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International Rivers Network

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Volume 12, Number 2 / April 1997

Special Focus: People Affected by Dams

IN THIS ISSUE

- **Cover Story**: "Coalition Calls for International Moratorium on Large Dams".
- **Commentary**: Telling the stories of people whose lives have suffered because of large dams.
- **Mekong**: The proposed Nam Theun 2 Dam in Laos may be without a buyer for its power.
- **India**: The story of the people forcibly resettled for the Sardar Sarovar Dam, excerpted from the new book *Masters of Illusion*.
- **Latin America**: Three large dam projects are brought before the World Bank Inspection Panel. And a [brief explanation about the Panel](#).
 - **Chile**: "Chilean Dam Builders Slip Through the Noose: Endesa Pays Off World Bank to Avoid Loan Conditions".
 - **Argentina/Paraguay**: "World Bank Authorizes Yacyretá Investigation".
 - **Brazil**: "Brazilian Farmers File Inspection Panel Claim".
- **Finance**: The World Bank establishes an advisory group to study problems with its hydropower projects.
- **Brazil**: The Declaration of Curitiba reflects the struggles of dam-affected people from around the world, and call for a conditional end to large dams.
- **News Briefs**: The latest news on the world's rivers.
 - **Shorts**.
- **In Print**: New publications of note.
- **Last Page**: South Africa's new water regulations could mean an end to new large water-supply dams there.

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World Rivers Review

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Coalition Call for International Moratorium on Large Dams

by Aleta Brown & Patrick McCully

Delegates at the first International Meeting of People Affected by Dams have demanded an immediate international moratorium on the building of large dams. Attendees of the meeting, held March 11-14 in Curitiba, Brazil, said the moratorium should last until a number of demands are met, including the provision of reparations to the millions of people whose livelihoods have suffered because of dams.

"We have stopped dams in the past, and we will stop more in the future," states the declaration. "Over the years, we have shown our growing power. We have occupied dam sites and offices, marched in our villages and cities, refused to leave our lands even though we have faced intimidation, violence and drowning. We have unmasked the corruption, lies and false promises of the dam industry. We are strong, diverse and united and our cause is just."

The "[Declaration of Curitiba](#)," which was endorsed by representatives of dam-affected people and dam opponents from 20 countries, opposes the construction of any dam not approved by the affected people "after an informed and participative decision-making process."

In addition to reparations, the declaration gives a number of conditions that must be met before a moratorium would be lifted, including an end to "all forms of violence and intimidation against people affected by dams and organizations opposing dams," and the creation of an international independent commission to review the performance of dams supported by international aid and credit agencies.

Over the past 50 years, some 30 to 60 million people worldwide have been displaced by large dams. Tens of millions more living downstream have been impoverished due to falling productivity of their farmland and fisheries after dam construction.

Conference attendees came from dam-affected communities in India, Argentina, Chile, Mexico, Paraguay, Russia, Taiwan, Thailand and Lesotho. The meeting was organized by the Brazilian Movement of People Affected by Dams (MAB) with help from IRN and an international committee including India's Save the Narmada Movement (NBA), the Biobío Action Group from Chile (GABB) and the France-based European Rivers Network.

Delegates from Brazil's MAB made up the majority of people at the conference. Presently, Brazil has

around 600 large dams (defined as over 15 meters), with another 494 more proposed. MAB representatives included people from communities threatened by planned dams in the central Amazon who had travelled for up to a week by boat and bus to reach Curitiba; farmers displaced by Itaparica Dam who have just filed a claim with the World Bank's inspection panel ([see that story](#)); people living downstream of the huge Tucuruí Dam in the eastern Amazon who have suffered filthy water, an explosion in mosquitos, and increased diseases since the Tocantins River was impounded; and representatives of the rural communities in the Uruguay River basin who have for twenty years been successfully fighting a proposed complex of 22 dams.

Fighting for Dignity

Fulgêncio Manoel da Silva, a farmer displaced by Itaparica and a regional organizer for MAB, told the meeting that where dam-affected people in Brazil had not united to demand adequate compensation, "the effects were terrible with many farmers ending up penniless, with no land or other source of income." Not long after he learned his family would lose their land to Itaparica, he met a family of beggars living under a bridge who once made a living farming their own land before being evicted for a dam. This experience shocked da Silva into organizing the Itaparica families. Although displacement has increased the rates of poverty, violence, alcoholism and other social problems in local communities, at least the regional power company has been forced to provide much better land and community facilities than would have been the case without organized protests, da Silva said.

Simón Ruiz Lerma, President of the Committee for the Defense of Mayo Culture from the state of Sinaloa in northwest Mexico, described how his indigenous community suffered after they lost their lands to the Huites Dam in 1992. Ruiz said that his community wanted the dam because they were told it would bring them irrigation and electricity. Instead, the people of Huites have been left without land, without money to pay for electricity, and without even a source of drinking water.

Dams have disproportionately affected poor, rural communities. Those who depend most on the land for their livelihood, those who still work directly with natural resources, those whose heritage is woven into the land itself have the most to lose - and the least to gain - from large dams in their communities.

Mehda Patkar, a leading member of India's Save the Narmada Movement which has worked to stop the Sardar Sarovar Dam, told the conference, "We commit ourselves to save the Narmada, and the most ancient civilization in its lap, and the valuable natural resources there. This, we are confident, will be nothing less than waging a war against all big dams and the projects that are destructive, non-sustainable and socially unjust." ([See the story of people displaced by the Sardar Sarovar Dam.](#))

As the Declaration of Curitiba notes, although delegates at the conference came from many different parts of the world, all shared similar experiences of displacement, environmental devastation and cultural impoverishment. The delegates also recounted the unfulfilled promises of dam builders for compensation from dams. There was widespread agreement that struggles against dams were also struggles for democracy, and for the rights of communities to control and manage their water, land, forests and other resources.

Delegates were unanimous in demanding that no dam should be built until the authorities have obtained the informed consent of the affected people. The conference passed a resolution condemning non-governmental organizations which "legitimate large dam projects by working as consultants for project authorities when the costs and benefits of the dams have not yet been established and when affected people have not been fully informed and consulted on resettlement."

Conference delegates also shared experiences of successful and unsuccessful strategies used in opposing dams and forcing dam builders to provide just compensation. They agreed that an important long-term goal was to raise public awareness of the destruction caused by dams, the failure of dams to deliver their promised benefits, and of the many sustainable and appropriate methods of river management which could be implemented instead. Luis Della Costa, a leading activist in the Uruguay Basin affiliate of MAB, stressed that "mobilization is education" and that "involving people in direct action is the most educational act you can take." Della Costa added that "whatever the outcome of your struggle, you've never lost if you've educated the people."

Finally, to symbolize the growing unity of dam opponents around the world, the Declaration of Curitiba announced that March 14, currently the Brazilian Day of Struggles Against Dams, will from now on become the "international day of action against dams and for rivers, water and life." The international organizing committee for the Curitiba conference will be responsible for coordinating the international day of action.



1847 Berkeley Way
Berkeley, CA 94703 USA
phone (510) 848-1155
fax (510) 848-1008
email: irn@irn.org

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Living With Rivers

by Lori Pottinger

"The river runs through me like blood in my veins. If you dam the river, it is like stopping the blood that gives me life."

Raul Rocco, Argentinian fisherman

Raul Rocco lives with a river. Not beside it or near it, but with it. He is a fisherman, and the river he lives with - the Paraná in northeastern Argentina - provides him and his family with food, a livelihood, water for drinking and washing, inspiration for their songs, their poetry, their lives. The river in fact defines their lives. Rocco cannot conceive of life without this river, his people's river, which they have lived with for generations.

But he has recently learned that there are a surprising number of people around the world who have their eye on the Rio Paraná, people who have never visited his home or even seen the river. Hailing from Washington, DC, Chicago, Moscow and Rotterdam, this international cadre of engineers, manufacturers and politicians envision the river trussed up in concrete and steel and "harnessed" to create electricity. The Paraná Medio Dam, as proposed by its backers, would create one of the largest reservoirs in the world (at 760,000 hectares, it would be 40 times bigger than Buenos Aires), displace thousands of people, flood productive land, destroy fisheries and a diverse ecosystem. And as usual, people like Rocco will be the last to learn the details - in fact will likely be left out of the planning process entirely.

