



# DEVELOPMENT DISASTERS

JAPANESE-FUNDED DAM PROJECTS IN ASIA

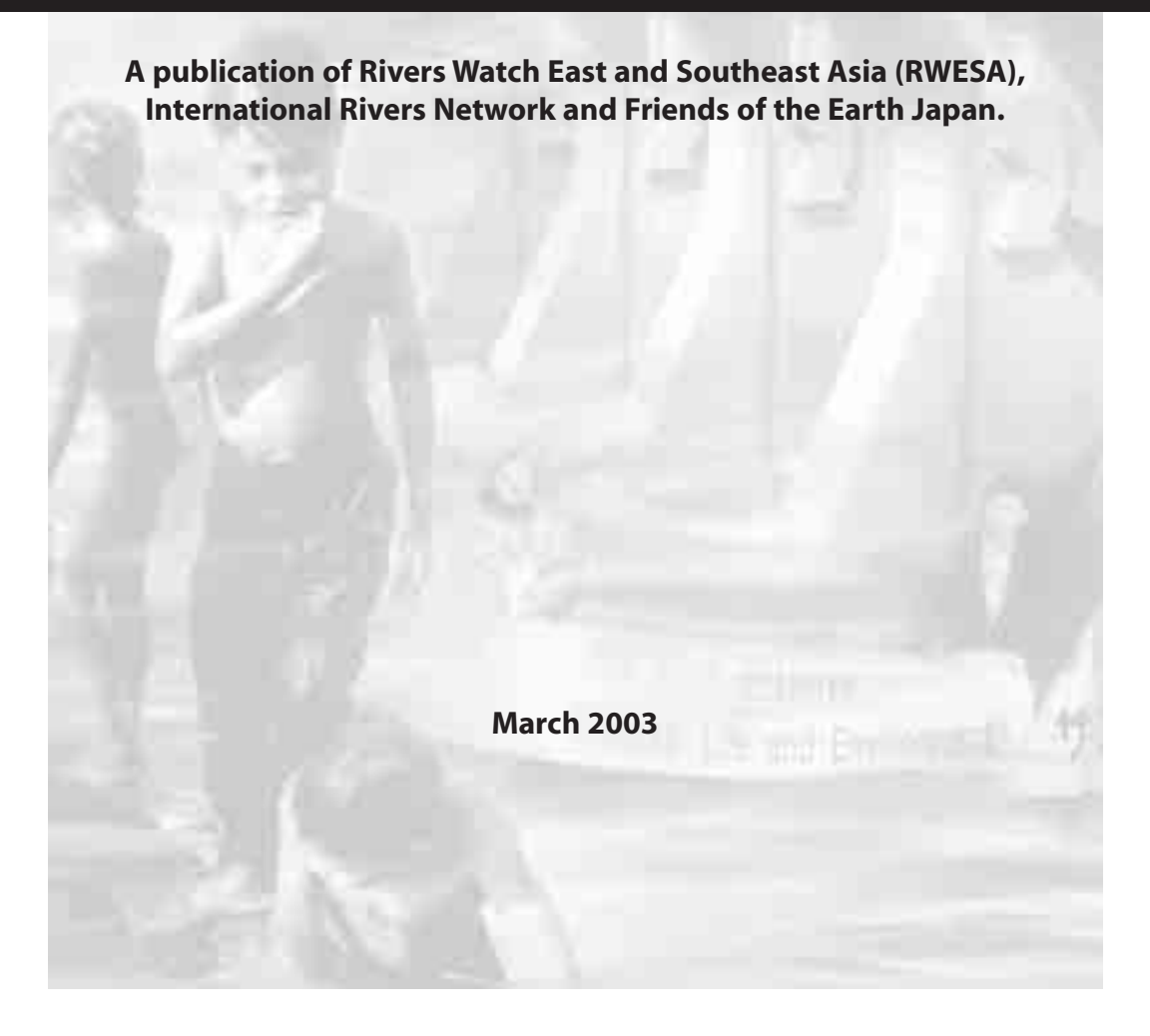






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**A publication of Rivers Watch East and Southeast Asia (RWESA),  
International Rivers Network and Friends of the Earth Japan.**

**March 2003**



Rivers Watch East and Southeast Asia (RWESA) is a network of NGOs and peoples' organizations from East and Southeast Asia - supported by their allies internationally - that was formed in July 2000. The network aims to stop destructive river development projects in East and SE Asia and to restore rivers to the communities who depend on them. For more information, go to [www.rwesa.org](http://www.rwesa.org).



International Rivers Network (IRN) supports local communities working to protect their rivers and watersheds. We work to halt destructive river development projects, and to encourage equitable and sustainable methods of meeting needs for water, energy and flood management. For more information, go to [www.irn.org](http://www.irn.org).



Friends of the Earth Japan is an international NGO occupying itself with environmental problems at the global level. FOEJ is working to improve the funding policies of the Japan Bank for International Cooperation and other international financial institutions and advocates for greater transparency and accountability in development finance. For more information, go to [www.foejapan.org](http://www.foejapan.org).

Many thanks to all the members of RWESA  
who contributed case studies to this booklet.

Translation English/Japanese:  
Tom Eskildsen, Randal Helten. A thousand thanks to both of you!

Edited by:  
Aviva Imhof.

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Design: Design Action Collective, [www.designaction.org](http://www.designaction.org)  
Printing: Inkworks Press



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# Introduction

**A**round the world, large dams have caused massive irreversible harm to rivers, riverine ecosystems and the people who depend on them for their livelihood. Between 40 and 80 million people have been forcibly evicted from their homes and lands to make way for large dams. Most have been left worse off. Many millions more living downstream have had their livelihoods destroyed by changes to river ecosystems and destruction of fisheries. Some of the world's most diverse wildlife habitat and fertile farmland has been flooded beneath reservoirs. Entire river ecosystems have been irreversibly harmed.

Increasingly, society is recognizing that the costs of large dams have been far too high. In the first comprehensive independent assessment of the worldwide record of dams, the World Commission on Dams (WCD), established by the World Bank and the World Conservation Union (IUCN), stated that while dams have made an important contribution to development, “in too many cases an unacceptable and often unnecessary price has been paid to secure those benefits.”<sup>1</sup>

Although the rate of dam-building has dropped to less than half of its peak in the early 1970s, hundreds of projects remain under construction and many more have been proposed. Japan plays a key role in promoting this development internationally: the Japanese government and Japanese corporations continue to fund and build dam projects throughout the world, with devastating results for local communities and the environment.

In September 2002, an unprecedented lawsuit was filed by communities affected by the Koto Panjang Dam in Indonesia. The project, which was supported by the Japanese government and built by Japanese construction companies, forcibly evicted around 20,000 people from their homes and land and destroyed important habitat for endangered species such as elephants, tigers, bears and monkeys. The 3861 plaintiffs are demanding that the Japanese government and the Japanese company which designed the dam take measures to restore the rivers destroyed by the project, and pay compensation of 5 million yen (about \$42,000) per person.<sup>2</sup>

The San Roque Dam in the Philippines is another example of a destructive dam project funded by the Japanese government. People affected by the dam have repeatedly called on the Japanese government to halt its funding of the project, yet their pleas have fallen on deaf ears. Those affected by the project include indigenous Ibaloi people who live in fear that their land and villages will be buried in sediment backing up behind the dam, as well as thousands of people who were forcibly displaced to make way for the construction site and reservoir.

These two cases are perhaps the most well-known in Japan, but several more are contained in this report. The cases in this report examine not only the social and environmental impacts of JBIC-funded projects, but also their economic viability. Many JBIC-funded dam projects are failing to produce as much power or water as predicted, resulting in onerous debts for borrowing countries.

