

# Spanish Activists Arrested Over Itoiz Dam

by Glenn Switkes

**T**he spirited resistance against the Itoiz Dam – Spain’s most controversial large dam project – culminated in the arrest of at least 53 people in June. For the past eight years, activists have carried out non-violent civil disobedience to halt construction of two irrigation dams and 177 km of irrigation canals on the Irati River, a tributary of the Ebro, in the Spanish Basque country.

The project is being constructed in the Pyrenees mountains at the heart of the area impacted by Spain’s pharaonic National Hydrological Plan (see *WRR*, June 2003 for more information). Hundreds have been arrested at the more than 60 actions against the dam, and one of the leaders of the opposition, Iñaki García Coch, has served two years of a five-year prison sentence for using a chain saw to cut the cables powering a concrete pump used in the dam construction.

The June actions came as the government moved in to evict residents of the village of Itoiz. Residents chained themselves to tubes anchored in the walls of their

homes, and others scaled the roofs of local buildings, vowing to remain there. Eyewitnesses reported that activists were beaten by police and shot with rubber bullets.

The Itoiz project will flood 1,100 hectares. Nine villages will disappear under its waters, and another six communities will suffer impacts. Natural reserves and designated bird sanctuaries will also be impacted by the project. The construction of the 135-meter-high dam has continued during the past eight years despite widespread opposition and evidence of dam safety problems, including seismic threats. In all, 120 large irrigation dams will be built in the Pyrenees to irrigate one million hectares of land in dryer parts of the country, and trans-basin



The latest of many protests against Itoiz Dam.

water transfers, including one from the Ebro, will principally benefit luxury tourist areas and lands for intensive agriculture along the Mediterranean coast, at a total cost of US\$26 billion. ■

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## Viva o Rio Araguaia!

### Aluminum Companies Drop Proposed Amazon Dam

by Glenn Switkes

**P**lans for the first dam to be built on Brazil's Araguaia River in the eastern Amazon have been dropped, apparently due to tougher environmental standards imposed by the Lula administration earlier this year.

The Araguaia River runs 1,600 miles from Brazil's central plateau through savannas into the eastern Amazon. Rare pink and Tucuxi dolphins swim through its currents, and black saki monkeys climb on its densely wooded banks. It also provides one of the richest fish habitats on earth – at least 20 fish species are found only here. Santa Isabel Dam would have flooded a protected natural area and more than 100 archaeological sites, as well as forcing the relocation of at least 6,800 people.

Following months of unclear signals from Brazil's environmental agency, IBAMA, the project consortium has "returned" the concession it had won in competitive bidding in 2001. The concession is effectively the right to operate the dam, conditional on securing required environmental licenses. The consortium consisted of Brazil's Companhia Vale do Rio Doce, BHP Billiton (UK/Australia), Alcoa (USA), and Brazil's Votorantim and Camargo Corrêa.

In a letter to International Rivers Network, Ian Wood, Billiton's Vice President for Sustainable Development, said that "the consortium has been formally advised by IBAMA that the project was not considered feasible from an environmental point of view. While we feel appropriate safeguards could have been put in place to address the issues identified through the environmental impact assessment, we respect and understand IBAMA's decision in this regard."

The US aluminum firm Alcoa released a terse public statement admitting defeat: "After a ruling by the Brazilian environmental agency, Alcoa and its partners have withdrawn from this project." In giving up their

concession, the companies will forfeit a US\$40 million guarantee they had in place for the project.

Nilvo Silva, the Director of Licensing and Environmental Quality of IBAMA, told IRN, "The Santa Isabel project was rejected last year due to weaknesses in its Environmental Impact Studies. This year, the companies petitioned IBAMA, questioning the rejection. We informed them that IBAMA would not go back on its decision, and that if they were interested in presenting a reformulated project, then new environmental studies should be carried out under new standards." Silva says the new standards, adopted in March, require analysis of the impacts of dams over an entire river basin.

#### Mixed Signals

While opponents of the Santa Isabel Dam celebrated the cancellation of the project, they continue to apply pressure on the new Lula government and IBAMA to reconsider fully the leftover dam-building plans of the past government. Of 53 large dams awarded to private investors by the administration of former president Fernando Henrique Cardoso, 25 are behind schedule, many of these due to environmental concerns, and more than US\$2 billion in previously committed investments have been pulled from Brazilian energy projects, principally due to uncertainties regarding changes in licensing and regulatory policies.

The new government's energy policy makes it clear that it still plans to build new dams – including the 11,000 MW Belo



The Rio Araguaia.

Photo: S. Cirqueira

Monte complex on the Xingu River and the 7,480 MW dam and channelization complex on the Madeira River (which could also include another large dam on the lower Beni River in Bolivia). The Xingu and Madeira are both tributaries of the Amazon.

The government is also negotiating additional energy sources for Amazon aluminum plants, including electricity from additional turbines being added to Tucuruí Dam. Aluminum companies consume about 8% of all electricity in Brazil. Alcoa, among others, has indicated it plans to expand its aluminum refining operations, but only if it can be guaranteed long-term, inexpensive energy. Aluminum companies in Brazil have long enjoyed huge subsidies for electricity from the region's dams. Alcoa/Billiton's Alumar smelter has received about \$2 billion in subsidized energy from Tucuruí dam over the course of its 20-year contract from the Brazilian government, which is expiring in 2004. The companies are now pursuing new hydroelectric projects, including some in the Amazon, to replace this cheap power.

Mixed signals from the Lula government have shaken up potential investors in

*continued on page 7*

## Soul-Searching at the World Bank

After more than a decade of project preparation and six years of delays, on July 18 Thailand was poised to sign a long-awaited agreement to purchase the power from the proposed Nam Theun 2 Dam in Laos. But just a day before the agreement was to be inked, Electricité de France, the project's biggest investor, pulled out, casting doubt on the future of the project.

The unexpected announcement left more than a few people floundering as the press hounded them for comments. The Thai energy minister said in a hastily organized press conference that his country would seek power from elsewhere if there is no progress on Nam Theun 2 over the next year. The Lao government, defiant as ever, announced that new investors would be found within three months (although finding an investor willing to risk US\$115 million in equity is no mean feat). And the World Bank, whose steadfast support for the project over the years has boosted the project's credibility, admitted that EDF's withdrawal "raises some questions over the future of the project."

So what went wrong? EDF's pull-out followed a French parliamentary commission report that called EDF's expansion plans "a failure" that involved taking "reckless and ill-considered" risks with taxpayers' money. However, EDF's withdrawal from Nam Theun 2 – a project often depicted by the World Bank as its poster-child for "sustainable" private sector hydropower development – raises more fundamental questions about the World Bank's promotion of private power and large dams.

Nam Theun 2 was the jewel in the crown of both the World Bank's country strategy for Laos, and of its much-criticized global strategy of promoting private-sector investment in massive dams and other large power projects. In its latest Water Resources Sector Strategy\*, championed by senior water advisor and dam zealot John Briscoe, the World Bank states that it will step up its funding of what it terms "high risk/high reward hydraulic infrastructure." Nam Theun 2 and Bujagali Dam in Uganda were the Bank's model projects for this strategy. Yet in both cases, two desperately poor countries have invested huge amounts of scarce human and financial resources in projects that are now on the rocks, and have brought no benefits to their societies. In contrast, project consultants Lahmeyer (of Germany), Acres International (Canada) and other foreign companies continue to reap lucrative benefits throughout the long years of project preparation.

According to a July article in the *Wall Street Journal*, the failure of privatization in the water and energy sectors is sparking a crisis of faith at the World Bank. Increasing electricity and water costs for consumers, coupled with decreasing interest from private investors unwilling to invest capital in high-risk projects, has led to a rethinking within the Bank. "There's certainly a lot of soul-searching going on," Michael Klein, the World Bank's vice president for private-sector development, told the *Wall Street Journal*.

If the World Bank is indeed searching its collective soul for better solutions, it should not suggest a return to the old state-built, top-down, centralized model of energy or water development. This model squandered billions of dollars of public funds on ill-conceived projects that benefited consultants and politicians rather than the world's poor, while at the same time ignoring both the huge impacts of such projects and better alternatives to meet the needs for water or energy.

A better (if less flashy) model for the international financial institutions to adopt is to prioritize demand-side management and efficiency measures as the first pass at solving water and energy needs. When new supply is needed in places where the grid is not fully developed, a decentralized approach is more appropriate for delivering energy and water to the world's poor. Decentralized energy systems – smaller-scale systems owned and operated by local utilities, private companies, communities and rural cooperatives – include renewable energy plants as well as small-scale combined-cycle natural gas units. These systems have several advantages: they can be developed incrementally, avoiding over-capacity as a result of inflated demand projections. They can improve fuel efficiency, reduce costs, avoid massive social and environmental impacts, and minimize the need for expensive, invasive transmission lines.

Ultimately, these approaches are less risky, require less up-front capital investment, and are more likely to bring rewards to poor consumers than the high risk/high reward model now favored by the World Bank and other agencies. As we are seeing with Nam Theun 2 and Bujagali, these projects are indeed high risk, but their high rewards seem to accrue only to foreign consultants and the ruling elite. There is a better way, but whether the World Bank has the collective will to follow it remains to be seen.