Rocco has decided not to wait to see how the dam will affect his community and way of life - he has begun to take action. At the first International Meeting of People Affected by Dams, held recently in Brazil ([see cover story](#)), Rocco described his travels by canoe along 1,000 kilometers of the Paraná to tell people living along its banks about the proposed dam. He used poetry and street theater to convey the message. After the conference, Rocco's story was taken back to Lesotho, Thailand, Russia and Chile, where it will be retold, along with dozens of other stories about people standing up for their rivers. The retelling of these stories will give strength to those who hear them, people who are themselves fighting large dams.

This special issue is full of stories like Rocco's. These stories share a common thread, one that runs

through the stories of most people affected by large dams. It goes like this: a poor, rural community suddenly learns about a dam project that is to be imposed upon it and which will forever change its way of life; the community has no resources to fight the project and even less political power to wield against it; the project is being promoted by a well-connected "hydromafia" of government officials, bankers and multinational corporations intent on building it. But if there are harsh similarities to these stories, there are also echoes of hope as communities unite to keep their homelands dam-free. The move to dam India's Narmada River ([see story](#)) gave rise to one of the most inspiring pro-river, anti-dam movements ever formed. Today, the Save the Narmada Movement continues its struggle to stop the ill-conceived project, and to inspire other river communities around the world.

The [Declaration of Curitiba](#), which was written by delegates at the Brazil conference, offers a shared vision for the world's rivers from people who have had to live with the consequences of large dams. It insists that local people be active participants in the planning and development of rivers and watersheds. The declaration will provide a starting point for the next generation of people confronting megaprojects in their watersheds.

Dam-affected people also make themselves heard by telling their stories to the international institutions behind the projects that have changed their lives. Local people have brought their concerns about World Bank-funded dams to the Bank's Inspection Panel, which investigates violations of Bank policy. Three Latin American dams have come before the Inspection Panel recently; read about these cases in this issue of *WRR*. Because almost half the cases so far brought before the Inspection Panel have been large dams, the World Bank is becoming ever more hesitant about funding large, destructive river projects.

As the stories in this issue illustrate, the voices of people affected by dams are growing louder. We will continue to retell their stories, and work toward a day when they do not have to be repeated.



1847 Berkeley Way
Berkeley, CA 94703 USA
phone (510) 848-1155
fax (510) 848-1008
email: irn@irn.org

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Nam Theun 2 Stranded With No Buyer for its Power

by Andrew Nette

The future of the controversial Nam Theun 2 hydroelectric dam in Laos is increasingly uncertain after its sole customer, the Electricity Generating Authority of Thailand (EGAT), announced that it is no longer interested in buying power from the project. The announcement has the consortium of companies backing the project under growing pressure to find economic justification for the dam.

Nam Theun 2's developers and the Lao government say the dam's power output will be sold to Thailand, as Laos has no need for such large amounts of power at this time. The project is intended to be financed mainly by private capital, but the government of Laos is also involved, using the dam as a means to generate foreign exchange.

EGAT Governor Preecha Chungwatana stated in late February that Nam Theun 2 would not be on the final list of three Laos power facilities from which Thailand has promised to buy 3,000 megawatts of power by the year 2006. He said the project was not included because of the delay in the completion of the project's environmental impact assessment. However, a reliable source close to the project says that the dam's construction costs, financing and a final purchase price for electricity also remain unfinalized, and are all factors in EGAT's decision.

Located in central Laos on the upper Theun River, the fourth largest tributary of the Mekong River, Nam Theun 2 will displace more than 4,000 ethnic minority people. Thousands more will suffer from the disruption of fisheries and agriculture along the Theun and Se Bang Fai rivers. In addition, the project threatens to flood more than 450 square kilometers of the Nakai Plateau, a biologically unique area of diverse grasslands, pine and cypress forests.

The decision by EGAT is the latest in a long line of problems confronting the dam's backers. In October EGAT announced that Nam Theun 2 had been dropped from the list of projects chosen to supply the first 1,500 MW of power after the dam's developers said they could not finish the project by the year 2000 as originally promised. A senior member of the state-owned Lao power utility, Electricité du Lao (EdL), told the Bangkok English-language daily *The Nation* in mid-September that the construction delay had increased the project's cost by at least US\$800 million, bringing its estimated final cost up to \$2 billion. The dam's developers have denied this, saying that the project's price tag presently stands at

\$1.5 billion.

Lao government officials were reportedly shocked by the increased cost, as well as by the consortium's proposal to offset the cost increase by raising the dam's height ten centimeters to increase its generating capacity. A height increase, which the consortium says would increase power output from 682MW to 900MW, would require new engineering studies and designs, as well as revised economic and environmental impact assessments.

Nam Theun 2's failure to be included in Thailand's 3,000-MW power purchase agreement throws into doubt the scheme's economic viability as well as that of the many other hydropower projects in Laos. It also highlights the risks of being dependent on a single, economically powerful buyer of electricity and one with an increasing number of power supply options. Viroj Noppakhun, EGAT's deputy governor, told the Thai press in September that Laos' power accounts for less than one percent of Thailand's power demand.

World Bank Role Crucial

The Nam Theun Electricity Consortium (NTEC) comprises Transfield (Australia), Electricité de France (France), Electricité du Lao, Ital-Thai, Phatra Thanakit and Jasmine International (Thailand). The project consortium cannot secure commercial financing unless the World Bank provides "political risk" guarantees, which would insure investors against losses in the event of nationalization of the project by the Lao government, civil war and similar risks. Even with such guarantees, the project has enough economic uncertainties that commercial lenders may not be attracted to it.

While keen to promote private sector participation in large-scale infrastructure projects, the World Bank has demanded that several additional studies of Nam Theun 2, including an alternatives study and a macro-economic impact study, be completed before it makes a final decision on whether or not to support the project. The importance of Bank support for the project was emphasized by David Iverach, NTEC's director in Laos, when he told journalists in January that "If the World Bank does not proceed with the project, nor would we."

Public Workshops

EGAT's most recent decision came after the first of three public workshops dealing with the World Bank-requested studies, held in the Lao capital Vientiane in late January. The workshop on the project's public consultations and alternatives study was attended by around 150 participants, including local leaders from the dam site, government officials, academics, foreign consultants and journalists. Of the 25 NGOs invited, fewer than 10 participated, most of them directly contracted by NTEC to do studies for the project. Media reports attributed the low turn-out among NGOs to the short notice they were given to attend the meeting. Lao officials said that due to the lack of NGO participation, the government would hold another workshop to draw up the terms of reference for studies on the project's economic, social and environmental impacts.

Some workshop participants suggested that Laos should explore energy markets in Vietnam and Cambodia. There was also a suggestion the alternatives study should compare Nam Theun 2 with other potential dams in the sub-region that could supply power to Thailand, such as those in southern China.

Conspicuous in its absence from the meeting was EGAT. Lao Deputy Minister of Industry and Handicrafts, Chamomile Phoneme, speculated that EGAT's absence was due to its heavy workload, and said there was no reason why Thailand would not buy power generated from Nam Theun 2 because of the spirit of cooperation that existed between the two countries and because Laos will become a member of ASEAN this year.

"As for EGAT, we have enjoyed very good cooperation and soon enough we will negotiate on the tariff of the Nam Theun 2 on the basis of mutual benefit," he said after the workshop. "The Memorandum of Understanding between Laos and Thailand is valid and given the situation of cooperation, even a gentlemen's agreement would be valid."

Power Play

Many observers have interpreted the exclusion of Nam Theun 2 from the 3,000-MW power agreement as a tactic by EGAT to force down the price of its power. The economic fortunes of the dam must be seen in light of shifts in Thailand's energy sector. Thailand has revised downward its expectations of power demand in line with a slowdown in the country's economic expansion, a slowdown which became apparent in 1996. Senior EGAT officials have been quoted in the Thai press as saying that the reduced need for power would prompt an examination of all agreements to purchase power from independent producers.

