the ruins.

There was no one around to tell us the name of the village – this village that must have been loved and lived in.

As we turned to go, we saw a man walking towards us. He told us the name of the village – Jamunia.

We asked him if he ever felt lonely. “This is my village,” he said, and then, after a moment, “only sometimes ... when I think, where has everyone gone? Are they all dead?”

It is dark on the highway back to Khandwa. We pass truck upon truck carrying unmarked, illegal timber. Trucks carrying away the forest. Tractors carrying away the town. The night carrying away the dreams of hundreds of thousands of people. ■

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Guatemala continued from page 1

replacement land has produced widespread hunger; downstream villages are flooded without warning by dam releases; and the lack of a bridge or reliable boats has cut off access to communal lands.

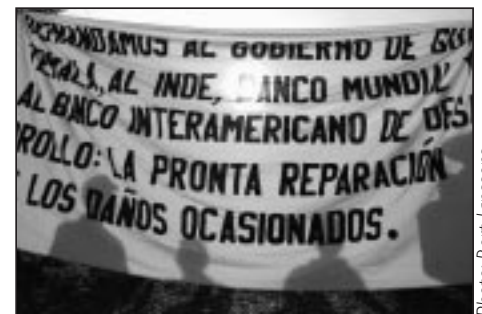
The institution responsible for implementing resettlement and other compensatory agreements, INDE, has been privatized, replaced by new power companies that have refused to recognize prior agreements to free electricity.

Thus, the resettlement village of Pacux has lost its electricity more than two months ago for failure to pay utility bills and, with the loss of power, the loss of potable water.

In short, people lack the means to enjoy their basic rights to food, water, health and livelihood.

Henry Monroy, from the Guatemalan Attorney General’s Human Rights Office, said, “The demands of the people who are occupying INDE’s facility date back to the times when the dam was built; the communities were displaced from their lands, and the government promised them development projects, but until now nothing has taken place.”

In 2002 community leaders met with World Bank and Inter-American Development Bank officials to begin discussions on



A banner at the occupation calls for reparations.

Photo: Bert Janssens

reparations. Both banks replied that they had fulfilled their commitments, loans had been paid and any remaining obligations lay in the hands of the government.

To affected communities, the World Bank’s and Inter-American Development Bank’s position of no remaining obligation denies the immense suffering of the massacred and survivors during the years of violence and the subsequent years of deprivation and continuing hardship. “The government took their money to build the dam,” said Carlos Chen, “and used it to kill my people.” ■

For more information

- “Continuing the struggle for justice and accountability in Guatemala: Making reparations a reality in the Chixoy Dam case.” Centre on Housing Rights and Evictions – Mission Report, August 2004 www.cohre.org/newframe.htm
- “The Chixoy Dam Destroyed Our Lives” by Monti Aguirre, Human Rights Dialogue (Spring 2004) www.carnegiecouncil.org/viewMedia.php/prmTemplatelD/8/prmID/4456
- Interview with Cristobal Sanchez Osorio, survivor of the Chixoy Dam massacres, WRR (April 2004): www.irn.org/pubs/wrr