Aviva Imhof

\*For more on this strategy, see *Commentary*, *WRR*, April 2003 (available at [www.irn.org/pubs/wrr](http://www.irn.org/pubs/wrr)).

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# Three Gorges: Government Looks for New Funding as Gates Close

by Doris Shen-Hoover

Sluice gates on the Three Gorges Dam slammed shut on June 1, blocking the flow of the Yangtze River behind the world's largest dam. Within two weeks, the silty river had filled the reservoir to its interim level of 443 feet, submerging dozens of villages, towns, industrial sites, temples and graves.

Days later, the China Three Gorges Project Corporation invited bids from Chinese and international companies for four more turbines and generators for the dam. IRN and other groups are urging Western governments and companies to refrain from extending further support for the project, as long as serious human rights violations remain unresolved.

A recent investigative report by IRN documents serious problems with the compensation and resettlement programs, and reveals that compensation funds have been routinely diverted by corrupt officials. It describes numerous instances where opposition to the inadequate resettlement provisions has been met by heavy repression.

In addition to such overt human-rights abuses, the reservoir is expected to become a major health hazard for the millions who live near it. Public health officials fear that the submergence of industrial sites and the stream of pollution that is pouring into the reservoir will create serious health problems.

The government is reportedly some US\$6 billion short of the final project cost, which is expected to be \$22 billion by the time construction draws to a close in 2009. The Chinese government has also spent \$1.5 billion in grid costs to link the dam to 10 provinces throughout China. Private investors have shown little interest in buying a stake in the huge project. Most of its cost has been covered by loans from state-owned banks, special taxes and government bonds. Potential international investors have been scared off by the project's ongoing corruption, dam safety concerns, and the expected high cost of the project's electricity, according to a May 9 article in *CFO Magazine* about the dearth of Three Gorges investors.

Official export credits and guarantees from Germany, Switzerland, Sweden, Canada, France and Brazil funded the first batch of turbine and generator contracts in 1997. Turbine and generator contracts were signed by ABB, Alstom, General Electric, Kvaerner, and Voith-Siemens. Since that time, ABB's

## Fast Facts

**Dam size:** 2,316 meters across and 183 meters high

**Reservoir length:** 400 miles

**Number of people displaced:** Between 1.2 and 1.9 million – the largest forcible resettlement ever attempted.

**Electricity generation capacity:** 18,200 megawatts

power division was acquired by Alstom, and Kvaerner, by GE Hydro. The World Bank, historically the largest funder of dams in developing countries, refrained from investing in the controversial project. The US Export-Import Bank also decided not to finance the controversial dam.

In 1997, governments justified their support for the Three Gorges Dam by asserting that through their involvement, they could improve the project's environmental and human rights standards. Most of these governments have not bothered to press for an improvement of human rights standards, and so their claims have turned out to be empty promises.

## Technical Problems Mount

Meanwhile, technical problems continue to plague the project. The UK newspaper *The Guardian* reported on May 30 that project officials have announced plans for four more

large dams on a major tributary of the Yangtze to save Three Gorges from being choked with silt. The Yangtze is one of the world's siltiest rivers, and the dam's reservoir is expected to be inundated with hundreds of millions of tons of silt every year. The upstream dams, which will be built and funded by the same company responsible for Three Gorges, are expected to have their own serious resettlement, compensation and environmental problems. These dams – one will be 270 meters high and another 160 meters – will be built in an active earthquake zone, and pose safety risks as well.

Cao Wenxuan, an aquatic life specialist at the Chinese Academy of Sciences, told *The Guardian*, "If the Three Gorges Dam does not succeed in driving certain rare species to extinction, constructing more big dams will finish the job, fragmenting the river into several parts." ■

## What You Can Do

Act now to pressure Export Credit Agencies to refrain from supporting this project until human rights and forced displacement grievances are addressed. Send a letter from [www.foei.org/cyberaction/3gorges.php](http://www.foei.org/cyberaction/3gorges.php)

See <http://irn.org/programs/threeg/> for letters by IRN to potential funders of the project.

## WORKING TO PROTECT RIVERS? FIGHTING FOR JUSTICE?

### Dam-affected peoples, river activists and dam critics around the world are invited to **RIVERS FOR LIFE**

the 2nd International Meeting of Dam-Affected People and their Allies to be held in Thailand on December 1-7, 2003.

The meeting will take place in a village established by communities fighting to decommission Rasi Salai Dam and restore the Mun River.

**Registration closes on September 30, 2003, so sign up now!**

Conference fees are on a sliding scale from US\$150 to \$250 per person. This includes food, accommodation, conference packets and transportation to and from the airport and on the field trip.

**To register or get more information,** visit [www.irn.org/riversforlife](http://www.irn.org/riversforlife), call IRN at +1 510 848 1155 or email [riversforlife@irn.org](mailto:riversforlife@irn.org).

# FROM THE GROUND UP

## Philippine Activist Finds Strength and Inspiration in Dam-Affected Communities

by Aviva Imhof

**J**oan Carling chairs the Cordillera Peoples' Alliance and has been leading the campaign against the San Roque Dam in the Philippines for the past six years. Through her work on San Roque, she has become an integral part of the international dam-critics movement. Joan is closely involved in follow-up work on the World Commission on Dams report and is the coordinator of Rivers Watch East and Southeast Asia, a regional network established to stop destructive river development projects. I interviewed Joan after years of working closely with her and being impressed by her commitment and integrity. I wanted to find out what inspires her, and to hear her insights on lessons learned from the San Roque campaign.

### **WRR: How did you become an activist?**

**JC:** I got involved in activism when I was a student. My university was very activist at the time. It was the peak of the Chico Dam struggle\* which was inspiring to a lot of students then, and I became a student leader involved in many issues. The Chico Dam campaign got me interested in indigenous peoples' issues. My degree in sociology and economics was very much focused on western models of development, so I was curious about why people would prevent this kind of development project when electricity was, to my mind, a tool for development. I wanted to learn about the social realities around me and the people of the Cordillera.

One summer break I stayed with the communities who would be affected by the Chico Dam for a couple of months. This gave me some understanding that there are different ways of looking at development. Electricity was nothing to them. What was more important was their own way of life, their land, and maintaining their tribal community. I really admired and respected that. I began to understand what self-determination is all about, in terms of people asserting their own way of life, and that this should be respected by the rest of the world.

After university I moved to Kalinga Province in the Cordillera mountains to work as a human rights worker. That was the peak of my activism because it was at the height of military operations in Kalinga and there were a lot of human rights violations by the military. This strengthened my commitment to work for human rights because I was faced with the glaring reality of survival for poor communities: powerless people who were simply victimized by the might of the

state. It was very emotional for me. It was a very risky job at that time; I was talking with military officials at the front lines and received many threats. But I had to continue because I couldn't ignore the plight of the victims – they were always in my thoughts. After three years I got arrested, and afterward could not go back because of lingering health problems from malaria, so then I joined the Cordillera People's Alliance (CPA) to concentrate on indigenous peoples' issues.

### **WRR: What does the CPA do?**

**JC:** It is an alliance of grassroots organizations. We do a lot of organizing in villages, public awareness, and campaigning in defense of the people's rights over their land and for self-determination for the indigenous peoples of the Cordillera. We also do education and capacity-building trainings – we're building up the strength of the communities in the Cordillera as a way of asserting our rights as indigenous peoples. We're involved in campaigns against destructive projects like mining, dams, commercial logging and large-scale commercial tourism, as well as human rights and militarization issues.

### **WRR: What do you find most satisfying about what you do?**

**JC:** The most satisfying part is the recognition and appreciation we receive from the communities we work with and the feeling that we are making a difference. We have had significant successes in the Cordillera region, starting with the Chico Dam struggle, the logging ban, and anti-mining victories, and we've been gaining strength, credibility and recognition. But what is more

important to me is seeing how communities are getting empowered. Seeing local leaders begin to speak for themselves and learn how to assert their rights with government officials is very rewarding. These campaigns can really strengthen the communities.

### **WRR: What have you learned from the community leaders you work with?**

**JC:** It is always inspiring for me to talk with local leaders because I also learn a lot from them and their perspective. I learn about how they appreciate life, in contrast to how the project is affecting them. For example, for the gold panners who have lost their livelihood to the San Roque Dam, gold panning is not just an economic activity for them, it is also a social activity which keeps the community dynamic. As an outsider you wouldn't see that. Having this understanding of their perspective affects how I think about the campaigns we work on with these communities.

Working with the Ibaloi people (who will be affected by the San Roque Dam) has taught me a lot about the uniqueness of their culture and how to deal with such a gigantic problem in a very determined way. At the end of the day, it's clear that what the Ibaloi want is to stop the project, but how to do it is really quite a burden for me. Every night you think about it – how are we going to stop this project? We are always talking with the community leaders about their ideas for stopping the project. There is a mutual frustration on their part and on my part on how to really stop the project.