At the same time, EGAT is embarking upon a policy of diversifying its energy sources. This has given Bangkok massive bargaining power by putting Laos in direct competition with Thailand's independent power producer (IPP) schemes, which are being encouraged as part of the ongoing deregulation and privatization of the country's power sector. Ironically, the cancellation of the Nam Theun 2 agreement coincided with EGAT signing a power purchase agreement for the first IPP deal in Thailand: a 70-MW natural gas-fired plant in eastern Thailand.

The World Bank has remained tight-lipped over its position on the dam. Kathryn McPhail, the Bank's representative in Laos, told journalists that "the World Bank has yet to make up its mind on the project."

Meanwhile, logging continues in and around the Nam Theun Nakai Plateau, which would be flooded if the project goes ahead. Maydom Chanthasinh, vice president of the military-owned Mountainous Areas Development Corporation, said the company has cleared up to 600,000 cubic metres of timber over the past three years, most of it exported to Thailand and Vietnam. He added that 51 families had already been evacuated from the dam site. n

The author is a Bangkok-based journalist.

- See the [Mekong Campaign Page](#) for more information.



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Berkeley, CA 94703 USA
phone (510) 848-1155
fax (510) 848-1008
email: irn@irn.org

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The Holiest River

India's Sardar Sarovar Dam will, if completed, displace 320,000 people. Those who have already been displaced find themselves exiled to "resettlement ghettos" on poor land, far from their former communities. The intolerable conditions that met the Narmada "oustees," combined with the government's inability to rectify the project's social and environmental problems, has given rise to one of the largest, most successful anti-dam movements in the world. The following excerpt from Catherine Caufield's new book, Masters of Illusion: The World Bank and the Poverty of Nations (Henry Holt), tells the story of people whose lives have been turned upside-down for the Sardar Sarovar Dam.

They hadn't believed it at first, that the government was going to build a dam across the Narmada River. Obviously those surveyors and engineers hadn't seen the river in the monsoon, huge and powerful, surging through the canyons and across the plains. But the people of Gadher knew the power of the river. They had lived beside it, with it, for centuries. And even if it were possible to control such a force of nature, would anyone really dare to impound the most holy river in India? Shiva himself had named it Narmada, the ever-delightful. As the old people say, you wash away all your sins by bathing seven times in the Yamuna or three times in the Saraswati or once in the Ganges, but the mere sight of the Narmada has the same effect!

Well, in the last few years they had seen the dam rising, and now they believed. There would be a dam, and the village of Gadher - along with hundreds of others like it - would be submerged. They had to move, and soon. It wouldn't be easy to find good land, especially with so many others looking at the same time, so it was a good thing that the government was helping them. The Land Purchase Committee had already found some land it thought the people of Gadher would like. When they visited it, what they saw was a pleasant surprise. The soil was rich, there was water nearby, and the previous owners had planted lots of banana trees. There was no forest, unfortunately - so it would be hard to find bamboo for building, fiber for rope, herbs for medicine, or fodder for the goats. And it was so flat! With no hills to hide behind, how would one find the privacy needed to perform the most basic functions? No, it certainly wasn't home. But then home, Gadher, would soon be deep under water.

They were fortunate, they knew, to be offered a fertile plot. Nonetheless, it was strange buying land. Not something they'd ever done. They were *adivasi*, the original dwellers. They lived and farmed where their parents and grandparents before them had lived and farmed. They had little money - hadn't had much need for it up to now - but the government had promised to pay them for the land they lost. They would

get half in cash, and the government would use the rest to pay for their new land. Or so they understood. Actually the money would only cover a downpayment on the land; they would have to pay the balance - in twenty interest-free annual installments - from what they could earn by selling their crops.

The officials who had brought them here were anxious to make a deal. They explained that the government would build a school and health clinic here, and put in roads, electricity, and a water pump. And since the men from Gadher liked what they saw, they agreed to sign the papers. Well, not sign, because they couldn't read or write, but put their thumbprints on. The officials congratulated them and said they were landowners now. The men went back to Gadher to tell their families, and a few weeks later they were ready to go. There were about 70 of them, more than a tenth of the village - sad to quit their lifelong home, but hopeful, too. They understood that by forsaking the beloved land of their fathers they were ensuring a better future for their children.

Moving day came. The people loaded their belongings onto the government trucks and climbed aboard. After travelling for an hour or so, the trucks stopped and the men jumped down, eager to show their families their new home. The first things they noticed were the corrugated tin huts, all close together in rows. With the hot sun beating on them, they weren't inviting, but they would be replaced with wooden houses before too long. It was the land that mattered, and, as they looked around, it was the land that stunned them. There were no banana trees, there was no water, it was a wasteland! They walked around, confused, trying to orient themselves. They turned to the officials: This isn't the land you showed us. Oh, yes, came the reply. This is your land. Here are the deeds you signed.

No, no, no. The villagers shook their heads. This is not it. The officials looked at one another. Then one spoke in soothing tones. You're upset because you expected to see roads and schools - everything already in place. But you must understand, all that will take some time.

No, said the men. We were shown rich land; this land is useless. It is not what you offered us. The man in charge sighed. Look here, he said. Just give it a chance. See if you can make it work. If you really aren't satisfied in a year or so, then we'll find you some new land.

What could they do? They stayed.

That was in 1990. The people of Gadher stayed at the Timbi resettlement site for two years, struggling to make the saline soil produce. By the time I got there, in 1993, they had abandoned the place and moved back home. The dam was already half-finished and in a few months, when the summer rains came, Gadher would be one of the first villages to be flooded. Nevertheless, the people had returned to Gadher because they couldn't feed themselves at Timbi and they had no place else to go. It was hard to tell that there had ever been a settlement at Timbi. The people had taken everything with them; the only evidence of their stay was a few blackened firestones scattered among the weeds. Since the government had never supplied any of the amenities it had promised, there were no roads, no electric poles, no school or clinic, no well or handpump to mark the site of what had once been, not a village exactly, more a refugee camp.

The neighboring hamlet had seen the Gadher refugees come and go. One man said, "If we had known that the land was going to be sold, we would have warned the buyers. The big landlords who had owned

all this land had been trying to sell it for a long time, but no one around here would have it. It's full of salt, no good at all." But the owners had finally gotten lucky: the Land Purchase Committee agreed to act as their broker, to sell the land for them. And even with thousands of desperate clients, the committee had had to resort to fraud to unload it.

The Sacred River

There is, in the heart of India, a sacred pool surrounded by temples and shrines. From this pool rises India's holiest river, the Narmada. Since ancient times, pilgrims have come here to be blessed by the river as it begins its 800-mile journey through the hills, forests, and plains of three states westward to the Arabian Sea. Some go on to make the *parikrama*, the ritual circumambulation of the river, from its source to its mouth and back. This trip, from temple to temple along the riverbank, traditionally takes three years, three months, and three days to complete.

India began thinking about damming the Narmada, its fifth-longest river, in 1946. The official Narmada Valley Development Plan now calls for 30 major, 135 medium, and 3,000 small dams to be built on the Narmada and its tributaries over the next fifty years. The centerpiece of the scheme is to be the Sardar Sarovar Dam, stretching 4,000 feet across the river and rising to the height of a 45-story building. When its associated canals, irrigation works and power transmission lines are taken into account, Sardar Sarovar is the biggest water development scheme in India, and probably in the world. The multi-billion dollar venture is intended to irrigate nearly two million hectares of farmland and bring drinking water to 30 million people. It will also take the land of at least 320,000 people, many of whom are the indigenous or tribal people known in India as *adivasis*.