Many of these projects would not have been built without support from the Japanese government through the Japan Bank for International Cooperation (JBIC). It is Japanese taxpayers' money that is being used to subsidize these destructive projects, all in the name of "development". To what extent are Japanese citizens, the Japanese government and corporations promoting such development taking heed of the enormous social, environmental and economic impacts of large dams? And what improvements have been made to address these problems?

### **JBIC'S ENVIRONMENTAL GUIDELINES**

The Japan Bank for International Cooperation (JBIC) is a publicly funded institution that was formed in 1999 after merging the Export-Import Bank of Japan and Japan's Overseas Economic Cooperation Fund. JBIC therefore has two main functions: it provides government-backed loans and guarantees for the overseas operations of Japanese corporations, and it provides development assistance, in the form of yen loans, to developing countries. JBIC is one of the largest development agencies in the world, with annual disbursements of around 2 trillion yen (\$17 billion).



In April 2002, JBIC released its new environmental guidelines.<sup>3</sup> The guidelines provide a framework for ensuring institutional transparency and accountability. They state that decision-making needs to be carried out in the context of full disclosure of information and consultation with all stakeholders, that project proponents must provide information to ensure an accurate understanding of environmental risks, and that environmental costs must be figured into economic analyses of projects. In response to such trends, the Japan International Cooperation Agency (JICA), which carries out project planning, feasibility studies, environmental impact assessments, and other “upstream” support for projects, has also begun deliberations on new environmental guidelines.

It is our hope that JBIC’s environmental guidelines will play an important role in improving project quality at JBIC. While some of the guidelines have come into effect as of October 2002, many will not come into effect until October 2003. NGOs in Japan and people affected by JBIC projects globally believe that JBIC should make every attempt to adhere to its guidelines for all projects currently under consideration. This is the only way to improve the quality of JBIC-funded projects. NGOs will continue to closely monitor JBIC operations to ensure that the guidelines are being followed.

### **FINDINGS AND RECOMMENDATIONS OF THE WORLD COMMISSION ON DAMS**

In addition, the final report of the World Commission on Dams, released in November 2000, provides a new framework for decision-making on water and energy projects that would help to resolve the problems of the past, and to avoid similar problems in the future.<sup>4</sup> JBIC has stated that it will take the WCD’s recommendations into consideration when appraising new dam projects.

The WCD approach is based on recognising the rights of, and assessing the risks to, all stakeholders. Those who would be adversely affected should participate in the planning and decision-making process and have a share in project benefits. The Commission’s main recommendations include the following:

- No dam should be built without the “demonstrable acceptance” of the affected people, and without the free, prior and informed consent of affected indigenous and tribal peoples.
- Comprehensive and participatory assessments of people’s water and energy needs, and different options for meeting these needs, should be developed before proceeding with any project.
- Priority should be given to maximising the efficiency of existing water and energy systems before building any new projects.
- Mechanisms should be developed to provide reparations, or retroactive compensation, for those who are suffering from existing dams, and to restore damaged ecosystems.

Specific measures to be taken by governments, international financial institutions, corporations, consultants and other stakeholders to implement these recommendations are also outlined.

## TEST FOR JAPAN

JBIC is facing its toughest test. A growing people's movement in Asia is challenging JBIC's destructive development model and promoting alternative methods of meeting needs for energy, water and flood control. People's movements to regain rights to water, lands, forests, and other shared resources are expanding beyond national borders and across regions. In July 2000, Rivers Watch East and Southeast Asia (RWESA), a network of NGOs and people's movements, was formed to stop destructive river development in East and Southeast Asia and to press for reparations for affected communities and restoration of damaged ecosystems. RWESA is demanding that JBIC adhere to its own environmental guidelines and the WCD recommendations in all future planning for energy, water and flood control. In addition, RWESA is demanding that JBIC take responsibility for repairing the harm from existing projects, as recommended by the WCD.

The Japanese government, as well as the Japan Bank for International Cooperation, the Japan International Cooperation Agency, concerned ministries/agencies, corporations, consultants and other stakeholders need to take responsibility for the impacts on local people and the environment, and for the economic viability of the projects they fund.

This report features six case studies of JBIC-funded or proposed dam projects and their problems from the perspective of the affected communities. Based on these case studies, we hope JBIC will reconsider its support for these destructive developments, take steps to repair the damage caused in past projects, and ensure that the mistakes are not repeated in the future.

Ikuko Matsumoto

Friends of the Earth, Japan

- 1 The World Commission on Dams (WCD) was established in May 1998 in response to the growing opposition to large-scale dams. It carried out an assessment of the development effectiveness of large dams, studied alternative water and power sources, and drafted internationally applicable guidelines. For more information on the World Commission on Dams, go to: [www.dams.org](http://www.dams.org)
- 2 The Japanese government, Japan Bank for International Cooperation, Japan International Cooperation Agency, and Tokyo Electric Power Services Co., Ltd., which provided all-out support for the project planning, feasibility study, detailed design and financing for the construction of Koto Panjang Dam in Indonesia have been sued by the affected local people.
- 3 For "Japan Bank for International Cooperation Guidelines for Confirmation of Environmental and Social Considerations," refer to: <http://www.jbic.go.jp/english/environ/guide/finance/eguide/index.php>
- 4 World Commission on Dams (2000) *Dams and Development: A New Framework for Decision-Making*, Earthscan Publications, London.



# Koto Panjang Dam Indonesia

BY FRIENDS OF THE EARTH JAPAN/NETWORK FOR INDONESIAN DEMOCRACY, JAPAN (NINDJA)

## PROJECT DESCRIPTION

Purpose: 114 MW power, flood control,  
irrigation, tourism development, fisheries.

Cost: \$251 million.

JBIC role: Funded the entire project.

Ownership: 100% owned by the State Electricity  
Company (PLN).

Number of People Affected: More than 4,886  
households, representing 17,000 to 23,000 people.

Status: Completed in 1996, commercial operation began  
in 1997. Due to very low water levels in the reservoir,  
the project does not generate power at full capacity.

PHOTO: Some villagers who were resettled for Koto Panjang Dam return to their previous homes to fish and farm. Some houses were not flooded due to lower than expected water levels in the reservoir.

## INTRODUCTION

The Koto Panjang Dam on the Kampar Kanan and Mahat Rivers in West Sumatra, Indonesia, was built with loans from what is now the Japan Bank for International Cooperation (JBIC). The feasibility study for the project was funded by the Japan International Cooperation Agency (JICA) and carried out by the Tokyo Electric Power Services Co., Ltd (TEPSCO). Japanese and Indonesian companies were awarded the construction contracts for the main part of the dam.

At least 4,886 households, representing between 17,000 and 23,000 people, were relocated in the early 1990s to make way for the dam. Their traditional lifestyle and culture has been destroyed and their living standards have declined considerably. In addition, endangered species such as the Sumatran elephant, Sumatran tiger, Malay bear and monkey could face extinction as a result of damage to their ecosystem. The local people demanded a halt to construction and Japanese funding from the time that work started on the dam in 1992, but their pleas were ignored and the project was completed in 1996. Nevertheless, the voices of opposition have continued to this day. In September 2002, 3,861 people from the project area filed a lawsuit in the Tokyo District Court demanding that the Japanese government, JBIC, JICA, and TEPSCO take measures to restore the affected rivers, and that they pay compensation of 5 million yen (about \$42,000) per person.