*continued opposite*

\* The Chico Dam was proposed by the Philippine government and the World Bank in the 1980s. The local indigenous people waged a campaign against the project and were successful in stopping it. The Cordillera People's Alliance was born out of the Chico Dam struggle.



Joan Carling (front, right) with San Roque project director John Lockwood on a tour of the San Roque Dam construction site.

**WRR: What do you find most difficult about your work?**

**JC:** What's really difficult and frustrating is dealing with government officials who refuse to listen to reason. It's amazing how many of them don't think rationally and completely ignore the legitimate demands of the communities and refuse to recognize the realities of what the communities are dealing with.

**WRR: How did the CPA start working on San Roque Dam?**

**JC:** The affected communities came to us for support. We immediately expressed support because it's a legitimate issue and the CPA was founded out of the Chico Dam struggle, and there really are a lot of lessons to share from that struggle. We first worked with them on strengthening their local organization, and doing research on how to do the campaign. We even had our Cordillera Day celebration in their area to express wider solidarity for their issue.

**WRR: What lessons have you learned from the San Roque campaign?**

**JC:** It has contributed much to my maturity as an activist, especially in terms of lobbying and advocacy at the national and international levels. It is quite a breakthrough for the CPA to be engaged in the national and international arenas again, because after the Chico Dam struggle we were running more local, low-key campaigns.

One of the lessons I learned from this campaign is that a consistent, grassroots

movement in combination with strong international pressure is crucial in getting the attention of the national government. They ignored us in the past when we just campaigned at the local level, but when we started to gain international support and attention, that pushed the government to address the issues we were raising and deal with us. Only after the international pressure began did JBIC [the dam's funders] recognize us as a legitimate stakeholder. Especially with this kind of project where there are foreign funders and builders, that's a crucial aspect of it.

Another lesson is the importance of building solidarity and cooperation between the upstream and downstream communities. We should have done this right at the beginning of the campaign. In this campaign we were rather strong in the upstream area but weak downstream where the construction was happening. This was difficult for the CPA because the downstream area was not in the Cordillera region and we had to get support from NGOs working in the area, who also didn't have the capacity.

The other lesson is not to underestimate the importance of strong national lobby work. That's one thing we missed because of our internal lack of capacity and because we are a regional organization not located in the national capital. That could have been solved by building a more dynamic and active network at the national level. We also should have done more of the lobbying ourselves at the national level.

**WRR: What were the most effective things you did in the campaign?**

**JC:** It was really a combination of all our activities that made the campaign effective. The most effective thing was generating more public awareness at the national and international levels that created stronger pressure on the dam funders, dam builders and national government. In the earlier days of the campaign we were completely ignored, but after we got national and international attention, the project developers started paying attention to us. IRN's technical reviews of the environmental impact assessment and power purchase agreement made a big difference in the whole dynamism of the campaign, and helped generate a lot more national and international attention. At the same time, the consistent opposition on the ground made it effective. The Philippine President now says that she will not support any more dam projects in the Cordillera, simply because it is going to be a big headache for them.

**WRR: The dam has now been built, where do you go from here?**

**JC:** For one, there are still a lot of outstanding legitimate issues that should be addressed even if the dam is operating. The affected communities have been denied their livelihoods, and they should be provided with proper compensation and sustainable livelihoods. We will be working toward that. We're still demanding a cancellation of the project because it's a useless project, a white elephant that's going to be a financial burden on the Philippine people. We will also have to appeal for the cancellation of JBIC's loan. Although we were not able to stop this project, it has a very strategic value in the whole movement in the country and even at the international level because we've proven that dam-building is going to cause a lot of headaches for dam builders, funders and the Philippine government. They just simply cannot get away with murder anymore.

**WRR: What advice would you give to other groups fighting big dam projects?**

**JC:** It's important not to lose sight of the small picture as well as the big picture – that is, making sure that any campaign is very much grounded in the local struggle, while at the same time not ignoring the big picture in terms of the national and international dimensions. I think at this time when dam-building is being pushed more by outside entities, cooperation among international NGOs as well as maintaining a strong opposition on the ground is crucial. One way of judging a campaign is how much you made a difference in the lives of those affected. ■

# Swimming Against the Tide

## Asian Development Bank Promotes Burmese Dam Despite Repression

by Susanne Wong

**A**t a time when the Burmese military regime has come under increasing international pressure following a violent attack on pro-democracy leader Aung San Suu Kyi and her supporters, the Asian Development Bank (ADB) is promoting a massive power grid fueled by hydropower dams in Burma, China and Laos – all places where public opposition is stifled. The power grid plan was unveiled just weeks after at least 70 people, mostly youth activists, were killed in the May 30 attack on Suu Kyi's motorcade, according to eyewitness accounts.

While the attack has drawn sharp criticism from around the world and threats of additional economic sanctions, the Asian Development Bank's grid plan would support one of Burma's most controversial dams.

The ADB's plan to support the Tasang Dam in Burma and transmission lines to Thailand flies in the face of Suu Kyi's call for institutions to reject investment in the country and to cut off foreign funding for the brutal military regime.

Suu Kyi and at least 18 members of her political party, the National League for Democracy, were detained after being attacked by members of the government-sponsored Union Solidarity Development Association. At press time, Suu Kyi was still being held in the Insein Prison, which is notorious for its harsh conditions and use of torture and beatings.

In response, the US Congress overwhelmingly passed a package of economic sanctions barring all direct exports from Burma and expanding a ban on travel to the US by regime members. The Japanese government, Burma's largest donor, announced that it has suspended new economic aid to the country. In a rare rebuke, the Association of Southeast Asian Nations (ASEAN) chastised Burma publicly for the crackdown and detention of the 1991 Nobel Peace Prize laureate.

But while governments worldwide are curtailing aid to Burma, the ADB is promoting a multi-billion dollar regional electricity



Photo: Earth Rights International

*The Salween River is the last major free-flowing river in mainland Southeast Asia. A dam in Burma would end its freedom.*

scheme powered in part by the Tasang Dam. The extensive electricity network is a flagship initiative of the ADB's Greater Mekong Subregion program, which is intended to encourage cooperation and economic growth in the six countries sharing the Mekong River basin. In addition to Tasang, some of the most destructive hydro projects in China and Laos are proposed to fuel the grid, whose power is intended for consumption in Thailand and Vietnam.

### Human Rights Disaster Zone

People living in Burma's Shan State, where the dam would be located, have suffered from forced relocations, forced labor, extrajudicial killings and intimidation. Construction of Tasang Dam on the Salween River would further devastate the lives of ethnic minorities. Opposition to Tasang is not tolerated and can even be deadly under the military regime. By supporting infrastructure projects in Burma (which inevitably benefit the military regime), institutions are accomplices to the human rights abuses committed by the regime.

The dam would also devastate the last major free-flowing river in mainland Southeast Asia. Originating in the Tibetan Plateau, the Salween runs through China, Burma and along the Thai-Burmese border before emptying into the Andaman Sea.

In addition to Tasang, Thai Prime Minister Thaksin Shinawatra has also voiced support for further dam construction on the Salween River as "essential elements" to develop an ASEAN power grid which would stretch across Southeast Asia.

Dozens of organizations from Thailand and Burma signed a December letter to the Thai government expressing opposition to plans to build dams on the Salween River. The letter called on Thai senators to stop the government, companies and international financial institutions "from supporting the Salween dam projects in any way, until there is democracy in Burma and the rights of the local people are respected."

The Mekong power grid is also supposed to connect to the Jinghong and Nuozhadu dams in China and the Nam Theun 2 Dam in Laos. The Chinese dams, which are to supply power to Thailand, are part of a cascade of dams on the Upper Mekong that will severely disrupt the river's flood-drought cycle and block the flow of sediment that nourishes the fertile floodplains and rice-growing areas downstream. Nam Theun 2 in Laos is another integral part of the Mekong power grid, with planned interconnections to Thailand and Vietnam. The dam would forcibly displace 4,500 indigenous people and severely impact the Xe

*continued opposite*

### For More Information

IRN's new briefing paper on the Mekong Power Grid, "Trading Away the Future," is available at [www.irn.org](http://www.irn.org) or email [swong@irn.org](mailto:swong@irn.org).

## News Flash!

### Future of Nam Theun 2 Dam in Doubt as Lead Investor Pulls Out

Electricité de France, the lead investor in the controversial Nam Theun 2 Dam in Laos, announced on July 17 that it was withdrawing from the US\$1.1 billion hydropower project. EDF's withdrawal from the World Bank-promoted dam came just a day before the Power Purchase Agreement between the consortium and the Electricity Generating Authority of Thailand was due to be signed.

The withdrawal of EDF, the latest in a series of investors to pull out of the project, casts serious doubt on the dam's future. Almost all the power from the dam would be exported to Thailand, which has numerous cleaner options to meet its energy needs. Thai energy minister Prommin Lertsuridej said in the wake of EDF's decision that his country would seek power elsewhere if there is no progress on Nam Theun 2 in the next year.