Gadher, home to 500 families, is one of the largest of the several hundred villages to be submerged by the dam. For centuries, the people of Gadher have lived peacefully as subsistence farmers, cattle and goat herders, and gatherers from the river and forest. It was, at least until the shadow of the dam fell across it, a thriving village, though poor by Western standards. Its thirteen hamlets are scattered across low hills, surrounded by forest, fields, and grazing land, and bordered by the river. There are no paved roads; oxcarts, bicycles, and a few motor scooters are the only transport. The houses, mostly wooden with thatched or tiled roofs, are spread out so that each family has room for a vegetable plot and a few animals.

When I first visited the village, a crowd gathered, curious to discover my business. Outsiders are rare here, and the villagers are understandably wary of strangers. Fortunately, I was with Balraj Maheshwari, a lawyer who is well known locally. Mr. Maheshwari works with the Rajpipla Social Services Society, a local organization founded in 1975 by a Catholic priest and dedicated to helping the poor of the region. Once he vouched for my good intentions, people were eager to tell their stories.

Several villagers expressed pleasure at having a chance to speak to an outsider. "When others come to get information, they go only to Kevadia [the dam headquarters]," said Ramsin Pijiyu. "Then government officers come and take one or two persons from here to tell the visitors that everything is fine. Sometimes we have to pretend that we are from a different village, or that we are resettled

someplace. You are the first from abroad to come here. It is good because we can tell you how we are." A cynic called out, "But if they find out someone from abroad has been here, they'll be patrolling in project trucks tomorrow."

By April of 1993 when I visited Gadher, most of its residents had been moved elsewhere - split up among 31 different resettlement sites. But roughly a third of them had returned to the village because of intolerable conditions in the resettlement colonies - ranging from barren land to polluted drinking water and outbreaks of cholera. The returnees - and the fifty or so families that never left the village - are under pressure to move before the summer monsoon begins. But they are wary: twice lately, officials have taken groups from Gadher to see potential resettlement sites and each time they have discovered that the land they were shown was not the land they were to move to. "We've been cheated once, so we look very carefully now," said a middle-aged man named Kanti Bhoga who had recently returned from Timbi. "If good land is given and we could cultivate the land and our life is happy, then we should go. But without good land - if they want to cheat us only - then how can we go?"

It's not only the quality of the land they have been offered that concerns them. What they have tasted of the refugee existence has deeply discouraged them. They have discovered that in leaving their land, they are leaving behind a way of living. "Life in the other place was very congested - all the houses side by side," Mr. Pijiyu explained. "If we have a choice between the two, we will choose this. All the traditions, all the social life that we know and enjoy are here. If we move 100 kilometers away, the traditions will be different. So, will ours survive? That worries us. At the other place when someone died, we were not allowed to burn the body in the open in the natural way. We had to bury it on our land. That was a very bad experience. Here we can get everything free: water is free; wood and other things from the forest are free. It means that our livelihood is very easy and we are not in trouble. But if we go elsewhere, we will have to buy everything - water, forest produce, everything. So it's not good to leave our homeland. Whether this dam is good for someone else or not, we don't know, but for us it's very bad."

Rocky Foundation

Work on Sardar Sarovar began in 1961. On April 5 of that year India's first Prime Minister, Jawaharlal Nehru, flew to the remote dam site to lay the foundation stone. The helipad on which he landed was built - as were the dam's offices and the guest quarters for visiting dignitaries - on land obtained by the forcible eviction of at least 800 families. As it turned out, the villagers had been forced from their homes somewhat prematurely: construction was stopped for 20 years by an argument over how the costs and benefits of the project would be divided between the three states through which the river flows - Gujarat, Madhya Pradesh, and Maharashtra.

In 1969 the government appointed a tribunal to settle the quarrel. After ten years, the Tribunal awarded most of the project's water to Gujarat, the driest of the three states. The Tribunal also ruled, however, that Sardar Sarovar is not viable on its own. It requires three more reservoirs upstream so that the massive amounts of water during the monsoon season can be stored and released later in the year. Known as the Narmada Sagar Projects, these three reservoirs will displace another 200,000 people and cost another \$1.6 billion dollars. Planners say this additional storage capacity is essential if Sardar

Sarovar is ever to recoup its cost.

The World Bank had long been interested in helping to finance Sardar Sarovar, but it could do little while the Tribunal was still debating the matter. Once the Tribunal ruled, however, the Bank was swift to act. After the project plans were finalized, four delegations of Bank staffers and consultants visited India. They appraised the technical and economic aspects of the project, but did not consider social or environmental issues. This omission worried the Bank's tiny environmental office.

There was cause to worry. India's resettlement record is disturbing, to say the least. A conservative estimate of the number of Indians forced from their homes by large dams since Independence is 11 million, with another four million displaced by mines, industrial developments, and wildlife sanctuaries. Three-quarters were not "rehabilitated" - bureaucrats returned to their previous standard of living. As a result, millions of poor but self-sufficient peasants have ended up as beggars in the slums of the nearest big city.

The World Bank too has had many bitter experiences with resettlement. According to its own experts, Bank-funded development projects across the world have displaced millions of people, pushing many into destitution. In 1980, belatedly recognizing the harm it had done, the Bank announced that all new projects must "ensure that, after a reasonable transition period, the displaced people regain at least their previous standard of living." By the time the Narmada loan was under consideration, the Bank had already adopted policies designed to prevent forcible relocation and to ensure that displaced persons, especially tribal people, would be protected from the negative side effects of development.

India has no national laws governing resettlement, but the Tribunal had imposed resettlement standards on the Narmada project. Ousted landowners were to receive not merely financial compensation but "land for land." In addition, India was a signatory to a 1957 United Nations convention that recognizes the rights of tribal people to their traditional land and requires governments to provide displaced tribal people with equal-quality lands to those they previously occupied. These high standards meant little, however, because India - with the Bank's knowledge - violated them from the beginning.

In 1981, when construction resumed, five more villages were destroyed to make room for the holding tanks for the main irrigation canal. Construction workers and company officials pressured the villagers to affix their thumbprints to deeds of sale, or to blank sheets of paper to be filled in later. Some relinquished their land this way; others refused. The homes of those who resisted were demolished. When some villagers appealed to the Gujarat High Court for a stay against forcible removal, the contractors stepped up the pace of demolition so that the stay, when granted, was useless. Years later, the Bank reported that many of them "could be seen camping in extreme poverty at the edge of what remained of their lands."

Aware of this sorry history and prodded by its environmental office, the Bank sent Thayer Scudder, a CalTech socio-economist well-known for his studies of the impact of large engineering projects on the poor, to investigate the project's resettlement plans. Scudder found that there was no resettlement plan and that the government had not begun to collect information needed to make a plan. No one even knew how many people the dam would displace. After Scudder's report, the Bank dropped its insistence that

India submit a resettlement plan before the loan was granted.

All Bank loans must be approved by the Board of Directors, which bases its decisions on the Staff Appraisal Report prepared for each loan application. The report for Sardar Sarovar acknowledged that the project had already harmed thousands of people, but offered assurances that India would correct those wrongs and treat all future oustees in accordance with Bank policies on resettlement. It did not mention that India's Ministry of Environment had refused to approve the dam on the grounds that more information was needed about its environmental and social impacts. On March 7, 1985 the Board of Directors of the World Bank unanimously agreed to lend India \$450 million for Sardar Sarovar.

***Editor's Note:** In 1989, a national coalition opposing the Sardar Sarovar project was formed. The Save the Narmada Movement (NBA) rallied thousands to the cause, both nationally and internationally. Despite government repression against those who speak out against the dam, the NBA has continued its campaign to expose the project's many technical problems and social injustices. In 1992, the World Bank received a highly critical internal review - the Morse Report -which exposed massive violations of Bank policy on the project. In 1993, the Bank was forced to abandon its involvement in the project. Construction has now been halted for two years due to disputes between the states over benefits and costs. The people's movement that arose against the dam is still going strong, however.*

- See the [Narmada Campaign Page](#) for more information.