## MAIN CONCERNS

### **No participation or consent of affected people**

The affected people, who were ethnic Minangkabau, were given no chance to participate in decisions regarding the dam, nor on plans for resettlement and compensation. The people presented their demands for the quality and location of resettlement sites, as well as expectations for compensation, to the government. However, the local government and the electricity company told locals that if they resettled in the new location they would have a better life than today, and urged them to agree to the compensation offered. The military also intimidated the local people, and in the end the village leaders agreed to move.

Although every village house was promised compensation, it was limited. Compensation was set at extremely low levels, and the actual awards were different from those that had been promised.

Amid this background, in September 1991, five representatives from Riau province carried a petition with 700 signatures to Jakarta and presented their demands to the Indonesian parliament and Japanese Embassy. They demanded that no threats be used to coerce them to consent to resettlement and compensation, and that negotiations should take place not only with the village leaders, but directly with the villagers. In addition, one village representative and one member of a supporting NGO went to Japan to meet government officials, with Japanese parliamentarians observing. During those meetings they stated that if the resettlement problems could not be resolved, dam construction should not proceed. The Japanese government's response was that resettlement and compensation were issues that should be left to the Indonesian government to address. Subsequently, the Indonesian government deemed the resettlement issue to have been resolved, ignoring the contrary views of the villagers, and started construction work on the dam in 1992.

### Resettlement destroys livelihoods

Today, thousands of families from the ten villages that were forced to resettle are facing severe hardship in the resettlement area, with no income to sustain their lives. In many of the resettlement sites, the topsoil has washed away because the area was originally tropical rainforest that was bulldozed to create settlements. This makes agriculture impossible. Also, the water in the reservoir is of very poor quality because vegetation was not cleared and has rotted in the reservoir, making it unsuitable for household use.

The local governments originally promised resettled families land for houses and gardens, plus two hectares of rubber plantations per family. They promised that the rubber trees would already be planted and could be harvested within a few years. However, in reality, people only received the land for their house and garden, and there were only a few rubber trees growing alongside the roads. The promised plantation was the only source of cash income at the resettlement site, so most people's standard of living dropped after resettlement.

Before resettlement, some people were living on the income from their own rubber plantations, but after resettlement they had no choice but to work as farm laborers in other people's fields. Some people, women included, break rocks and sell them for construction use. Unable to find adequate sources of livelihood, some have moved back to their former lands, which remain exposed because of lower than expected water levels. Other people have simply moved away from the area.

Another shortcoming of the livelihood compensation plan was the problem of delayed compensation payments. By the time the reservoir began filling in 1997, a large number of the residents had still not received compensation, and even today some have not been paid. In 1998 and 2000, some residents filed lawsuits in the local district court against

***"If we had never moved and had continued getting income from the rubber plantation, by now my son could have been in university."***

— 43-year-old woman affected by the project.



One of the resettlement areas for communities displaced by Koto Panjang. The construction style of the buildings is more Javanese than Western Sumatran.

the Indonesian government and the State Electricity Company (PLN) demanding the payment of outstanding compensation.

### **Water supply problems at resettlement sites**

The lack of drinking water at the resettlement sites is a serious problem. The wells were full at the time of resettlement, but they turned out to be full with rainwater, and when the rain stopped, the wells dried up. To solve the water shortages, the government provided a piped water supply using provincial funds, but the water intake clogged with silt and is not functional. As a result, villagers who before resettlement were able to use spring water from very near their homes are now forced to buy water in plastic containers at very high cost during the dry season.

In addition, at Pongkai in Riau province, the houses that were provided have roofs containing asbestos. Says the head of Pongkai village: “As things are, we can’t even drink the rainwater that runs off the roof because of the asbestos.”

### **Destruction of Minangkabau society and culture**

The Minangkabau are an ethnic group that lives mainly in West Sumatra province, in the midwestern part of the island of Sumatra. Those displaced by the dam were Minangkabau, who lived according to their traditional customs and culture. The Minangkabau consist of village communities based on customary law. They are followers of Islam, and there is a mosque and a communal building called the *rumah gadang* (meaning “large house”) at the center of every village. Land in Minangkabau society is traditionally communally owned,

with each village having common land (*ulayat*) for use by the entire village or an individual clan (*suku*). The *ulayat* cannot be bought and sold, and is guided by customary law.

The project's feasibility study failed to take account of any of these characteristics of Minangkabau society. The evictees mounted a strong resistance to the treatment they were receiving, but the Suharto regime stationed military in the area and suppressed the opposition. Thus, with the social and cultural identity of Minangkabau society ignored, the villagers were resettled in a place that had neither *ulayat* land, nor *rumah gadang*. In addition, housing provided by the government was not the traditional Minangkabau style on stilts, but rather poorly-built wooden houses situated directly on the ground. Problems arose with the mosques as well, with some built facing the wrong direction, and others too small for everyone to enter, so the people had to build their own mosques. Besides these problems, existing relationships in society were ruined when people lost respect for some village leaders who had difficulty coping with resettlement and accepted bribes.

### **Ecosystem destruction and impacts on biodiversity**

The area surrounding the dam reservoir once boasted a rich natural environment, a treasure house of tropical plants and animals. The reservoir has destroyed that environment, bringing the threat of extinction to wildlife in the area. Sumatran elephants were designated an endangered species by the World Conservation Union (IUCN) in 1988, yet only 36 elephants were captured to avoid extinction (one died during capture), and 18 to 24 elephants were left to fend for themselves. Because their habitat was destroyed as a result of the dam, this herd of elephants ended up damaging the fields of resettlers, and one elephant was accidentally killed when a villager shot at it to scare it off. Further, the World Wide Fund for Nature Indonesia believes that most of the captured elephants have already died. This may be due to infections in scars from tranquilizer guns used during capture and wounds caused by chains during transfer. There have been reports that the captured elephants were not released in a wildlife protection area as recommended by Riau University, but transferred to an elephant training center, where they were not provided with adequate food and died from starvation.

Besides the Sumatran elephant, many other species lived in the dam catchment area, including the endangered Sumatran tiger, the endangered Malay tapir, the Malay bear, and various monkeys. No measures were taken to save these other animals, however, and many of them fled to an island that formed temporarily in the reservoir as the waters rose, but according to local reports they could not find food and almost all died of starvation.

### **Economic viability in question**

Today the dam is facing serious economic problems as a result of low water levels, which have left it unable to function at full capacity. Logging continues to take place in the dam's catchment area, and a wide swath of land around the reservoir has been denuded of vegetation to make way for resettlement sites and rubber plantations. As a result, sedimentation in the reservoir is increasing, reducing the lifespan of the dam which threatens to make it even more of a financial liability for Indonesians. Because profits from power generation are now doubtful, the State Electricity Company – already in financial difficulty – is unlikely to recover the cost of constructing the dam, leaving it in greater debt.



## RECOMMENDATIONS

JBIC imposed three conditions on Indonesia when the loan agreement for the first phase of construction was signed in 1990: (1) all elephants living in the project area must be transferred to an appropriate protected area, (2) the living standard of households that will be affected by the project must be equal to or higher than before resettlement, and (3) consent for resettlement of project-affected households must be obtained in a way that is fair and equitable. In reality, none of these three conditions were honored, but Japan's Ministry of Foreign Affairs justifies the situation by claiming that the conditions were just "requests." The government of Japan and JBIC have tried to avoid responsibility by stressing that the problems arising from this project are domestic matters for the Indonesian government. It would seem appropriate, however, to challenge the responsibility of the Japanese parties, who failed to ensure that proper consideration was being given to the environment and the resettlement of villagers.