EDF said it will continue to assist the project until the end of the year while a new financial structure that excludes EDF is found. The withdrawal came as part of a major shake-up in the French utility, which is under fire from the French government for accumulating massive debts as a result of ill-considered investments in risky foreign ventures.

Since 1989 the World Bank and Asian Development Bank have encouraged Laos to borrow tens of millions of dollars and devote large amounts of scarce government funds to attract foreign investors into hydropower, which was held out as the country's economic savior. But Laos' dreams of hydro-prosperity were badly shaken in 1997, when the Asian economic crisis sent Thailand's power demands tumbling. While numerous other hydro projects have been on indefinite hold since 1997, the World Bank and Nam Theun 2 development consortium continued to insist that the project would be an economic boon.

Aviva Imhof

For more information: <http://www.irn.org/programs/mekong/namtheun.html>

Bang Fai, a Mekong tributary on which over 120,000 people depend for fishing, gathering wild vegetables and irrigating rice fields. Given the past experience with dams in China and Laos, it is unlikely that people will be adequately compensated for their losses.

#### Flawed development process

"The Greater Mekong Subregion program is driven by the ADB's limited vision of economic development, rather than by the local

realities of what poor people in our communities need," said Mak Sithirith, coordinator of the Cambodian Fisheries Action Coalition Team. "Instead of helping the poor, the ADB's grand design of building hydropower dams will bring more harm and exploitation. Fisheries in our Mekong will be further destroyed, more of our communities will be displaced, and we will get into more and more debt."

The Mekong power grid appears to contravene the ADB's energy and water policies and violates the strategic priorities of the

World Commission on Dams, which the ADB claims to support. The initiative has not been discussed or debated among civil society in the Mekong Basin nor with those who would be directly affected by the transmission lines or hydropower projects. This contradicts the ADB's Water Policy which states that the "ADB will adopt a cautious approach to large water resource projects – particularly those involving dams and storage – given the record of environmental and social hazards associated with such projects. All such projects will need to be justified in the public interest, and all government and nongovernment stakeholders in the country must agree on the justification."

Research indicates that renewable technologies and demand-side management measures have considerable potential for meeting energy needs in Thailand, which is considered the leading purchaser of power from the grid. A 1998 study commissioned by Thailand's National Energy Policy Office found that biomass-fired power plants had the potential to generate 3,000 MW of economically viable power. A 1993 World Bank report on Thai fuel options estimated that the country could save 2,000-3,000 MW by implementing demand-side management measures. Solar, wind and small hydropower projects also have considerable potential. In Vietnam, the use of small decentralized systems such as mini-hydro plants and wind generators, large-scale photovoltaic power systems and biogas plants also has significant potential.

The NGO letter opposing dams on the Salween River concludes, "The Thai government must explore other more suitable alternatives in order to ensure sustainable power management, not just take advantage of the lack of democracy in Burma to push through this project."

For now, the ADB seems intent on swimming against the tide and working with repressive regimes like Burma's. In so doing, it may soon find itself in over its head. ■

#### Araguaia continued from page 1

Brazil's energy sector. Electricidade de Portugal (EDP) has announced it will forego its investment in the Peixe Dam on the Tocantins River, and the Belgian company Tractebel said it will withdraw plans to invest \$1 billion in the Sao Salvador and Estreito dams, also on the Tocantins. International power utilities Endesa, Duke Energy, Iberdrola and Alliant have also all severely cut back or suspended new investments in power plant construction. Another factor weighing heavily on their decisions is a glut in electricity, and a resulting plummet

in energy prices. The glut is a result of conservation measures taken by industrial and residential consumers during the 2000-01 energy crisis as well as a weak economy.

Despite the market realities, the fate of the Santa Isabel Dam prompted a chorus of outcries from industrialists that a new energy crisis looms if investment in large dams is not encouraged. And the conservative newspaper *O Estado de São Paulo* blamed delays and barriers to licensing new dams on official agencies and NGOs with "a radical attitude." The reactions make it clear that dam

proponents are also confused about the positions that the new government will take when it comes to dams, rivers and energy.

For its part, the Brazilian electric sector says it has awakened to an understanding of the need for more rigorous environmental and social safeguards in new dam projects. The state electric holding company, Eletrobrás, declared that new projects would only be offered for private concessions after they had acquired all necessary environmental licenses. ■

# Iberá Wetlands Threatened by Rising Waters

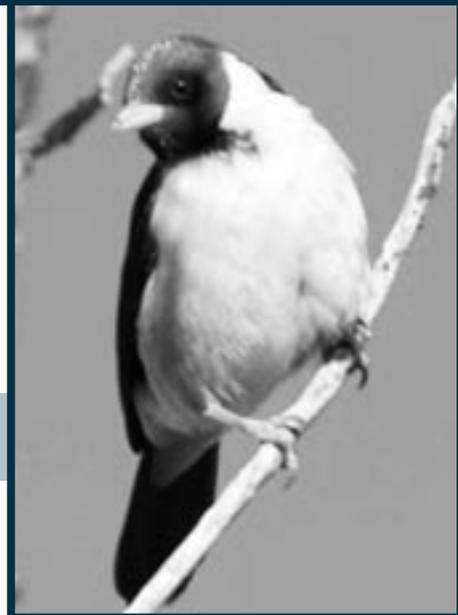


Photo: FVSA

The Scarlet-Headed Blackbird, an Iberá denizen.

## Experts Ask, Is Yacyretá Dam to Blame?

by Marcelo H. Acerbi

Ever since construction began on Yacyretá Dam on the Paraná River in 1989, water levels in Argentina's biologically rich Iberá wetlands have been rising. Today, the wetlands are about 80 cm (28 inches) higher than before construction of the notorious dam. The higher water levels have altered ecosystems, and drowned cattle pastures and forests. Scientists believe seepage from the dam could be the culprit.

Initially, the evidence that seepage from Yacyretá reservoir was harming the wetlands was circumstantial, but now a growing number of scientific studies support this hypothesis. Scientists have begun to pressure the binational company Entidad Binacional Yacyretá (EBY), which built and runs Yacyretá, to carry out more sophisticated analyses to prove or disprove that Yacyretá is responsible for the destruction of Iberá, and to indicate what mitigation measures may be taken to lessen the impacts.

The effect of rising water levels in Iberá has been serious, impacting as much as 300,000 hectares of land in the basin. If the seepage hypothesis turns out to be correct, more serious effects could be expected if Yacyretá's reservoir were eventually raised from its current level of 76 meters above sea level to 83 meters, as EBY plans. EBY continues to emphatically deny that seepage from the reservoir is occurring.

The Iberá, which covers nearly 14,000 square kilometers, is one of Argentina's most extensive, and arguably its most important wetland ecosystem. Its considerable biodiversity includes 44 mammal species, 80 fish species, 40 types of reptiles, 35 amphibians, and an astounding 300 bird species. Many are rare or endangered species, including the marsh deer, pampas deer, and maned wolf. Other species which are hunted for their hides are the Paraná otter, two species of cayman, and the water boa.

There has been a surge in interest in developing ecotourism in Iberá, and many ranchers have sought to draw tourists wanting to experience the exuberance of the area's wildlife. Iberá became a Natural Reserve in 1984. Within Iberá, five conservation areas were created in 1994, and in 2002, an area of 24,550 ha of the Iberá Lagoon was nominated by the Argentine government as a Ramsar wetlands site of international importance. In addition to its value as a natural preserve, the wetlands have long supported rural families who fish and raise cattle.

Studies by researchers at the Universidad Nacional de Centro (Argentina), in partnership with other South American and European universities and with support from the European Commission, have documented that Iberá is not a hydrologically "closed basin." Although the wetlands are traditionally fed by rainwater, the studies conclude that the wetlands could be affected by changes in the Parana River, possibly because of cracks in the bedrock that forms the wetlands' basin or via the sandy rise that forms the divide between the Parana and

Ibera. Additional modelling has established that the wetlands' increased water level cannot be attributed only to increased precipitation, nor sedimentation downstream on the Corrientes River, the only surface drainage from Iberá.

Adding water to wetlands would seem to be a good thing, but in this case, the inflow of lower-quality water (presumably from the Paraná) has directly affected areas critical for wildlife reproduction. In addition, dryer areas around the wetlands have been disappearing under water. The rural residents of Ituzaingó, the municipality closest to Yacyretá Dam, were among the first to denounce the flooding of their agricultural lands, and the provincial environmental agency verified the legitimacy of their complaint, if not its cause. The Ituzaingó region alone has registered the loss of 100,000 ha of agricultural land to the flooding (apart from those lost to the Yacyretá reservoir) and a subsequent reduc-

### Yacyretá: An Unending Nightmare

The Yacyretá Dam is a joint undertaking by the governments of Argentina and Paraguay to generate hydroelectricity (3,000 MW installed capacity). The Yacyretá Binational Entity (EBY) was created in 1974 by the countries' military dictatorships to build and implement the project. Civil works began in 1984. A decade later, the dam was filled to its initial level of 76 meters above sea level, despite the fact that there was no comprehensive environmental impact assessment or mitigation plan, nor a plan to resettle the more than 70,000 people who may eventually be affected by the project. If its reservoir is raised to the design level of 83 meters, Yacyretá will drown 107,600 ha of terrestrial ecosystem. It has already destroyed the Paraná island ecosystem, has had serious impacts on fisheries, and has affected the Mbyá Guaraní indigenous people.