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Berkeley, CA 94703 USA
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fax (510) 848-1008
email: irn@irn.org

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Volume 12, Number 2 / April 1997

A Primer on the World Bank Inspection Panel

by Dana Clark

The World Bank Inspection Panel is an independent body designed to improve the Bank's accountability and to provide a forum for local people affected by Bank-financed projects. The push for accountability was stimulated by international protest against the Sardar Sarovar Dam ([see related story](#)). The Panel has diligently established its independence from Bank management and has been supportive of people who are interested in either filing a claim or learning more about the process. But politics can enter into the process of approving investigations - since its inception in 1994, the Panel has received nine claims, only two of which have been approved for a full investigation. Despite some problems, the Panel process offers the opportunity for affected people to improve local environmental and social conditions, in addition to providing opportunities for overall Bank reform.

The Inspection Panel can investigate claims from two or more local people who are directly and adversely affected by a failure of the Bank to follow its own policies. Claimants must first have made an effort to bring the problems to the attention of Bank management and received an unsatisfactory response. Claims are not accepted once 95 percent of the Bank loan has been disbursed.

If a claim is accepted, the first step is a preliminary review. This generally includes a field visit to the project; meetings with the claimants, Bank staff, and representatives of the Borrower; and a review of Bank files and documents on the project. The Panel then issues its findings to the Board of Executive Directors (who represent member governments), recommending whether or not there should be a full investigation into the claim. Board authorization has proven problematic in the past, as there is a tendency for the claims to get highly politicized at this point. However, once there is Board authorization, the Panel can launch a more thorough investigation and issue a full analysis of the problems raised in the claim. Management must then create an action plan to address the findings.

For more information, contact:

The Inspection Panel
1818 H Street, NW,
Washington, DC 20433
tel: 202.458-5200
fax: 202.522.0915

email: ipanel@worldbank.org

Also, the Center for International Environmental Law (CIEL) will soon be issuing a Citizen's Guide to the Inspection Panel. For more information on the guide or on the Inspection Panel in general, contact:

CIEL

1621 Connecticut Ave, NW, Suite 200

Washington, DC 20009

tel: 202.332.4840

fax: 202.332.4865

email: cielus@igc.apc.org

Web site: www.econet.apc.org/ciel

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- See the [International Finance Campaign Page](#) for more information.



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Berkeley, CA 94703 USA
phone (510) 848-1155
fax (510) 848-1008
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Chilean Dam Builders Slip Through the Noose Endesa Pays Off World Bank to Avoid Loan Conditions

by Glenn Switkes

The Chilean utility Endesa, which borrowed US\$150 million from the World Bank to construct the first of a series of dams on the Biobío River, has hurriedly paid off its debt in an apparent effort to deflect mounting criticism from the Bank for its failure to address the project's social and environmental impacts. Endesa had been notified by James Wolfensohn, President of the Bank, that the company was in danger of default for not following mitigation measures agreed to in the loan agreement.

Endesa borrowed money from Germany's Dresdner Bank to pay back the International Finance Corporation (IFC), which is the private lending arm of the World Bank. Besides the \$150 million it borrowed from the IFC, the World Bank had brokered millions more for the Pangué Dam from Swedish and Norwegian bilateral lenders.

In a February 6 letter to Endesa, Wolfensohn told the company that it "appears to have taken a less than constructive approach to its environmental and social obligations . . . under the IFC financing agreements. If Endesa continues on the course it seems to have taken, we are heading toward a conflict and we will have no choice but to declare Endesa in default."

Wolfensohn wrote the letter shortly after receiving two internal inquiries that were reportedly quite critical of the project. The inquiries were undertaken after a group of Pehuenche indigenous people and the NGO Grupo de Acción por el Biobío (GABB) filed a claim with the World Bank Inspection Panel in November 1995. Although their request for a full Inspection Panel investigation was denied because the IFC is not under the Panel's purview, Wolfensohn ordered a broad inquiry into the project's environmental concerns, which was carried out by former National Wildlife Federation president Jay Hair. He also commissioned anthropologist Theodore Downing to assess the Pehuen Foundation, an agency created by Endesa to provide aid to affected Pehuenche Indians. Neither report has yet been made public, although the Bank has indicated its intention to release at least parts of both studies. IFC officials have had Downing's report since mid-1996, sources say.

Endesa's payoff is not expected to curtail Bank inquiries into the company, since the IFC still retains a minority interest in Pangué, SA, the Endesa subsidiary which operates the dam.

Indigenous Land Protections

In other developments, two key agencies of the Chilean government have questioned the legality of Endesa's efforts to construct Ralco Dam, which would be the second and largest dam on the Biobío. In a continuing evaluation of the revised Environmental Impact Study by Endesa, which was found to be inadequate when first released last year, Chile's National Land Ministry has submitted an opinion that the project is not viable, because Endesa cannot purchase indigenous lands, which are protected by Chile's Indigenous Peoples Law. CONADI, the Chilean indigenous protection service, has reaffirmed its position that, under national law, the Pehuenche may not be resettled without their consent.

Juan Pablo Orrego, director of GABB, believes Ralco may face even tighter scrutiny. "Ralco Dam would have a reservoir seven times larger than Pangué," he notes. "It would transform the Biobío into a continuous series of dams and reservoirs 49 kilometers long. Besides this, since Ralco's powerhouse is another eight km downstream, it will mean the total destruction of 70 km of the river - not to mention impacts further downstream and the flooding of valleys of its tributaries."

According to Orrego, Endesa "has tried to lower the profile of the problems the project would cause, focusing only on the question of the Pehuenches, which in reality is only one aspect of the overall problem."

- See the [Biobío Campaign Page](#) for more information.



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phone (510) 848-1155
fax (510) 848-1008
email: irn@irn.org

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World Bank Authorizes Yacyretá Investigation

by Glenn Switkes

In late February, the Executive Directors of the World Bank agreed to authorize the Inspection Panel to investigate the environmental and resettlement problems caused by construction of the Yacyretá Dam. The review was triggered by a claim filed with the Inspection Panel by Sobrevivencia - Amigos de la Tierra Paraguay, an NGO representing itself and individuals living on the banks of the Paraná River.

The Inspection Panel will now look into issues raised in the September 1996 petition. The Panel will conduct its investigation over the next four months and issue a report containing its findings and recommendations to the Board of Executive Directors. The claim was also filed with the Inter-American Development Bank (IDB), which is expected to make its decision on whether or not to authorize an investigation in April.

The complaint alleges the Bank failed to take a number of steps, including the following: assess the environmental and social damage Yacyretá would cause; mitigate the harm done; consult local residents in drawing up resettlement plans for communities flooded by the dam; supervise and hold its borrowers to contractual obligations, and withhold money when it became clear the terms of Bank loans were being violated.

The massive, 67-kilometer-long dam is located on the Rio Paraná, on the border between Argentina and Paraguay. Construction has led to some 5,000 Paraguayans being forcibly resettled, many for sub-standard housing and a jobless future. As many as 50,000 face forced resettlement when the dam is completed some time in the next three years.

The Board's decision to authorize an investigation is a significant step toward vindicating the claims of people affected by the dam that the World Bank has failed to adequately enforce its policies on social and environmental mitigation.

Elias Diaz Peña of Sobrevivencia said the decision "proves that people affected by this mega-project cannot be ignored by the financial institutions. It raises our hope that the multilateral finance institutions may finally halt their support for gigantic projects with serious environmental and human impacts, and may begin to respond to real human needs and true environmental conditions in order to really contribute to sustainable societies on this planet."

Although the Bank's Inspection Panel has received nine claims, this is the first in nearly two years to receive Board approval for an inspection, said Dana Clark of the Washington, DC, group Center for International Environmental Law. "This decision means a renewed commitment for responsibility and transparency which has marked the Inspection Panel process," Clark said.

In total, the World Bank and IDB contributed \$1.8 billion to the construction of Yacyretá. The nearly complete dam is plagued by environmental and social problems. But rather than adopt urgent measures to alleviate the suffering of local populations and to mitigate environmental damage, Paraguay and Argentina - backed by the World Bank and IDB - have instead sought to accelerate the privatization of Yacyretá.