In September 2002, a group of 3,861 evictees filed a lawsuit in the Tokyo District Court demanding that the Japanese government, JBIC, JICA, and TEPSCO press the Indonesian government and the State Electricity Company (PLN) to take the following actions to restore conditions to their original state:

- Restore the Kampar Kanan and Mahat Rivers to their original flows as they were before construction of the Koto Panjang Dam, by immediately opening the sluice gates of the dam.
- Take adequate measures to restore the environment for the survival of endangered species, by creating adequate channels, or by making the proper modifications to the base of the Koto Panjang Dam to allow water to pass through, in order to restore the areas along the Kampar Kanan and Mahat Rivers.

They are also demanding compensation payments of 5 million yen per person.

JBIC should own up to its responsibility for the failures of this project, and ensure that the affected people receive adequate compensation for their losses. In addition, JBIC should work with the Indonesian government to restore the rivers to their original flows.

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- Kubo Yasuyuki, "The state of human rights and environmental models-Indonesia," in "How should we change ODA?," *Commons*, 10 June 2002, pages 62-79 (in Japanese).





# San Roque Multipurpose Project

The Philippines

BY THE CORDILLERA PEOPLE'S ALLIANCE, THE PHILIPPINES

## PROJECT DESCRIPTION

Purpose: 345 MW power, irrigation of 87,000 hectares, flood control and water quality improvements.

Cost: \$1.19 billion.

JBIC role: Provided \$700 million in loans to the consortium and leveraged additional funds from private banks.

Ownership: 100% foreign-owned by the San Roque Power Corporation, consisting of Marubeni, Kansai Electric and Sithe Energies.

Number of People Affected: 4,400 people resettled, thousands more could be affected by sedimentation upstream of the dam.

Status: Construction complete, operational by March 2003.

## INTRODUCTION

The San Roque Multipurpose Project has been one of the most controversial projects funded by JBIC to date. The dam has displaced more than 4,400 people, and threatens the livelihood of thousands of indigenous Ibaloi people living upstream of the dam. The Ibaloi have been opposed to the project since its inception in 1998, yet contrary to Philippine law and JBIC policies on indigenous people, the project has been built, with commercial operation scheduled to begin in March 2003.

As well as having enormous social and environmental impacts, the project's economic viability is in doubt. The price of the power for the Philippine government is extraordinarily high, and the irrigation component of the project lacks funding, and may never be developed. With this in mind, affected communities are demanding that the project be halted and proper compensation be provided to all people affected by the dam's construction. They are also demanding that JBIC refuse funding for the irrigation component of the dam until all outstanding compensation issues are resolved.

## MAIN CONCERNS

### **Destruction of the Ibaloi's land and culture**

The Agno River is known as the cultural heartland of the Ibaloi people. The fertile land along the river and the gold ore found in the mountains have sustained several distinct Ibaloi communities engaged in agriculture, fishing and small-scale gold panning for generations. For the Ibaloi, land and water are resources to be used and shared with their kin, ancestors and gods.

These very resources are under threat from the San Roque Dam project. The Cordillera People's Alliance estimates that approximately 20,000 residents of Itogon, Benguet, will be affected by sediment that will accumulate behind the reservoir over the course of the dam's life. This sediment will eventually submerge the homes, rice terraces, orchards, pasture lands, gardens and burial grounds of the Ibaloi close to the Agno River.

This is not the first time the Ibaloi have experienced the negative impacts of hydroelectric dams. The Ambuklao and Binga dams were constructed upstream on the Agno River in the 1950s. During that time, the Ibaloi were called upon to sacrifice their lands and their lives for the sake of “national development”. Though both dams were for electric power, nearby communities have seen few benefits and most still have no electricity. Many of those relocated were never compensated for the loss of their homes, lands and livelihoods, and more than 70 Ibaloi families have lost their land and houses to sedimentation that has backed up behind Ambuklao Dam. At present, Ambuklao Dam is non-functional as a result of the serious sedimentation problem. Binga Dam is also heavily silted and its partial operation is maintained by the water coming from Ambuklao Dam. Because of this experience, the Ibaloi have been opposed to the San Roque Dam since its inception.

### **Failure to fulfill commitments on resettlement and compensation**

4,400 people were resettled to make way for the project, and many gold-panners and farmers in Pangasinan were deprived of their livelihood. Most of these people were subsistence farmers who met their basic needs from gold-panning, farming, gardening and animal raising. JBIC and the San Roque Power Corporation claimed that resettlement would be carried out according to international best practice, which requires that the standard of living of those resettled is at least restored, and preferably improved, after resettlement. Yet three years after they were moved, many people are struggling to survive in cramped resettlement sites without any land or source of income. Conditions at the resettlement sites are approaching desperation for some families.

One 39-year-old woman with three children said, “Before we moved, we were far better off. Even though we had smaller houses, we had sources of livelihood. We could eat, grow vegetables, do gold panning. Here we need money to survive but we have no source of income. Life here is difficult.”

As most people have no source of income, many cannot afford to pay their electricity and water bills. Some have already had their services cut off. Because most of the relocated families were tenant farmers, they were entitled to compensation only for their house, land improvements and crops. Livelihood programs promised to the resettled families have proved unsuccessful. Out of 180 families who moved to the Camangaan resettlement site in 1999, some 30 households have already sold their houses and moved away because of the lack of sustainable livelihoods.

Last year, the National Power Corporation (NPC) banned all gold panning activities along the lower Agno River, depriving 3,000 people of a major source of livelihood during the rainy season. In response, more than 1,000 gold panners petitioned NPC and San Roque Power Corporation to allow them to continue gold panning. In spite of a series of protest actions and dialogues held between NPC and gold panners, the people’s demands for proper compensation and alternative sources of livelihood remain unheeded.

***“Before we moved, we were far better off. Even though we had smaller houses, we had sources of livelihood. Here we need money to survive but we have no source of income. Life here is difficult.”***

– 39-year-old mother of three displaced by San Roque Dam.



There is no room for growing food or raising livestock at the Camangaan resettlement site.

### **Lack of free and prior informed consent**

The Indigenous Peoples' Rights Act (IPRA) of the Philippines requires the free and prior informed consent of indigenous peoples for projects that impact their ancestral lands. When the affected Ibaloi communities learned of the San Roque Dam, they immediately raised their concerns about the adverse impacts of this project. In spite of their efforts in reaching out to the Philippine government, JBIC and the power company through dialogues, appeals, and petition letters, the project was built.

A report released in 2001 by the Office of the Presidential Assistant on Indigenous Peoples' Affairs validated claims that project proponents did not obtain the free and prior informed consent of affected indigenous communities and that consultations were conducted only after the project was already underway. Indigenous Ibaloi communities living upstream of the dam intend to file a lawsuit to stop the project based on the violation of IPRA and other Philippine laws.

The tenant farmers who were resettled for the project also had no choice but to agree to be relocated since the National Power Corporation was able to buy the land from their owners. The tenants were made to sign forms in English indicating their agreement to be relocated with compensation, even though most people could not understand English.

### **Increased flooding downstream**

Farmers downstream of the San Roque Dam experience flooding every time the two existing dams along the Agno River, Ambuklao and Binga, release water during the rainy season. The flooding has destroyed thousands of hectares of rice fields, fishponds and homes. The operation of the San Roque Dam will put downstream communities at greater risk, especially during extreme flood events, when there will be even more water backed up behind dams that will need to be released quickly.