The World Bank and I ly US\$2 billion for cor lion spent to date. Mil running for office, form onument to corruptp to fully assess the exte he was in power.

Despite playing an imp engineering company l ed by EBY to carry ou Corpus Christi Dam ju

Glenn Switkes

tion of 50,000 head of cattle able to graze in the region in the past five years. The Batel-Batelito wetlands region, adjacent to Iberá, has also registered a loss of 250,000 ha of economically productive lands.

### Pressing for Answers

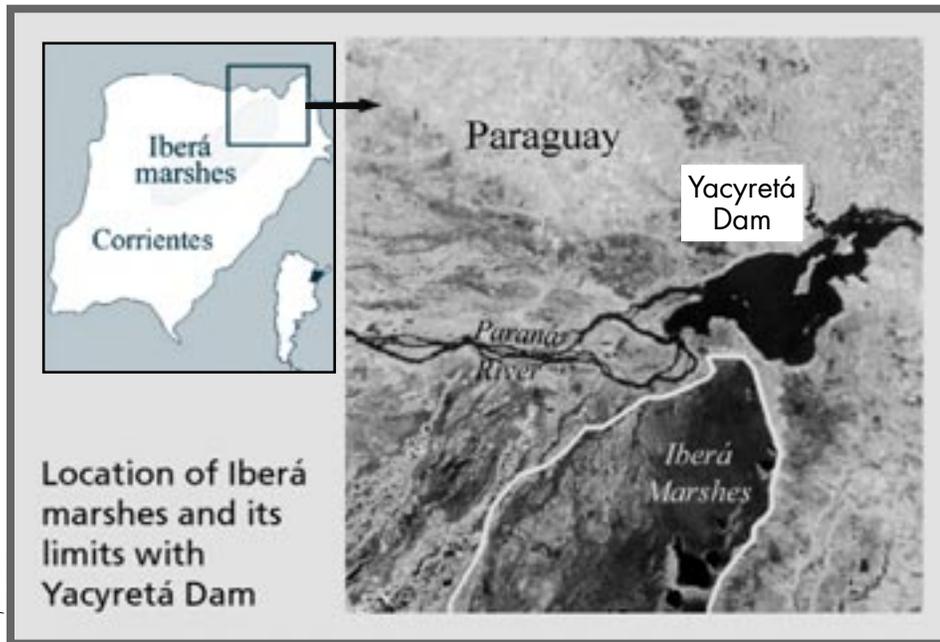
The crisis of rising water in Iberá has awakened concern among the province's residents, local authorities, and various agriculturalist associations, as well as national environmental and legal authorities. In response, a multi-sector stakeholders' group was formed to attempt to solve threats to the wetlands. The Iberá-Yacyretá Forum was created in October 2001, during a seminar organized by EBY and held in Posadas, Argentina to discuss the Iberá situation. Some 30 organizations now take part, and have chosen as coordinators the Fundación Vida Silvestre Argentina (representing

NGOs), the Batel-Batelito Basin Committee (representing rural producers), the Universidad Nacional del Nordeste (representing the academic sector) and the municipality of Ituzaingó (representing the governmental sector).

The Forum's principal objective is to guarantee transparent mechanisms to evaluate the magnitude of seepage from Yacyretá reservoir into the Iberá wetlands. One of its initial actions was to designate an independent technical group to advise and monitor EBY's plans and actions regarding the evaluation and mitigation of existing or potential environmental impacts on Iberá. Given EBY's refusal to admit the possibility of seepage from the reservoir, this group has sought to "persuade" EBY to cooperate by bringing pressure at various levels – for example with project funders. The World Bank and Inter-American Development Bank (IDB) together

cluded that there are no studies that disprove that seepage is occurring. The meeting was evaluated by the local chapter of the anti-corruption group Transparency International, which concluded that the failure of EBY to permit complete and timely access to data and studies prevented the transparency demanded by the Forum.

The Technical Meeting and prior Forum meeting were the first times that EBY sat down with civil society representatives to discuss these issues. These initiatives are the first signs of a greater openness by EBY to discuss environmental questions that must be part of its Environmental Management Plan, currently being developed in consultation with the World Bank and IDB. Without a doubt, the participation of the Iberá-Yacyretá Forum in the Technical Meeting is an important precedent for populations facing similar situations as a result of dam projects in the future.



### EBY Sets Bar Too High

A sticking point in this dialogue is that EBY has demanded irrefutable proof from outside scientists regarding the possible Yacyretá-Iberá connection before they will take any action, while the Forum's technical team insists that the responsibility lies with EBY to carry out necessary additional studies to confirm whether or not the rising waters in Iberá can be attributed to the reservoir. The technical team states that there is already sufficient data showing that rainwater alone cannot explain the rising water levels, and that more serious studies must take place.

Despite the fact that the technical debate is complex and conflicting, the process of dialogue between the parties continues. The diverse institutions which comprise the Forum have indicated that they have varying degrees of doubts regarding the conclusiveness of studies presented by EBY to prove there is no seepage taking place, but share the opinion that it is important to clear up doubts through a transparent process, adequate information access, and full participation. EBY has thus far only shown some signs that it may be willing to cooperate to achieve clarity on this problem.

In the meantime, one of South America's natural treasures continues to deteriorate, and the list of victims of this notorious dam continues to grow. ■

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Inter-American Development Bank provided near-construction of Yacyretá, out of an estimated \$11 billions of dollars remain unaccounted for. When former president Carlos Menem called Yacyretá "a lion," but there is little evidence he did anything about the corruption or take steps to halt it once

important role in the Yacyretá debacle, US-based Montgomery Watson Harza was recently contracted to study for the construction of the proposed dam upstream.

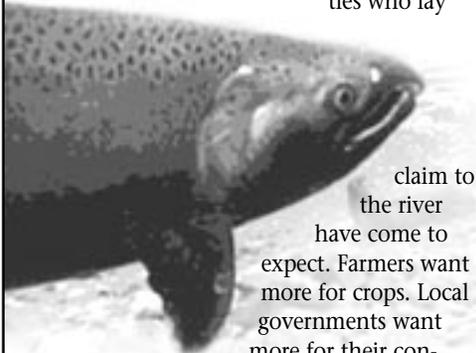
provided nearly US\$2 billion for the dam. Raising the reservoir to its design level is contingent upon the preparation of a comprehensive environmental management plan and the approval by the World Bank and IDB. Therefore, the Forum has begun to engage the banks in this process.

EBY formally recognized the Forum at its meeting in March, and in May EBY met with the Forum's group of experts. At this meeting, both the Forum and EBY presented documentation and studies to support their positions regarding seepage into Iberá. The results were perhaps predictable: EBY concluded once again that there is no evidence to support the contention that seepage is taking place, while the Forum's experts con-

# Laying Down the Law on Klamath Salmon

by Elizabeth Brink

**T**he Klamath River flows through the hot, dry agricultural areas of southern Oregon and northern California, where thirsty farms and communities siphon off much of its waters. After years of overuse and drought, there simply isn't enough water to go around – or at least not in the amounts that various parties who lay



claim to the river have come to expect. Farmers want more for crops. Local governments want more for their constituents. Native American tribes, fishing communities and environmentalists want more water for fish and for a healthy watershed.

The over-exploitation of the river basin's waters came to a head last September, when more than 33,000 adult salmon (including federally protected species) died in the Klamath River before reaching their spawning grounds. Federal water diversions were found to be the main cause. A coalition of commercial fishermen, conservation groups, and Congressman Mike Thompson filed a lawsuit to challenge the federal irrigation plan that diverts water to farms in the upper Klamath basin at the expense of fish.

In late July, a federal court ruled in favor of the groups, and rejected the Bush administration's 10-year plan to protect the Klamath's threatened salmon. The court ruled that the plan was illegal because it fell well short of meeting the requirements of the Endangered Species Act.

"The Bush Administration has worked hard to maintain the status quo in the Klamath Basin, but last summer the status quo killed 33,000 salmon," said Bob Hunter of WaterWatch of Oregon. "Hopefully this court ruling will end the Administration's policy of denial and delay and put us on track to actually solve this crisis."

However, the judge indicated that water deliveries this year would not be affected, which could spell disaster for the salmon in the event of low flows.

## Legal Aid for Salmon

The lawsuit, brought against the National Marine Fisheries Service and Bureau of Reclamation, claimed the agencies' 10-year plan failed to leave sufficient water in the river for salmon and relied on future, speculative actions from the states of California and Oregon to make up for the missing water. The huge salmon kill happened within five months after the plan went into effect.

Because threatened Klamath River coho salmon are protected under the Endangered Species Act, the National Marine Fisheries Service must approve any long-term irrigation plan devised by the Bureau of Reclamation. In May 2002, the Fisheries Service held that the Bureau's plan would jeopardize the continued survival of the Klamath River coho. However, when the Fisheries Service issued its final approval of the Bureau's plan, it failed to require adequate measures to protect the salmon.