The project, which is expected to end up costing more than \$8 billion, is being offered for sale for around \$1 billion. Critics of the privatization of the dam argue that private buyers cannot be expected to assume a serious commitment to the needs of affected populations, nor for environmental problems created by negligence of the dam's binational builder, EBY, and the multilateral financial institutions.

- See the [International Finance Campaign Page](#) for more information.



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fax (510) 848-1008
email: irn@irn.org

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Brazilian Farmers File Inspection Panel Claim

by Glenn Switkes

The latest claim to come before the World Bank's Inspection Panel was filed in March by farmers relocated for the Itaparica Dam in Brazil, who say that promised irrigation water was never delivered. Unions representing populations resettled for the dam say that, some nine years later, they have been left high and dry following construction of the dam on the São Francisco River.

The dam was built by the local power company, Companhia Hidreletrica do São Francisco (CHESF). The World Bank loan was secured by the national power utility, Eletrobrás, as part of the 1986 Bank loan to Brazil's Electric Power Sector. The World Bank later loaned an additional \$100 million for the resettlement program. The dam flooded 834 square kilometers, displacing 40,000 people.

According to the complaint, only a third of the projects which were to have provided 6,000 families with 19,512 hectares of irrigated land have been completed, and even these are plagued by maintenance problems. Another third of the projects are still on the drawing board, the complaint states, even though conditions in the "sertão", the arid Brazilian northeast, make farming difficult without irrigation. Among those displaced who remain without water is a Tuxá indigenous community.

The complaint states that the failure of the Bank to effectively monitor execution of the irrigation projects has resulted in a generalized decrease in the quality of life in the region, including increased alcoholism and violence.

- See the [International Finance Campaign Page](#) for more information.



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World Bank Establishes Hydro Advisory Group

by Patrick McCully

According to an internal document leaked to IRN, the World Bank is setting up a high-level International Advisory Group (IAG) on Bank hydropower projects. The purpose of the group, according to the document, is "to obtain the best available expertise and experience to guide the Bank on how it can improve its handling of environmental and social issues in the hydropower projects it supports worldwide." The Bank has never before established an advisory group of this kind to oversee its projects.

The initial role of the IAG will be to advise the World Bank "on its handling of environmental and social issues" related to the proposed Nam Theun 2 Dam in Laos and in particular on the compliance of the project "in both letter and spirit" with the institution's environmental and social policies.

While the IAG will look at the risks posed by Nam Theun 2 to the environment and local people, it is also intended to assess "risks to the Bank posed by involvement in Nam Theun 2, and advise on what measures the Bank should take to address these risks." Detailed studies of the dam's economics and environmental and social impacts are expected to be complete in July. Yet despite the lack of knowledge over whether or not Nam Theun 2 might be economically viable, the IAG is supposed to advise the Bank "on steps to be taken to build international consensus on the proposed Nam Theun 2 project."

"At a later stage" the World Bank's Environment Department "will seek the advice of the IAG on how to improve hydropower development in an environmentally and socially sustainable manner" worldwide. The IAG does not have a remit to look at the wider economic and technical viability issues surrounding Bank hydro projects.

Groups monitoring Nam Theun 2 were cautious about the IAG's role in the project. "The Bank, in taking this unprecedented step, has revealed its eagerness to fund the project. It clearly fears that Nam Theun 2 could turn into a public relations disaster like Arun 3 or Narmada," said Lee Rhiannon of the Australian NGO AID/WATCH.

The IAG is to make its first visit to Laos at the end of May. Its findings and recommendations on Nam Theun 2 will be submitted to the Bank's Vice-President for East Asia. The Bank will have 45 days to respond before the reports will be made public along with the Bank's response. The project is not set to

be officially approved by the World Bank until September or October.

The people invited to participate in the group are David McDowell, a Canadian who is Director-General of the International Union for the Conservation of Nature; Emil Salim, a former Minister of Environment for Indonesia; Kazuo Takahashi, a Japanese expert on international development and environment issues; Margaret Taylor, a former Papua New Guinea Ambassador to the US; and Derk de Zeeuw, of the Netherlands Commission for Environmental Impact Assessment, who has been asked to be secretary for the group.

The idea to form the group is believed to have come from Maurice Strong, a veteran organizer of UN environmental conferences and advisor to World Bank President James Wolfensohn, and Andrew Steer, head of the Bank's environment department.

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News Briefs

UPDATES

LESOTHO: South Africa will pay to have 57 of 70 families moved from Mapeleng village near the Katse Dam in Lesotho, according to Kader Asmal, South Africa's Minister of the Department of Water Affairs and Forestry (DWAF). The remaining 13 families do not wish to move. Mapeleng has suffered severe damage from earthquakes caused by the filling of the dam, and a number of families have been forced to live for over a year in "temporary" metal sheds supplied by project authorities. In early January, some villagers left Mapeleng to seek refuge in other villages. The villagers fear living so near the reservoir which has damaged their homes and disrupted their lives. On March 17, Asmal announced that those who choose to move will be relocated to a site one kilometer from their present village. DWAF says villagers who choose to remain behind will also get new houses. "All [replacement] houses will be strengthened to withstand seismic activity and also be equipped with stoves," states a DWAF press release.

Katse Dam, part of the huge Lesotho Highlands Water Project that will pipe Lesotho's water to South Africa's industrial Gauteng Province, has caused nearly 100 earthquakes since it began filling in October 1995. After one particularly loud earthquake in January 1996, a 1.5-kilometer-long crack appeared in Mapeleng, baffling project geologists. A 1988 seismic study for Katse concluded that while the dam could possibly cause seismic activity, "there would be no significant tremors." Some experts are starting to question both this conclusion and the dam's design strength (it is designed to withstand a maximum 6.5 magnitude earthquake). Chris Hartnady, a geologist from the University of Cape Town who has studied the area's geology extensively, says, "There is absolutely no doubt in my mind that natural earthquakes of magnitude greater than 7 are both possible and probable in the Lesotho region."

- See the [Southern Africa Campaigns Page](#) for more information.

GUATEMALA: Since a World Bank investigative team visited the Chixoy Dam area in July 1996, little has changed for people who were forcibly and violently resettled for the dam. Last year, World Bank President James Wolfensohn acknowledged that 400 people living in the submergence zone for the Bank-supported dam were massacred before the reservoir was filled in 1982. Despite Wolfensohn's calls

to the Guatemalan government to improve conditions for survivors who were resettled for the project, local people report that they still have not been adequately compensated for their losses.

"After the World Bank visited last year, INDE [Guatemala's national electric company] told us they would buy us the farm of our choice," said Jose Mario, who now lives in the resettlement community of Pacux. "We chose three farms that meet the requirements and went to INDE with the petition. That was in November. They still have not replied to our petition, and we continue without land." Witness for Peace, a US nongovernmental organization that brought the Chixoy massacre to international attention, says the situation is complicated by INDE's condition. In preparation for privatization, the already bankrupt and inefficient utility has had large financial and staff cut-backs. "The Bank mission told us last July that they had serious doubts about INDE's capacity to comply with their 15-year-old promises without direct help from the Guatemalan government," a Witness for Peace spokes-person said.

- See the [International Finance Campaign Page](#) for more information on the Chixoy massacre.

GUYANA: Three Guyanese citizens filed a lawsuit on March 26 in Montreal against the Canadian mining company Cambior for spilling 3.2 billion liters of cyanide-laced waste into Guyanese rivers in 1995. The spill occurred at the Omai gold mine, a joint venture between Cambior and the Colorado-based company Golden Star, when the earthen dam holding mining waste failed. Hundreds of fish and even animals were reported killed as the toxic mine waste washed into the Omai river which in turn feeds into the Essequibo River, the country's main waterway. The three plaintiffs have set up a Quebec organization named Recherchés Internationales Quebec to represent themselves and the 23,000 people living near the river. The company is already battling 520 claims in Guyanese courts on the same matter. Geoffrey King, a spokesman for Cambior, says the company has already settled 226 claims for an average value of 400 Canadian dollars; another 470 claims have been rejected.