An independent scientific review of the Environmental Impact Assessment for the project found that the reservoir was only designed to contain a relatively small flood expected to occur once every five years. The reviewer states that “building a dam that will contain the five-year flood is asking those below the dam to develop a false sense of security” resulting in “far more devastating floods when the five-year magnitude of flood does arrive.”<sup>1</sup> Even though the dam is scheduled to begin operation soon, no flood management plan has been made available to the public.

### **Onerous agreement puts debt burden on Philippine people**

The Power Purchase Agreement between the San Roque Power Corporation (SRPC) and the Philippine government’s National Power Corporation (NPC) is heavily weighted in favor of the SRPC. The cost of the power is hugely inflated, and the NPC has agreed to pay \$10 million a month to the SRPC regardless of whether there is sufficient water available to generate power.<sup>2</sup> Aside from this, the Philippine government is responsible for paying back \$400 million in loans to JBIC as a subsidy to the project. This means another debt burden for the Philippine electricity consumers and taxpayers.

### **A TOUGH LESSON FOR JBIC**

The San Roque Dam project became a major problem for JBIC. Many of these problems could have been avoided had JBIC played a more active role in project selection and preparation, and had there been clear monitoring throughout project implementation. Some of the lessons that JBIC could learn from this project are as follows:

1. JBIC should have considered the petition submitted by affected Ibalois and the Cordillera People’s Alliance prior to loan approval and, rather than relying on the proponent’s claims, should have determined for itself whether there was true public acceptance of the project. Likewise, the Association of Gold Panners of San Nicolas should have been informed and consulted prior to any decisions made over funding.
2. JBIC should have properly evaluated the feasibility of the irrigation component as well as its social and environmental impacts prior to funding the project. National Irrigation Administration (NIA) engineers now admit that the San Roque Dam is not the best source of irrigation water, and only half the original target area will be irrigated, due to strong opposition to the project.
3. The project funding agreement should have included binding legal conditions to ensure protection of the environment and provision of sustainable livelihood sources and just compensation to affected communities. Violations of these conditions should have been grounds to stop or withhold disbursements. The conditions should have been made public and subjected to independent monitoring.
4. Legitimate stakeholders, particularly from the communities adversely affected by the project, should have been identified and included in the process of monitoring and evaluation of project implementation, and there should have been clear stipulations on how outstanding issues raised by affected communities were to be resolved.

Last year, the Philippines Inter-Agency Review Committee investigated several independent power producer contracts and found serious problems with the contract for San Roque. Philippine President Gloria Macapagal-Arroyo stated that the San Roque contract and four others “have both legal and financial issues that need to be referred for appropriate study, renegotiation and possible legal action.” Critics in the Legislature have charged that the contracts were unfair to the public as they required NPC to pay huge amounts to independent electricity producers even if it did not use this power.

### RECOMMENDATIONS

Ibaloi communities, displaced farmers and gold-panners in Pangasinan are demanding that the project be halted and proper compensation be provided to all people affected by the dam’s construction. This includes adequate monetary compensation for gold-panners, as well as sustainable livelihood sources for all displaced people, including land, employment and other sources of regular income. Also, JBIC should ensure that there are mechanisms in place to guarantee that those adversely affected by the project in the future are adequately compensated for their losses, through holding appropriate consultations with legitimate stakeholders.

The Philippine government is currently requesting funding from JBIC for the irrigation component of the dam. JBIC should only consider funding the irrigation component if all outstanding issues raised by the dam-affected communities have been resolved. Further, affected communities believe that JBIC should study other options for meeting the irrigation needs of Pangasinan farmers. The irrigation scheme for San Roque may lead to massive flooding, the destruction of rice fields to make way for big canals, and a higher debt burden for the Philippine people. Increasing the efficiency of existing irrigation systems and funding smaller-scale irrigation projects should be given serious consideration.

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# Lam Takong Pumped Storage Project Thailand

BY SOUTHEAST ASIA RIVERS NETWORK, THAILAND

## PROJECT DESCRIPTION

**Purpose:** 1,000 MW power. The project pumps water from an existing reservoir up to the top of a mountain, where it is stored in a purpose-built reservoir. The stored water is released to generate power during peak demand periods.

**Cost:** \$778 million.

**JBIC role:** Provided \$148.5 million in loans to EGAT for procurement of equipment, transmission lines and supervision consultants.

**Ownership:** 100% owned by the Electricity Generating Authority of Thailand (EGAT).

**Number of People Affected:** 371 affected by construction-related blasting.

**Status:** Completed in 2001. However, the project is still not operational due to structural problems in the upper reservoir.

## INTRODUCTION

Lam Takong is a pumped storage hydropower project situated in Nakhon Ratchasima province, in the Northeast of Thailand. The project was funded by the World Bank and Japan's OECF, now known as JBIC. Blasting of rocks and other matter during construction has destroyed the livelihoods of several hundred people, who have lost agricultural land, crops, livestock and access to natural resources. They are now struggling to survive, indebted to loan sharks, their lives ruined. Villagers are demanding that the Electricity Generating Authority of Thailand (EGAT), JBIC and the World Bank restore their livelihoods and their health.

## MAIN CONCERNS

### **Project construction destroys villagers' livelihoods**

Prior to the project, Khao Yai Tiang villagers were subsistence farmers, earning income from fruit trees, and dairy and beef cows. They relied on common property resources in the area such as non timber forest products and community grazing grounds. Now, the community's livelihood has been destroyed, their health ruined, their lives in tatters. All for a project that is not even operational yet. Affected people should be amongst the first to benefit from a project such as this, rather than being left to pick up the pieces of their lives after construction is complete.

For two years and seven months, project developers blasted bedrock to make way for the upper reservoir, underground powerhouse and tunnel. This blasting caused countless impacts to villagers. The blasting created disturbing vibrations, noise and air pollution. Contaminated dust fell everywhere, including into wells, on fruit orchards, grazing fields and house roofs. This dust destroyed natural resources in the area. Wild products such as bamboo shoots, mushrooms, grass for cows and native species such as frogs were lost.

Agricultural production dropped dramatically, villagers' crops failed and they faced decreasing food security. Cows became sick and failed to produce milk. Beef cattle, pigs,





***'My daughter left home to work as a laborer in the city, leaving her baby with me, occasionally sending some money for the baby's milk. My corn farm has been unproductive since the blasting started, just like my health. I am in debt with loan sharks. I have to make brooms for my living, and to pay the loan sharks' huge amount of interest.'*** - 50-year-old woman.

chickens and ducks became sick and died. Communal wells dried out, and those wells that did not dry out were contaminated, causing illness and death to people and animals. Rainwater storage tanks were also contaminated. During the long period of blasting, villagers had severe shortages of clean water. Some villagers are still facing water shortages.

The failure of agricultural production and the loss of natural resources forced the villagers into poverty. Not only did they lose their income, but they also had to purchase food and medicine. Many households are indebted to both the agricultural cooperative established by EGAT and loan sharks.

### **Villagers suffer physical and mental health problems**

As a result of drinking and bathing in contaminated water and breathing polluted air, villagers suffered from respiratory illnesses, skin rashes, diarrhea and vomiting. Healthy people became seriously ill and had no energy to work. Even today, some people remain sick and disabled.

In addition, thunderous noise during the construction period caused anxiety amongst villagers. People have been anxious about the illness of their family members, their lack of livelihood, debt and other problems that have arisen since construction started.

The lack of assistance from the project's owner, EGAT, has led to despair amongst the affected communities, who have no faith in the state's problem-solving processes. People feel that they have been cheated and have lost their security of life.