Kristen Boyles, an attorney with Earthjustice, said, "A promise to provide a fraction of the water salmon need, sometime in the future, from somewhere, meets neither the requirements of the law nor of sound science. The fish in the Klamath are in real trouble right now; they need real action, not vague promises."

Inadequate river flows that result when the Bureau of Reclamation diverts water for irrigation in the high desert hurt salmon in a number of ways. Newly hatched salmon need safe habitat in and around bank vegetation to hide and feed. Lower river flows force these young fish into the mainstream of the river where they are easy prey. Year-old salmon need adequate flows in the spring to safely make the journey to the Pacific Ocean. Adult salmon, returning upriver to spawn, are hurt or killed by high water temperatures and poor water quality due to low river flows.

The Klamath was once the third mightiest salmon-producing river in the continental US, behind only the Columbia and Sacramento in productivity. The river has been reduced to a shadow of its former self largely as a result of the Bureau of Reclamation's replumbing of its headwaters to maximize irrigation in the arid upper basin. The long-term answer could include buying back some of the agriculture land in the Klamath Basin to reduce water demand.

"This decision gives hope to the families that depend on Klamath River salmon," said Glen Spain of Pacific Coast Federation of Fishermen's Associations. "This case

*continued on page 15*

## Dammed Shame

Klamath salmon also must contend with numerous dams in the basin. "These chronic water shortages in the river are compounded by the hydropower dams that block many miles of salmon spawning habitat," said Rebecca R. Wodder, president of American Rivers.

As a result of this grave threat to local species, the California Energy Commission has instructed energy company PacifiCorp to consider decommissioning dams on the Klamath River as part of relicensing its Klamath hydropower project. The license it operates under now expires in 2006.

Aside from being unable to pass migrating fish above lowermost Iron Gate Dam, the reservoirs formed by the project have notoriously poor water quality.

Though PacifiCorp has stated that it has no intention of decommissioning the dams, it could be forced to examine the option by the Federal Energy Regulatory Commission (FERC). The company serves some 1.5 million customers, including irrigators in the US Bureau of Reclamation's Klamath Irrigation Project, who pay a small fraction of the energy costs to pump their water. Under a new license, that arrangement is likely to change, and farmers will likely have to pay about fair market value.

In a preliminary assessment of energy issues associated with the project, the commission said that replacement energy would be needed to make up for any dams that may be removed. But that power could be made up by new and proposed facilities nearby, it said, including a cogeneration facility, and two proposed projects totaling 1,500 megawatts. The seven dams in the Klamath project together only produce 151 megawatts.

# Ten Traumatized Rivers

## Canada's "Most Endangered Rivers List" Lays Out Threats, Offers Opportunities for Activism

by Lori Pottinger

**T**he groups EarthWild and Wild-canada.net have released the second annual list of Canada's 10 most endangered rivers, and a call to action to improve the health of the nation's rivers. Dams figure high on the list of threats, as do industrial development, pollution and overuse of rivers' waters. This year, half of those on the list are rivers shared with the United States.

"Canada is experiencing a resurgence of large hydro projects, driven by rising American energy demands and Canada's ratification of the Kyoto Protocol," said David Boyd, chair of the Endangered Rivers Review Committee. "Although local groups and communities are resisting these mega-projects based on sound environmental and social objections, this issue has not yet achieved national prominence. Our endangered rivers list is intended to help focus national attention on the threats posed by large hydro projects to Canada's rivers."

Rivers are nominated for the list by local communities, environmental groups, and Aboriginal people. Finalists are chosen based on three criteria – national significance, the magnitude of the threats facing the river, and the opportunities in the coming year to make a positive intervention to either protect the ecological integrity of a river or restore its health.

### Dams Loom Large

Canada's renewed plans to build hydroelectric dams landed a number of rivers on the

list. The Eastmain and Rupert rivers (sharing #2) are threatened by an extensive plan for dams proposed by Hydro-Québec to feed American power demands. The government has basically given Hydro Quebec and private developers free reign to develop nearly any hydro project they wish, and the list of proposed dams is a long one. The Eastmain River is already heavily diverted to support hydropower on another river, and now a new project on the river would add insult to injury. The Eastmain-1 (EM-1) project includes the construction of a new dam, 30 dykes, a reservoir and a generating station on the Eastmain River. Implementation of the project surreptitiously began in 2002 with the building of an 80-km-long access road to the Eastmain River. Construction on the main dam is expected to begin in 2004.

"With its latest assault on the Eastmain and Rupert rivers, Hydro Quebec is trying to turn back the clock to a time when widespread environmental devastation was just the cost of doing business," said Boyd. "But the era of large dams in Canada is supposed to be over. We need to focus on developing clean, low-impact renewable energy, not destructive megaprojects."

The Churchill River (#9) is also threatened by proposed dams. The reservoir of the proposed Lower Churchill hydroelectric project would destroy one million hectares of boreal forest and drown the nesting sites of endangered and threatened species.

Existing dams are a big culprit in the



Mining on the Taku.

Photo: Paul Morrison

Okanagan's poor health. The British Columbia river has been drained and dammed so extensively that its natural flow has been reduced to a minuscule seven kilometers, from its previous length of 314 km. Dams and flood control projects have dramatically diminished the river's salmon populations by limiting their access to spawning grounds. Due to this loss of habitat, the Okanagan Valley claims 30% of the province's endangered species and 23 nationally threatened, endangered or vulnerable species.

Past dams also helped put the Bow River on the list. This western river, born in the glaciers of Canada's highest peaks, have been littered by 12 dams along its main stem and tributaries. The Bow's dams have disrupted its natural flow, and altered its aquatic ecology. The river is also "oversubscribed," with much of its waters going for irrigation.

### Next Steps

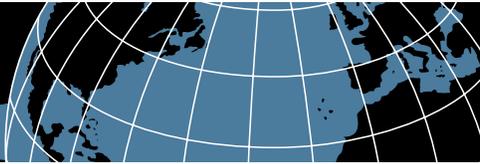
The organizations behind the list will now work with local communities, First Nations and conservation groups from across the country to highlight the plight of the rivers, and developing online "Action Centres" for each river to make it easier for people to get involved and pressure politicians to take action to improve the health of rivers.

Says David Boyd, "A concerted effort by all levels of government – federal, provincial, and local – is needed in order to achieve our long-term goal of seeing a day when Canada no longer has endangered rivers. Industry, communities, environmental groups, and concerned individuals also have a vital role to play in reaching this ambitious goal." ■

For more information: [www.endangeredrivers.net](http://www.endangeredrivers.net).

### The Rivers and Their Threats

1. Petitcodiac River, New Brunswick. A causeway, acting like a dam, has greatly reduced the river's flow.
2. Eastmain/Rupert Rivers, Quebec. Multiple existing and future dams.
3. Okanagan River, British Columbia. Drained and dammed, almost to oblivion.
- 4a. Taku River, British Columbia/Alaska. Mining and road projects.
- 4b. Iskut River, British Columbia/Alaska. Roads, dams, mining, logging, over-harvesting of wild salmon stocks.
5. Groundhog River, Ontario. Proposed mining development.
6. Milk River, Montana/Alberta. Excessive development, proposed irrigation dam.
7. Peel River, Yukon/Northwest Territories. Targeted by extractive industries and hydroelectric developers.
8. Red River, Manitoba/North Dakota. Discharge of urban sewage and agricultural runoff, overuse, drained wetlands.
9. Churchill River, Labrador (Newfoundland). A planned dam would destroy one million hectares of boreal forest.
10. Bow River, Alberta. Existing dams and overuse of its waters.



## UPDATES

**CANADA:** Two Canadian provinces joined forces in late June to launch a study into building a massive hydroelectric project on the Nelson River. The US\$4.4 billion Conawapa Dam, located about 500 miles north of Winnipeg, would include a high-voltage transmission line east to Ontario, which has been hit by growing worries over electricity shortages.

The 1,250-megawatt project would be the province's biggest hydro project, and is expected to flood 1.2 square miles. Government-owned Manitoba Hydro now runs 14 hydroelectric plants. The province already produces 40% more power than it uses. Most of that excess power is currently exported to the United States.

Manitoba Hydro will study the project's costs, and environmental and regulatory requirements. The current estimated cost of the hydro station is \$3.6 billion, while the transmission line could cost \$720 million.

But some have said the dam is unneeded, and that conservation could make up the shortfall in the region. The Manitoba group the Frontier Centre for Public Policy notes that Canada has much room for conserving energy. "The average Canadian consumes over twice the rich country average, and Manitobans consume 2.6 times the OECD average," the group writes. They calculate that if Canada was as efficient as the OECD average (per unit of GDP), Manitoba would free up electricity equivalent to almost 2.3 extra Conawapa-sized dams.

**CHILE:** Salmon producers from southern Chile have received strong political support in their effort to relocate the proposed Alumysa aluminum project, owned by the Canadian company Noranda Inc. The producers say the project would endanger the health of the salmon in the area.