King said the company has completed a second waste pond that it believes will be sufficient to deal with the waste over the 11-year estimated life of the mine. Meanwhile, Omai Gold Mines has announced plans to start exploring two potentially mineral-rich properties adjacent to its current mine. Since Omai began production, Guyana's declared gold production has skyrocketed from an average of 70,000 ounces to around 400,000 last year. The Guyanese government, which is a part-owner of Omai, relies on the mine for a quarter of its revenue. The Guyanese gold rush, which has drawn at least 60 foreign mining companies, has caused great harm to indigenous peoples and their rainforest homelands. *Pratap Chatterjee*

For more information on the suit against Cambior visit this web site: www.geocities.com/Rainforest/2651.

BRAZIL: Bombarded by NGOs, environmental agencies and the Attorney General of Goiás, the Environmental Impact Assessment and Report for the Araguaia-Tocantins Hidrovia project were found to be inadequate by the federal environmental protection agency. The agency in mid-March told the project's backers, Ahitar (Administration of the Tocantins-Araguaia Hidrovia), that the documents would

have to be redone and resubmitted. The project is included in the federal government's list of 42 priority infrastructure projects, and was scheduled to begin construction in January 1998.

As with the Paraguay-Paraná Hidrovia, this project involves dredging and exploding rock outcrops and the construction of fixed and mobile barriers. Even without environmental approval for the project, the Navbel company, based in São Paulo, had already begun construction of a port on the banks of the Rio das Mortes in Mato Grosso state - an operation that was quietly closed down by the State Environmental Foundation. According to Federal Deputy Gilney Viana, "they want to force the construction of the Hidrovia." The company had placed hundreds of navigation signs along the Rio das Mortes, including in the Pimentel Barbosa Indian reserve of the Xavante Indians. The Indians tore them out and threw them into the river.

THIRSTY WORLD

THE WORLD: If you want to use water wisely, eat potatoes instead of rice - and skip beef altogether. According to a new report by David Pimentel, a water resources specialist at Cornell University, there is an incredible disparity in the quantities of water needed to bring various foods to the dinner table. Pimentel's findings, which appeared in the February issue of *BioScience*, reveal profligate use of irrigation water around the world, causing increasing stresses on local water supplies. His research reveals that more than 1,900 liters of water are required to grow one kilogram of the thirstiest grain crop, rice, whereas a kilogram of potatoes uses just 500 liters. The disparities between different types of meat are even greater. A kilogram of chicken, for example, needs 3,500 liters of water, while a kilogram of beef needs an incredible 100,000 liters. The animals drink little of this water - the majority is used to grow their feed.

The report concludes that demand for water will outstrip resources in the very near future. "With further population rises, increased affluence, climate change and more international conflicts about water," says Pimentel, "we are going to have to think much more about how we use water." And wasteful irrigation practices, states the report, are major contributors to the global water shortage. For example, less than half of irrigation water reaches crops in the US. The other half evaporates or seeps away. Pimentel wants a worldwide phase-out of government irrigation subsidies, to encourage investment in more efficient methods of watering crops. *Aaron Gladman*

AFRICA: Twelve nations are planning to "bank" each other's unique crop seeds so that the genetic diversity they contain will survive local droughts or civil unrest. The program is patterned after the Seeds of Hope program, which helped reestablish Rwanda's agriculture after its civil war, thus saving many unique crop varieties, reports *New Scientist* (October 12, 1996). Ten of the 12 countries are part of the Greater Horn of Africa, which has not been free of either drought or civil unrest since 1979. The seed banks will mostly protect indigenous varieties that are uniquely resistant to local pests and diseases.

BIODIVERSITY

CALIFORNIA: The Southwest Center for Biological Diversity filed a criminal complaint in March against the US Department of the Interior and the Army Corps of Engineers for improper management of a dam that killed endangered species and drowned their habitat. The suit contends that these agencies defrauded the American government and violated the Endangered Species Act in 1995 and '96 by drowning the habitat of the endangered Southwestern willow flycatcher and the Valley longhorn elderberry beetle at Lake Isabella in Kern County, California.

The reservoir is supposed to be kept at moderate levels in order to provide flood control protection for downstream Bakersfield, but it is regularly filled to illegal levels to provide cheap, federally subsidized irrigation water. Higher reservoir levels threaten Bakersfield with flooding in winter. After the Army Corps first allowed high reservoir levels to kill endangered flycatchers in 1995, the US Fish and Wildlife Service attempted to make the Corps lower the reservoir to legal levels. The suit charges that Congressman Calvin Dooley, Undersecretary John Garamendi and officials in charge of dam operation illegally intervened in the process. *Kieran Suckling*.

EUROPE: Damming the Danube River has caused poisonous algal blooms in the Black Sea, a new scientific study has revealed. The research shows that silicate sediments in the river are being held back behind dams, starving the Black Sea of food for many marine plants that maintain the sea's ecosystem and creating ideal conditions for the growth of toxic competitors.

The Danube provides about 70 percent of the freshwater input into the Black Sea. Since it was dammed in 1972, silicates in the river have decreased by about two-thirds, according to a report in the science journal *Nature*. Silicate-loving marine plants such as sea grasses have disappeared, and along with them the main nursery and feeding ground for the sea's large stocks of anchovies, turbot, mackerel, flounders and sturgeon. In their place have come "red tides," algal blooms which manufacture some of the most powerful poisons in the natural world, killing fish and making shellfish poisonous to humans.

"Our results strongly suggest the damming of the Danube has been instrumental in causing the observed changes in Black Sea surface waters, and that the large number of dams in operation today could similarly affect the food web structure and biogeochemical cycling in coastal seas," write the scientists responsible for the study. "We think this impact is already widespread. We have a global problem here."



1847 Berkeley Way
Berkeley, CA 94703 USA
phone (510) 848-1155
fax (510) 848-1008
email: irn@irn.org

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Shorts

Swiss and Malaysian citizens' groups demonstrated in late February at a Swiss factory owned by the multinational Asea Brown Boveri (ABB), to protest the company's involvement in the huge Bakun Dam in Malaysia. ABB last year signed a US\$5.4 billion contract to build the dam, the largest contract the company has ever received. Protesters also delivered a letter to the head of ABB from people who would lose their ancestral lands to the project, which urged ABB to "stop its continued involvement and support of the Bakun Dam project." The project would result in the forced relocation of 9,500 indigenous people and the inundation of 70,000 hectares of rainforest and communal lands.

- See the [Bakun Campaign Page](#) for more information.

After waiting 40 years, the thousands of people displaced by the Hirakud Dam in India's Orissa State will finally be granted land ownership in compensation for their losses. A total of 26,500 families from 249 villages were displaced by the multipurpose project. Hirakud was called a "modern temple" by India's first prime minister, but elicited much opposition by local politicians and people to be evicted. The "multipurpose" dam, originally justified as a flood-control project, has worsened extreme floods in the area. (*Water: A Newsletter from the Centre for Science and Environment*, January 1997)

Australian artists and community groups "restored" the channelized Clear Paddock Creek last year - with art. The "Restoring the Waters" project, which is doing both a spiritual and an ecological restoration of the Sydney-area creek, transformed the concrete-lined channel into a mural with a stormwater theme, installed a creekside menagerie of former animal residents of the creek (made by local children out of mostly recycled materials), and collected oral and written stories about the pre-channelized history of the creek to highlight the cultural significance of water in our lives. Finally, two artists created the "Memory Line," a 2.7-kilometer band of rye-corn sown along the creek's original course. (*Habitat Australia*, October 1996)



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phone (510) 848-1155
fax (510) 848-1008
email: irn@irn.org

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In Print

A NEW BOOK, *Dying Wisdom: Rise, Fall And Potential of India's Traditional Water Harvesting Systems*, documents the diversity of traditional water harvesting systems across the country. The 400-page report, by Centre for Science and Environment (CSE), divides the country into 15 different ecological regions and describes each region's water harvesting systems. It examines why these systems declined and what efforts are being made by the government and NGOs to revive them.