### **Community disintegration**

The project has destroyed the community's unity. Villagers are divided into two groups: those opposed to the project and those who support it. Those who support the project are mostly the headmen, who receive financial support from EGAT. The formerly peaceful, united community has now become divided and unfriendly. As a result of these difficulties, many villagers have had to migrate to other places to find paid work. In many cases parents have had to leave their children with the elders.

***'I'm still young but now my health is so bad. I hurt even when I breathe. I cannot work anymore. I am also in debt. I feel we, the villagers, were cheated and ruined by this monstrous project.'***

- 32-year-old man who worked in the project construction site for 1 year and quit because of illness.



### **Lack of participation and disclosure of information**

The project was implemented without the genuine participation of affected communities. Instead, EGAT invested in public relations efforts to create a positive attitude toward the project, providing only information about the project's supposed benefits. For example, EGAT broadcast programs about the project's supposedly successful mitigation plans, which in reality were a failure. What's more, EGAT is promoting the upper reservoir as a tourist attraction, calling it the "sky-high lake".

Communities were never warned about the impacts of construction on their livelihoods and lives. EGAT made grand promises to villagers of compensation, vocational training and an agricultural cooperative, but villagers were never informed about the potential negative aspects of the project, and many of the promises failed to materialize.

### **A long struggle with few results**

Since 1996, villagers have raised their concerns with EGAT and asked for assistance in solving their problems. However, despite the many years of struggle, there has been little success for the villagers. In 1998, EGAT built a pond, but the water in the pond was laden with sediment and unsuitable for drinking or bathing. Complaints to provincial officials have also been rejected. A provincial committee set up to investigate the problems in 1998 refused to recognize any impacts from the blasting.

Due to EGAT's failure to adequately respond to complaints from affected communities, they joined the people's organization Assembly of the Poor and demanded that the Thai Government establish an investigative committee. In 2001, because of the villagers' ongoing efforts, the government established a committee but failed to allocate a budget, making the committee unable to complete its tasks.

In 2002, the villagers demanded that JBIC take responsibility for the impacts due to its role in funding the project. However, JBIC has consistently refused to accept responsibility for the impacts, stating that the villagers should bring their claims to the World Bank or the Thai government. This is unacceptable – JBIC needs to accept responsibility for its role in financing the project.

### RECOMMENDATIONS

Construction has been completed yet villagers' sufferings have not been mitigated. Villagers are requesting that JBIC assist in the following measures:

- Recovery of the villager's health and cancellation of the debt caused by the impacts of project construction.
- Installation of a clean water supply.
- A reparations fund for the community to restore villagers' livelihoods. Since the natural environment is currently recovering, there is a need for inputs to boost agricultural production. However, most villagers lack the capital to invest in such activities.

Finally, and most significantly, monitoring must be strengthened. JBIC should assist in establishing an independent committee consisting of representatives of JBIC and the World Bank, EGAT, affected communities, academics and NGOs to monitor the implementation of mitigation and reparations measures. It is important that the committee is accepted and agreed to by the affected people as well as the government.



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# Zipingpu Dam China

BY INTERNATIONAL RIVERS NETWORK, USA

## PROJECT DESCRIPTION

Purpose: 750 MW power, irrigation, urban water supply, flood control.

Cost: \$750 million.

JBIC role: JBIC approved a \$260 million loan for the dam in March 2001 but has not yet released funds.

Ownership: People's Government of Sichuan province is developing the project.

Number of People Affected: 40,000 people resettled, including ethnic Tibetans.

Status: Preparation started in 2001 and is expected to be finished in 2006.

PHOTO: A statue in Sichuan honors the designers of the ancient Dujiangyan waterworks, which will be destroyed if Zipingpu Dam is completed. Photo: Yu Chiu-Yu

## INTRODUCTION

The Zipingpu Dam in Sichuan province, China, is becoming one of the most controversial projects in China. Construction of the project began in July 2001, and is scheduled to be completed in 2006. One of the main concerns is the project's impact on the Dujiangyan waterworks, a 2,200 year-old cultural heritage site that has greatly boosted agricultural production in the area. The project will also require the forced resettlement of around 40,000 people, many of whom are ethnic Tibetans.

JBIC is providing about one-third of the project's funding, but until now has not responded to concerns raised by academics and government officials within China and NGOs outside of China. JBIC's failure to release key documents such as the Environmental Impact Assessment and Resettlement Action Plan indicates that the agency is failing to live up to its promises of greater openness and participation.

## MAIN CONCERNS

Within China, information and media coverage about the project has been strictly controlled by the government. However, transcripts obtained from an internal meeting held in September 2000 reveal controversy over the dam and disagreement at high levels of government and academia.

### Forced resettlement

The project will require the resettlement of at least 40,000 people to make way for its 18-square kilometer reservoir. Part of the impacted area falls within the Aba Tibetan and Jiang Autonomous County, meaning ethnic Tibetans may be among those forced to move. Resettlement in minority areas is highly controversial. In 2000, the World Bank proposed providing funds for the settlement of ethnic Han Chinese in Tibetan areas in Qinghai province, north of Sichuan. Global protest quickly followed, forcing the World Bank to abandon its support for the project.

Residents in the area are already complaining about being resettled, but legal mechanisms to address their grievances do not exist. One farmer explained, “My family has been here for generations and the officials are only giving us compensation of 200 renminbi (\$25) per square meter for our homes.”<sup>1</sup> At other projects involving forced resettlement in China, such as the Three Gorges Dam, people who have raised concerns about the adequacy of resettlement and compensation programs have been subjected to police brutality and imprisonment in an effort to silence them.

### **“Go West” development drive**

Zipingpu is a part of China’s western development – or “Go West” – strategy and is the first of several proposed dams on the Min River. The western development strategy was announced in 2000 to drive both Chinese and foreign investment for infrastructure projects that will facilitate resource extraction in western areas of the country. Critics of the development strategy contend that it is more about nationalism than effective economic development. Tibetans, and their supporters from around the world, fear that the Chinese government is using the development scheme to solidify its grip on its restive western regions, including Tibet. It is expected that Zipingpu will fuel environmentally destructive resource extraction activities in Sichuan province and, more controversially, Tibet.

### **Cultural heritage lost**

Nine kilometers downstream from the proposed Zipingpu Dam site is the Dujiangyan waterworks. A 2,200 year-old project that has tamed floods and distributed the Min River waters for irrigation, Dujiangyan helped the area gain its reputation as China’s granary. In 2000, UNESCO nominated Dujiangyan as a World Heritage Site, declaring it “a major landmark in the development of water management and technology.” World Heritage status has not yet been granted because of questions over Zipingpu Dam’s impact on Dujiangyan.

Since power sales are necessary to pay back Zipingpu’s construction loans, dam opponents fear that once Zipingpu is completed, plans for another dam just downstream of it are likely to be implemented. The Yuzui Dam would re-regulate Zipingpu’s releases and increase its power generation by more than 50%. Yuzui would be just 700 meters away from Dujiangyan – destroying the area’s scenery and ending Dujiangyan’s role as an effective irrigation and flood management system.

### **Overstated benefits**

Dam proponents claim that the project will irrigate 11.34 million acres of land while critics contend that Dujiangyan already irrigates 11 million of those acres. Chinese hydrologists point out that the project’s flood prevention ability is low. Zipingpu’s reservoir will be 1.1 billion cubic meters, yet hydrologists argue that the annual flow in the Min River is 90 billion cubic meters, too great for Zipingpu to effectively manage.

### **Earthquake risks increased**

Seismologists from China’s Earthquake Bureau warned in the September 2000 meeting that Zipingpu is situated too close to an active fault line and could trigger disastrous



earthquakes. They point out that in 1933, an earthquake in the region caused landslides that killed 9,000 people in the upper Min River area.