"For Alumysa to exist, the project has to respect all the environmental laws, but it cannot endanger previously existing activities, such as the salmon industry," said Christian Democratic Party (DC) Senator Aldofo Zaldivar, a powerhouse in the Chilean political scene and senator from the southern salmon-raising regions of the country.

The Alumysa project includes the construction of an aluminum processing plant, three hydroelectric plants, a port in Chacabuco Bay, an industrial landfill, the construction of a 94 kilometer road and 79 kilometers of electricity lines. The complex is expected to produce an average of 440,000 tons of aluminum per year.

The project environmental impact study is currently under evaluation by the Regional Environmental Commission. Alumysa's general manager Robert Biehl reacted angrily to the senator's statement. "Everybody knows that changing the location of the plant means the company has to develop a new environmental impact study and, obviously, there is no other place to locate the plant," Biehl said. "The clear intention is to stop the project."

The US\$2.7 billion aluminum plant will be located in Bahia Chacabuco, less than three kilometers from the region's largest salmon farms.

**GLOBAL WARMING:** The international carbon market is picking up steam, and the latest development has implications for rivers and dams. The World Bank announced in June that a 26MW run-of-the-river hydro project in the Chilean Andes is the first project under the Bank's Prototype Carbon Fund (PCF) to have produced verified greenhouse gas emission reductions. Carbon credits generated by the Chacabuquito project are intended to be sold under the Clean Development Mechanism (CDM), a tool established in the Kyoto Protocol climate change treaty to lower the costs of developed countries' emission reduction commitments. Japanese corporation Mitsubishi has contracted to purchase 100,000 tons of credits from the project.

German consultant TUV verified that Chacabuquito has generated 112,000 tons of carbon emission reductions in its first year of operation for sale to the PCF. This is 25% less than the original estimate for the project.

The PCF investors include six governments and 17 companies – including power and oil companies from Japan and Europe, and leading global banks from industrialized countries – who have contributed US\$180 million to the fund since its inception in 2000.

IRN and other NGOs monitoring the CDM are advocating for large hydro (plants with a generating capacity greater than 10 MW) to be excluded from any carbon trading schemes.

*Elizabeth Brink*

## A BETTER WAY

**US:** In June Maine Interfaith Power & Light (MeIPL) announced that it has enrolled 1,000 residential and small business consumers in its "green power" program – the most ever for a 100% renewable electricity offering in the state. Founded in 2000 by faith-based groups concerned about preserving the environment, MeIPL is a nonprofit power aggregator that works with suppliers of energy from wind, solar, biomass and small (less than 30 MW) hydropower. "Our success shows that Mainers want a more sustainable electricity supply – and are willing to pay for it," said Fred Horch, MeIPL project coordinator.

Similar faith-based efforts have been launched at least 13 states. Some, like those in Massachusetts and Tennessee, also offer ways to purchase energy generated from renewable sources that are less polluting than coal or nuclear power. Groups in Oregon, Wisconsin, and Connecticut focus on assisting local congregations through such services as energy audits for houses of worship and congregants' homes, capital needs assessments, and promotion of energy conservation and efficiency.

The largest and perhaps most influential of these eco-spiritual groups is California Interfaith Power and Light, with 225 religious congregations as members. Last year CIPL reported the prevention of 1.6 million pounds of carbon dioxide emissions into the air and 672,000 kwh of electricity saved through improved efficiency and increased use of alternative forms of energy.

The interfaith power movement began in 1994 with the founding of Episcopal Power and Light as a religious response to global warming. The Reverend Sally Bingham, environmental minister at Grace Cathedral in San Francisco and director of The Regeneration Project, has been a national leader in this effort. The faith community has been in

the midst of every great reform movement in the US, she says, citing the abolition of slavery, civil rights, peace, and poverty – and should give leadership in the environmental movement as well. Her motivation? “If you love your neighbor, then you don’t dirty your neighbor’s air.”

Anne Carey

For more information:

[www.theregenerationproject.org](http://www.theregenerationproject.org)

**WAVE POWER:** Generating power from ocean tides is becoming a more economically and technologically viable source of clean energy, as evidenced by promising pilot projects being developed in Europe and the US.

In England, a 300 kilowatt underwater turbine has been installed off the coast of Devon and linked to the national grid.

This project, which has been financed through the British Government, the European Union and private investors, is comprised of a 16-meter-wide turbine that spins with the ebb and flow of the tide at 12-15 revolutions per minute. This speed is believed to be quick enough to generate electricity, yet too slow to be hazardous to fish and other marine wildlife.

Proponents say tidal power could generate about 20% of Britain’s energy – equaling the energy produced by the nation’s nuclear power plants.

In Denmark, scientists from Aalborg University switched on the first Wave Dragon turbine in late June. The device is now producing power to the local grid. The next phase will include the installation of six additional turbines.

And in the US, a Native American tribe and a private company have installed a 1MW pilot project off Washington’s Olympic Peninsula. The demonstration project involved the private start-up company AquaEnergy Group Ltd, the Clallam public utility district, and the Makah Nation. Rather than rely directly on tidal currents, the Neah Bay project generates electricity using floating bouys moored in water 150-200 feet deep. “Once this permitting and development precedent has been set, we believe offshore wave power has the potential to satisfy 5-10% of total US power demand within 20 years,” said Alla Weinstein, CEO of AquaEnergy.

The company says the offshore technology is already cost-competitive. The \$2-million project is expected to generate power at about 6 cents per kilowatt-hour. If expanded to 100 MW, the cost could drop to

4 or 5 cents/kWh, which is near the cost of hydropower.

Proponents say that ocean energy is predictable and provides a constant stream of power, unlike intermittent winds. It doesn’t entail land use battles or the visual blight that has helped stall some of the larger wind farms. Wave energy contains about 1,000 times the kinetic energy of wind, and is produced at all times of day.

Jessica Heyman

**WIND:** The British government in July announced plans for the private sector to pump up to US\$9.6 billion into offshore wind power, in the biggest ever boost to the UK’s renewable energy sector. While the private sector will build the projects, the government has created a guaranteed market by ordering power suppliers to buy an increasing amount of their electricity from renewable sources.

The program could add 6,000 megawatts of generation capacity and create 20,000 jobs in manufacturing and plant management, said Patricia Hewitt, Secretary of State for Trade and Industry.

The wind drive is a key element in the government’s target of getting 10% of its power from renewable energy by 2010, as part of its effort to reduce its contribution to global warming.

Britain has long lagged far behind its continental neighbors in developing clean ener-

gy sources, getting just 552 megawatts (less than one-half percent of its electricity) from wind power. By comparison, Germany (Europe’s leader in wind energy production) generates about 12,000 megawatts of power, or 5% of its electricity. Denmark has 2,900 megawatts, which meets 20% of its needs. The US now produces 4,685 megawatts, or less than 1% of its electricity consumption, from wind.

Prime Minister Tony Blair pledged that Britain would seek to cut 60% from its carbon dioxide emissions by 2050, an ambitious goal that the Royal Commission on Environmental Pollution had recommended as necessary for the country to seriously confront climate change.

**US:** About a fourth of the United States packs winds powerful enough to generate electricity as cheaply as natural gas or coal-fired plants, according to a new study by Stanford University researchers.

The study was the first to measure wind speeds at 262 feet above the ground – the height of new turbines, almost 100 feet higher than older turbines. The study said “the unexploited electric power potential from winds in the United States appears enormous.” and that the Southeast and Gulf coasts offer “the greatest previously uncharted reservoir of wind power in the continental United States.”



Students demonstrate in Mozambique in June against proposed dams and for adoption of the WCD guidelines by their government. The banner says “Let our rivers run free for future generations.” The demonstration was organized by the grassroots group Livaningo.

Photo: Livaningo

## IN PRINT

### **Damming Evidence: Canada and the World Commission on Dams,**

by the NGO Working Group on Export Development Canada, a project of the Halifax Initiative (2003). Available for downloading from [www.halifaxinitiative.org](http://www.halifaxinitiative.org)

The last sentence of this new report sums up the authors' position well: "Canada has led in the promotion of hydroelectricity worldwide. It must now lead in the implementation of the World Commission on Dams."

The Canadian government and the nation's dam-building industry, both of which contributed to the World Commission on Dams (WCD) process, have continued to promote destructive dam projects around the world and ignore the recommendations of the WCD on those projects. And like other major players in the dam industry these days, they are gearing up for a broader push to put more dams on more rivers, both nationally and in developing countries.

Foreign dam projects are a lucrative business in Canada (as is exporting hydropower south: Canada is now the second-biggest exporter of hydroelectricity in the world). The report details the dam exploits of the Canadian International Development Agency (CIDA) and the Export Development Corp., national agencies which have financed feasibility studies and other work to pave the way for large dams around the world. The report describes more than a dozen projects that have gotten major support from these agencies, from Belize's Chalillo Dam (where funding for feasibility studies are expected to result in up to C\$12 million in contracts to Canadian businesses) to China's Three Gorges Dam (for which EDC has provided C\$189 million in loans for Canadian-built equipment).