CSE recently released the book at fifteen public meetings all over India. "With the publication of this report and these meetings, we are launching CSE's campaign for bringing such local water harvesting systems into the focus of our water policy and practices," said Himanshu Thakkar of CSE.

A national newspaper, the *Hindu-Thiruvananthapuram*, called *Dying Wisdom* "a painstakingly documented survey of Indian ingenuity in conserving water—from prehistoric, community tanks and innovative . . . underground canals, the bamboo drip irrigation systems of Nicobar islanders, the fascinating 'climbing' canals . . . The book is a passionate plea for going back to the roots of Indian traditional skills to overcome the current water crisis . . . Indian planners must make it compulsory reading."

And *Business Line* wrote, "If taken seriously and used by policy-makers, NGOs and water management agencies, [the book] could almost be the perfect backgrounder for a sound water management policy for the country . . . If the Gujarat government had diverted the money spent on full advertisements for Sardar Sarovar propaganda for cleaning up traditional water harvesting systems, the water problems of Gujarat would not be of such a nature."

The book is available from Centre for Science and Environment, 41, Tughlakabad Institutional Area, New Delhi 110062, India; Tel: +91-11-698 1110, Fax: +91-11-698 5879; E-mail: himanshu@cse@sdalt.ernet.in. It costs Rs 290.00 for paperback and Rs 490.00 for hardcover; contact CSE for details on acceptable currencies and shipping costs.

A NEW BOOKLET movingly describes the devastation caused by forced resettlement for development in India. *In Defense of the Future: Women Testify Against the Tyranny of Displacement* recounts the

stories of women displaced by development such as dams, canals, mining and other industry. As post-independence India has rushed to "modernize" its economy, it has also created a huge population of people forced to leave their homes - as many as 11 million people displaced by dams alone, nearly all poor and powerless. Women have been disproportionately affected, often losing control over food production, income-generating natural resources, and community support.

"Enforced displacement at the hands of the state and society tends to accentuate the inequalities inherent in any culture," the authors state. "It is only now, after years of struggle and devastation that the large-scale and far-reaching consequences of growth upon the lives of women are beginning to get noticed."

The stories in this book were recorded in March 1995 at a meeting of displaced women held in a village to be submerged by the Sardar Sarovar Dam. Holding the meeting at Saatalai village, say the authors, "was a symbolic choice. For it represents the resistance against the designs of development, and it also represents people's desire to live with and to preserve resources rather than destroy them."

The stories tell of being given seven days' notice to make way for construction of the Sanjay Sarovar Dam, of whole villages being displaced two and three times, of being given waterlogged land that does not support farming and, inevitably, of being abandoned by the government. "We only have one thing to say: we have seen bad days," is one woman's calm understatement. Others express the great hope of all powerless people: that together, they can make a difference. And some even tell of successful struggles: a woman displaced by a dam in Rajasthan said, "We have not got land for land. All women in the villages got together and decided to go to the Narmada Bhawan. We thought, let's work together. So we launched a struggle - 80,000 of us. We won."

In Defense of the Future is available from Swashraya, c/o Ravi Enterprises, Nr. Manek Rao Akhada, Dandia Bazar, Baroda 390 001, India.

- See the [Narmada Campaign Page](#) for more information.

ONE YEAR AFTER Ken Saro-Wiwa and eight colleagues were executed by Nigeria's military regime, the World Council of Churches (WCC) and the All Africa Conference of Churches have issued a compelling report on the situation in Nigeria since the November 1995 executions (the report's title comes from Ken Sara-Wiwa's final words, "Lord, take my soul, but the struggle continues.")

Ogoni - The Struggle Continues, written by Deborah Robinson, paints a comprehensive picture of the extensive social and environmental degradation in Ogoniland at the hands of the oil industry, which has extracted an estimated \$30 billion worth of oil from the area in the past three decades. It details the repression by Nigeria's military government (which relies on Shell for half its total income), using personal stories to lend a chilling immediacy to the account. It thoroughly describes the lack of clean-up, compensation or due care by Royal Dutch Shell, the problems associated with an oil-dominated economy, and the refugee crisis that began in early 1996.

As part of the groups' hope that readers will "feel challenged by a moral obligation to do something about the plight of the Ogoni people in particular and the Nigerians in general," the report provides meaningful ways for the reader to act in solidarity with the Movement for the Survival of the Ogoni People (MOSOP). Final recommendations call for Shell to clean up all oil spills and allow independent, international experts to assess clean-up activities; to enter into direct negotiations with victims and affected communities, and to use its influence to obtain the release of the "Ogoni 19," men charged with the same crimes for which Saro-Wiwa was hanged and who now languish in prison.

Ogoni - The Struggle Continues is available in the US (for \$8, which includes shipping) from The Africa Fund, 17 John Street, New York, NY, 10038 USA, phone (212) 962 1210, fax (212) 964 8570, email: africafund@igc.org; in Europe from WCC, P.O. Box 2100, 1211 Geneva 2, Switzerland; phone (+41) 22 791 6111; fax (+41) 22 791 0361, and in Africa from All Africa Conference of Churches, PO Box 14205, Westlands, Nairobi, Kenya; phone (+254) 2 441 483; fax (+254) 2 443 241.



1847 Berkeley Way
Berkeley, CA 94703 USA
phone (510) 848-1155
fax (510) 848-1008
email: irn@irn.org

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New Water Regulations Could End South Africa's Big-Dam Era

by *Lori Pottinger*

South Africa has announced its intention to adopt revolutionary water regulations that could prevent the need for new water-supply dams. The far-reaching changes were described in the South African weekly *Mail & Guardian* as "Israeli-style regulations so dramatic they were considered an April Fool's joke when reported this week."

The proposed water supply regulations aim to cut water consumed by the mining industry, agriculture, domestic users and municipalities. Domestic regulations, released in early April, include restrictions on lawn watering, a ban on the use of high-pressure hoses to clean pavement, and requirements for low-flow toilet and shower heads. Local authorities will be required to conduct annual water audits to help control waste. In some places, like Soweto, it is estimated that up to half the water supply is lost through leaky pipes.

Neil MacLeod, chair of the National Water Regulations Drafting Committee, said, "We're an arid country, and these regulations are the first step in a national process to conserve water. In about five years we will have to introduce stringent regulations, such as tariff hikes and compelling people to fit water saving devices." The *Mail & Guardian* reports that "consumers have reacted with some degree of shock, but senior officials in the Department of Water Affairs and Forestry (DWAF) said the real significance of the regulations lay in their potential to prevent the need for new expensive and destructive dam projects."

DWAF has been involved in the controversial Lesotho Highlands Water Project (LHWP), a series of dams that will transfer water from Lesotho's rivers to industrial Gauteng Province. Officials told reporters they were reluctant to speculate about the possibility that the new measures would reduce the need for LHWP water deliveries.

An ongoing report being conducted by DWAF has estimated that all fresh water resources in South Africa would, at current rates, be fully used in the next 30 years. At current growth rates, the amount of water available on a per-person basis would need to be cut in half - to a still-high 650 liters a day - to stay within the country's means, according to MacLeod.

Water use in South Africa follows an inequitable pattern left from the dark days of apartheid. Although

between 12 and 14 million people have inadequate or no water supplies, middle-class white communities, agriculture and industry have more than enough to spare, and at some of the cheapest rates in the world. DWAF Minister Kader Asmal has stated that the state's highest priority is to ensure that all South Africans receive enough water to meet basic human needs and to ensure basic human health.

The regulations are part of a far-reaching new national water policy announced in November 1996 by DWAF that would disallow private ownership of water, and would guarantee that river systems receive enough water to maintain their biological richness and meet downstream countries' needs. "For the first time, the water requirements of the environment will be recognised in law; more than that, they will have absolute priority over all other uses - except water for basic human needs," states DWAF.

- See the [Southern Africa Campaigns Page](#) for more information.



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Berkeley, CA 94703 USA
phone (510) 848-1155
fax (510) 848-1008
email: irn@irn.org

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