### **JBIC failure to release key information**

JBIC claims that according to the Chinese EIA, Zipingpu will not have serious impacts to the environment or the Dujiangyan waterworks. Nevertheless, despite repeated requests, JBIC refuses to release a copy of the EIA to NGOs, claiming that Chinese authorities will not allow release of the contents to any third party. This is contrary to JBIC's new Environmental Guidelines, which require JBIC to publicly release EIAs and other environmental documents for projects with significant environmental impacts.

Following a request from a member of the Japanese Diet, JBIC released a "summary" of the EIA in July 2002. The one page summary presents general claims that the "ecological landscape of interested area will not be affected seriously...Main landscape of Dujiangyan...and whole natural system of interested area will not be affected significantly." Data to prove these claims are not included in the summary. The summary notes that "there are some impacts on ecology and social environment in resettlement area", yet does not elaborate any further on what these impacts might be. The information in the summary is clearly insufficient to allow any independent assessment of the likely impacts of the project.

### **RECOMMENDATIONS**

The Zipingpu project should be suspended until there is a full and comprehensive resettlement plan made available to the public. The resettlement plan should be prepared in consultation with affected people and should have their approval. The EIA and other project documents should be released, and independent studies on seismicity and the project's impacts on the Dujiangyan waterworks should be conducted. JBIC should not proceed with loan disbursements for Zipingpu until these studies are completed, and until there is an opportunity for public debate on the benefits and risks of the project.

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1 David Murphy, "Dam the Consequences", *Far Eastern Economic Review*, May 23, 2002





# Metro Manila Flood Control Project

The Philippines

BY COMMUNITY ORGANIZERS MULTIVERSITY, THE PHILIPPINES

## PROJECT DESCRIPTION

Purpose: Flood control.

Project components: 9.8 kilometer road dike, plus floodgates, regulatory ponds and pumping stations at the mouths of four rivers leading to Laguna Lake.

Cost: \$80 million.

JBIC role: Financing of the entire project.

Ownership: Philippine government.

Number of People Affected: Around 380,000 people: some will lose their livelihood sources and others will be forcibly evicted from their homes and land.

Status: Construction began in 2001. Construction was halted for six months last year due to community opposition.

## INTRODUCTION

The Metro Manila Flood Control Project involves the construction of a 9.8 kilometer road dike and associated infrastructure along the shoreline of Laguna Lake in the towns of Taguig and Taytay. The Japan International Cooperation Agency (JICA) conducted a master plan and feasibility study for the project, and subsequently the OECF (JBIC's predecessor) funded the detailed design and construction on the project. The engineering services were carried out by a Japanese consultant, and the construction contracts were awarded to one Korean and two Japanese companies.

According to the government, the main purpose is to prevent flooding in five towns near Laguna Lake caused by the rise of its water level during the wet season. However, the project is likely to destroy the ecology of the lake and affect the land and livelihoods of around 380,000 people who depend on the lake for fishing and farming. The project is also unlikely to solve the flooding problems in the area because it will maintain the water level of the lake at an unnaturally high level.

## MAIN CONCERNS

### **Destruction of the Laguna Lake ecosystem and impacts to livelihood**

Laguna Lake is a 91,000 hectare watershed or catch basin covering the Rizal and Laguna provinces and part of Metro Manila. It is home to 23 endemic species of fish. Rice and other agricultural products are grown on the wetlands along its shoreline, and the lake provides important fishing and farming grounds for around 380,000 people. These people are concerned about the impacts of this project on the water quality and ecological balance of the lake.

The Laguna Lake is composed of freshwater and salt water and its ecosystem depends on the intrusion of saline water from Manila Bay through the Pasig River at times of low water level to sustain the biological life in the lake. However, two flood control projects, the Napindan Hydraulic Control (1983) and the Mangahan Floodway (1987), drastically altered the natural ecology of the lake. The former project impeded the flow of fresh water

and salt water between Manila Bay and Laguna Lake, meaning that there was less salt water intrusion, and less ability for the lake to drain into the bay. The latter project diverted additional fresh water into the lake, meaning that there was now much more water in the lake, but limited means of discharging this water into the sea. The result was more extreme flooding along the lake-side towns and permanent flooding of the shoreline wetlands, making the wetlands unusable for agriculture and destroying fish breeding grounds. It caused declines in fish catch and the disappearance of some endemic fish species.

Instead of fixing this situation, the government has pushed through another infrastructure project, the road dike project. In February 2002, an official of the Department of Public Works and Highways (DPWH) stated that one objective of this project is to make permanent the non-intrusion of saline water and maintain a high water level in the lake – at an elevation of 12.5 meters. The Secretary of the Office for Official Development Assistance Absorption (ODAA) added that this would be necessary in order to use the water in the lake for domestic drinking purposes.

The people fear, however, that this project will aggravate the problems caused by the two past flood control projects which have destroyed the Laguna Lake ecosystem. As a result of this project, many more areas along the lake will experience more severe flooding. In addition, fisheries will continue to decline, fisherfolk will lose access to the lake, and families will be unable to grow rice and other crops along the shoreline areas.

### **Loss of land and livelihood**

The government officially estimates that about 2,000 households will be evicted from the construction site of the dike. The people, however, have been concerned that an additional 28,000 urban poor, farmers and fisherfolk at the northern end of Laguna Lake in West Mangahan area, as well as at the dike site, will lose their homes and livelihoods to the project, with very little compensation. Of these, 25,000 people living in shanty towns on the edge of the lake will be evicted due to construction activities or because their homes will be flooded. A further 3,000 farmers and fisherfolk will have their farmlands destroyed by the construction and lose access to the lake for fishing and other activities. Some of these people were not even given advance warning that their farmlands would be destroyed. Most will receive little compensation and already poor people will be further impoverished.

Residents are also concerned about the structural safety of the dike, which is built on soft and unstable wetlands. In the past, extraordinary winds along the lake have caused massive waves which could destabilize or damage the dike, causing water seepages or flooding. The waves could also cause water to overtop the dike, posing a flood danger to residents. In addition, local seismic experts have stated that any ground movement due to the nearby Marikina Faultline would affect the area and could render the dike structure unstable. There are more than 3,000 families living within a 100 meter distance below the elevation of the dike structure who are in danger should the dike fail.

### **Inadequate consultation and access to information**

Many affected communities knew nothing about the project until construction began. After construction started, the affected residents were given conflicting and confusing



information. Residents without land title were simply told to vacate their lands, with very little assistance from the government. Some households along the Napindan River accepted as little as \$100 for vacating their houses. Some fisherfolk were told that they would not be affected by the project, only to discover later that the project will in fact impede their access to the lake. Many of the residents had to initiate dialogue and negotiation with the government themselves, or protest, in order to procure some assistance for their move.

### **Violation of Philippine law**

The 1997 Environment Impact Assessment law requires the participation of both directly and indirectly affected people in project planning prior to construction. It also requires the project developer to undertake a comprehensive risk assessment and environmental management plan, and to form an environmental monitoring team composed of all stakeholders. The developer should allocate funds for all these activities prior to project construction. None of these requirements were fulfilled, even to this day.

The 1998 Fisheries Code of the Philippines gives fisherfolk the right to plan and manage their coastal or water resources through the establishment of Fisheries and Aquatic Resource Management Councils (FARMCs). FARMCs around the lake were established in 1998, but they were not consulted about the dike project before construction commenced in 2001. In addition, eight months after construction started, the Laguna Lake Development Authority stated that the project had no permit from their office.