A helpful chart compares the WCD recommendations with the policies in place for building dams in Canada and those for Canadian involvement in dams in other countries. Those for projects outside Canada are the most vague and therefore the weakest, the report reveals.



"The Canadian dam building industry and the Canadian government are avoiding their responsibilities by ignoring the WCD recommendations," the report states. It calls for a moratorium on support for large

dams by Canadian agencies until Canada takes steps to incorporate the WCD guidelines into national policies.

**Drowned Out**, a documentary film by Franny Armstrong. Produced by Spanner Films, 2002 ([www.spanner-films.net](http://www.spanner-films.net)).

This remarkable movie follows the lives of villagers living in the ungodly path of the growing Sardar Sarovar reservoir in India's Narmada Valley. It is also the story of "the biggest people's movement since Gandhi" – the Narmada Bachao Andolan, or NBA – which arose to help fight the overblown dam-dreams of India's bureaucratic elite, and to help affected people through the trials of losing everything to the behemoth projects proposed for so many of India's rivers. This is a big story, beautifully told through the lens of one family facing submergence, and the reasons for their decision to drown rather than move to either an urban slum or a poorly outfitted resettlement village. We are with them as a monsoon comes close to taking their crops, as they visit a potential resettlement site (no water, poor land, no way to make a living there), and as they travel all day to meet with local officials responsible for resettlers, who after all that refuse to see them. Compelling footage of author Arundhati Roy and NBA activist Medha Patkar and others, who explain the sordid history and twisted logic to India's grand dam schemes. This is an unsettling, poignant film which paints a jaggedly clear picture of the human tragedy behind the decision to drown out the poorest of the poor "for the greater common good."

**Poverty Reduction or Poverty Exacerbation? World Bank Support for Extractive Industries in Africa**, by Scott Pegg. Published by Oxfam America, Friends of the Earth-US, Environmental Defense, Catholic Relief Services and Bank Information Center (2003).

The World Bank purports to reduce poverty through its lending and other programs. But its extensive support of the extractive industries has actually worsened poverty in many African nations.

The fact that these industries cause more harm than good is not news; the phenomenon is so well-documented that it has a name – "the resource curse." But this report documents the world's largest experiment in poverty reduction by the World Bank, and finds it a resounding failure. Analyzing the Bank's 20 years of support for the oil, mining and gas industries in resource-rich African nations, the author finds that "countries highly dependent on oil and mineral exports tend to grow more slowly, face lower living standards, and suffer higher levels of corruption and violence than resource-poor countries." The impacts on the environment and human health are well known, but a lesser known fact is that countries heavily dependent on the extractive industries are more prone to civil war.

Part of the problem is that the Bank has competing, and sometimes mutually exclusive, goals: that of reducing poverty through economic growth is counterbalanced by its zeal to draw the private sector with good deals. The authors state, "The policies that the Bank advocates to induce foreign direct investment often undermine the government's ability to generate revenues from oil, gas and mining sector activities through taxes and fees... Many codes and contracts

*continued opposite*

## New From IRN

**The Citizens Guide to the World Commission on Dams**, originally published by IRN in 2002, is now available in Spanish, French, Japanese, Simplified Chinese and Vietnamese. It will soon be available in Thai, Khmer, Chinese and Tagalog. French, Spanish and English versions are available for free downloading from <http://www.irn.org/wcd/>. To learn how to obtain a copy in the other languages, contact [aviva@irn.org](mailto:aviva@irn.org).

**Damming Iceland's Wilderness: How Large Dams and Their Funders Threaten Iceland's Natural Heritage**, by IRN with Friends of the Earth International, Icelandic Nature Conservation Association, and CEE Bankwatch Network (2003). This 4-page color brochure is available for downloading from [www.irn.org/programs/europe/035030.leaflet.pdf](http://www.irn.org/programs/europe/035030.leaflet.pdf). A more detailed, 15-page analysis is available from [www.irn.org/programs/europe/035030.karahnjukar.pdf](http://www.irn.org/programs/europe/035030.karahnjukar.pdf)

drafted with the World Bank's assistance are excessively favorable to investors."

The report relies on a variety of sources, including the World Bank itself, to document the widespread failure of the extractive industries to improve lives in Africa. While it doesn't propose recommendations on how (or whether) the Bank should continue its support for these industries, it does describe the problems inherent in this support, and poses a series of research questions that are intended to help resolve the problem. "The burden of proof is on the Bank to demonstrate how the institution's support for the extractive industries actually benefits Africa's poor."

**"Risks and Rights: The Causes, Consequences, and Challenges of Development-Induced Displacement,"** by W. Courtland Robinson. Published by The Brookings Institution's Project on Internal Displacement (2003).

Each year, millions of people are forcibly displaced by development projects such as dams, roads, and oil, gas and mining projects. This new report describes the costs of such displacement to the world's poorest, and catalogs in great detail the existing mechanisms that could be used to better effect to protect them.

The author notes that while victims of natural disasters are generally the focus of

sympathetic attention and international aid, "the same cannot be said for victims of development-induced displacement, although the consequences may be comparably dire." The report includes case studies (including a number of dams) that demonstrate how those uprooted by development projects often become landless, jobless, homeless, and face social disintegration and serious violation of their rights.

Key to the report is an analysis of the UN's Guiding Principles on Internal Displacement, the first international standards for internally displaced persons, and their application to situations of development-induced displacement. The author believes these guidelines offer the strongest hope for reducing development-induced displacement, and lessening its ills when it does occur. Also discussed are the guidelines of the World Commission on Dams (WCD), the World Bank, regional development banks and others.

For dam fighters, the report's recommendations might seem a bit too academic after years of following the WCD process and international efforts to improve the operational policies of the World Bank. For example, the author recommends a number of approaches that have already been done by the WCD (at least as far as dams are concerned), including "a global survey of development-induced displacement; and field missions to countries where development-induced displacement is problematic." He also recommends "a global consultation which would bring together the development as well as human rights and humanitarian communities to harmonize operational guidelines and policies applicable to development-induced displacement," which may seem like action to an academic, but will likely do little to slow the global tide of development-induced displacement. ■

## More on Extractive Industries and African Poverty

In early June, the *New York Times* reported that a new internal World Bank report had reached a similar conclusion to the new NGO report on the extractive industries and poverty reduction. The Bank's draft report concludes that it should stop financing the extractive industries in countries "whose governments lack the capacity to benefit from or manage such investment." (See "Striking It Poor: Oil as a Curse" by Daphne Eviatar, June 7, 2003)

A new report by Catholic Relief Services (CRS) estimates that sub-Saharan African governments will receive over \$200 billion in oil revenues over the next decade, in part because of an oil boom fueled by the US desire to replace its use of Middle Eastern oil with African oil. A new report by CRS notes that this oil boom comes at a time when foreign aid to Africa from industrialized countries is being replaced by an emphasis on trade to reduce poverty. The authors recommend ways to reduce the corruption, environmental destruction, human rights violations and conflict that have marred oil development to date. The report, *Bottom of the Barrel: Africa's Oil Boom and Prospects for Poverty Reduction*, is available from [www.catholicrelief.org/africanoil.cfm](http://www.catholicrelief.org/africanoil.cfm)

The *Los Angeles Times* ran a two-part investigative article on the World Bank's Chad-Cameroon pipeline, and its impacts on poor communities there. (See "Pipeline's Profits May Bypass Africans," by Ken Silverstein, June 17-18, 2003)

International extractive industries pay billions of dollars a year to many resource-rich countries in the global South. The Publish What You Pay campaign ([www.publishwhatyoupay.org](http://www.publishwhatyoupay.org)) is aimed at getting these industries to reveal their payments to governments, so the citizens of those countries can hold their governments accountable for the use of these funds.

**Klamath** continued from page 10

was about restoring balance to the basin so that fishermen, Native Americans and irrigators can all receive a fair share of the water. We will now work on a new vision for the basin."

Fishing and environmental groups are urging the federal government to buy out irrigation rights from willing sellers and to phase out commercial farming on federal wildlife refuges in the headwaters. Water saved by these measures could then be left instream for the benefit of the fish, wildlife, and communities that depend on the river.

## Praying for No Rain

Because the court did not rule to change the amount of water flowing in the river, another fish kill could occur this year.

The Klamath basin is facing its third year of below-average rainfall, and the US Bureau of Reclamation is considering scaling back its water forecast for the Klamath basin from "below average" to the more severe "dry." In a "dry" year, reservoir operators will be mandated to release more water to farmers, and fish could again suffer from reduced flows.

"In a dry year we actually get more water than we do in a below average year," said

Dan Keppen, executive director of the Klamath Water Users Association, which serves 1,400 farms in the region. "We have farmers here praying for no rain so we can be in a dry year."

But a dry-year classification could lead to dead salmon again. "We are very worried about a possible fish kill again this year if that happens," says Kristin Boyles of Earthjustice. "It was a tragedy last year, but if it happens again it would be catastrophic."

The Klamath was listed as the nation's No. 2 most endangered river by American Rivers this year, up from No. 3 last year. ■