The government contends that this project is not covered by these changes to the law, as the Environmental Compliance Certificate was issued in 1993. This is certainly not acceptable – the project’s certificate should have been updated prior to the commencement of construction in 2001 to reflect the changes in the law.

### **Inadequate Environmental Impact Assessment**

The Environmental Impact Assessment for the project is more than ten years old, and does not reflect the changing conditions in the lake area. The EIA looked at only the five towns directly affected by the project, and failed to consider the 28 towns around the lake that will be affected upon its completion. There is no clear assessment of the project’s possible risks to the people living around the lake, nor to the lake’s ecosystem.

In 2001, as a result of protests by local communities, the DPWH issued a memorandum suspending construction and recommending a new Environmental Impact Assessment and an expanded consultation to include all the towns around the lake. This was an apparent recognition of the people’s concerns. But after conducting three meetings with limited participation in February 2002, the government resumed construction in the pump installation area in May 2002. This resumption of the project is contrary to the government’s own previous order.

### **Lack of consideration of alternatives**

A study by the Laguna Lake Development Authority shows that there are other options for controlling floods in the lake-side towns. The needs of lake-dependent communities and the importance of the saltwater intrusion and wetlands to the ecological balance of the lake were not considered in the 1989 Environmental Impact Assessment.

Comprehensive studies with the participation of lake-side communities should be conducted on the best options for protecting and rehabilitating Laguna Lake, as well as for protecting the towns around the lake from destructive flooding.



Fishing and farming in the Laguna Lake will be threatened if the project is completed.

### **JBIC's role**

Affected communities have brought their concerns directly to JBIC. In 2001, representatives of JBIC said that if there are many people who would be adversely affected by this project, they will stop disbursements. However, after the government resumed construction in May 2002 without a new EIA and without an expanded consultation with all legitimate stakeholders, JBIC failed to take appropriate actions in order to stop construction.

### **RECOMMENDATIONS**

It is recommended that the project be suspended and the government undertake a new Environmental Impact Assessment with the full participation of the affected lake-wide groups and academics from University of the Philippines-Los Banos (UP-LB). This new EIA should follow the guidelines provided by the 1997 EIA law, meaning that it should be subject to evaluation, public hearing and approval. In 2002, a community-based EIA was conducted with UP-LB, the results of which should be reflected in a new EIA in order to secure the project's social acceptability.

The study must examine different alternatives for flood management within a framework of rehabilitation of the lake and its wetlands. The Philippine government states that one of the reasons it cannot conduct comprehensive studies on alternatives is because of the outstanding financial obligations to JBIC and the contractors from the existing loan. JBIC should consider canceling the existing loan and supporting a comprehensive study on alternatives.

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# Kelau Dam Malaysia

BY SAHABAT ALAM MALAYSIA (FRIENDS OF THE EARTH MALAYSIA)

## PROJECT DESCRIPTION

Purpose: Water supply to Selangor State and Kuala Lumpur.

Cost: \$1 billion.

JBIC role: Financing of the entire project.

Ownership: 100% owned by the Federal Government of Malaysia.

Number of People Affected: 325 indigenous people and 120 Malay farmers to be resettled.

Status: Construction to commence in 2003 after agreements are finalized.

PHOTO: The Orang Asli Village of Temir River, which will be resettled to make way for the Kelau Dam.

## INTRODUCTION

The Kelau Dam is proposed to meet the water demands of Selangor State and Kuala Lumpur in Malaysia. The project would transfer around 1.5 billion liters of water per day from the Kelau River in Pahang State to the Langat River in Selangor State. The project would be fully funded by JBIC.

The dam will have serious impacts on the Kelau River ecosystem and will require the resettlement of 325 indigenous people and 120 Malay farmers, seriously affecting their lives and livelihoods. Yet there is no clear need for the water: studies by Malaysian NGOs show that the current water supply system in Selangor state is wasteful and beset with inefficiencies. Investment in water conservation measures and reduction in system losses could result in water savings that would make the construction of the Kelau Dam unnecessary.

## MAIN CONCERNS

### **Water system losses greater than forty percent**

Construction of the Kelau Dam will not address the grave inefficiencies of the Selangor State water system. Per capita water consumption in Selangor and Kuala Lumpur is among the highest in the world; even surpassing major cities such as London, Tokyo, Sydney and Singapore. In total, over three billion liters per day was consumed in 2000.

More than 40 percent of this amount is lost by the distribution system through leakage and theft.<sup>1</sup> Thus the primary cause of the high consumption rate in Selangor is the high rate of system losses. In 2000, Selangor wasted around one billion liters of water per day.

Despite this, local water authorities refuse to implement a comprehensive program to reduce these tremendous losses. The Water Affairs Corporation of Selangor claims that reducing system losses to a rate of 10 percent “is too ideal” as the cost of replacing most of the old asbestos and cement pipes currently in use would be “exorbitant.”<sup>2</sup> From 1995-2000, only \$125 million was spent on reducing system losses for the entire coun-



try.<sup>3</sup> This is alarming considering that the state is willing to spend \$1.6 billion on the construction of two large dams within four years.

Such a refusal is clearly political rather than rational – illustrating a lack of political will, as well as an ignorance of the practical possibilities and potential financial benefits of an efficient system. Singapore has managed to reduce its system losses to less than seven percent by implementing a range of measures. The old pipes installed decades ago were replaced with more durable and corrosion-resistant materials. The distribution system is now metered from start to end, and water mains and valves are computerized, with regular leakage-detection tests conducted for the entire network and a service hotline established. Deterrent measures against illegal connections were also made more stringent.

By carefully developing a proper financing plan which includes pricing revision, revenue from what was previously system losses could significantly offset the funds used to change pipes and meters. To continuously delay such efforts is unwise. The longer effective action to reduce system losses is postponed, the more it will cost.

### **Inflated water demand projections**

The project proponent and the project EIA authors use inflated water demand projections for the period until 2020. If proper demand management strategies are implemented, and if system losses are reduced to 15 percent, per capita consumption could be reduced to about 40 per cent of what it is today by 2020 (see box for details). Assuming current population growth rates, demand could be reduced to 3.2 billion liters per day, even if the industrial demand doubles by 2020. This is not far above the state's current production capacity. In addition, another controversial new dam is scheduled to add about one billion liters per day to Selangor's current supply by 2005.

In contrast to a demand management plan, the projections of the project proponents would waste

## **Water Savings Measures Pay in the End**

The Malaysian government could adopt a range of demand management and water savings measures that would eventually pay for themselves:

- Realistic water-pricing structures that use tariffs, incentives and disincentives will add to the income of a utility. Savings on interest payments alone from the loan used to fund new dams may be able to finance a citywide retrofitting program leading to a 15 to 25 percent reduction in water use.<sup>4</sup>
- Mandatory installation of water-saving devices such as low-flow shower heads, toilets and efficient washing machines can be undertaken by contractors who are paid on the basis of the real water savings achieved. Customers can pay for the installation through their water bills.
- River water and treated sewage can be utilized for industrial and municipal purposes. In high-density commercial and residential areas, rainwater harvesting can provide water for cleaning and toilet flushing activities.

anywhere between four and eight billion liters per day. Clearly, the state does not need the 1.5 billion liters per day from the Kelau Dam at all, not even in 2020.

### **Inundation of a forest reserve and changes to river ecosystem**

The project will have serious environmental impacts. The reservoir will inundate the Lakum Forest Reserve, which is home to:

- 88 species of plants, 16 of which are known to have medicinal values;
- 11 species of large mammals, all of which are protected;
- 22 species of small mammals, most of which are protected;
- 147 species of birds, most of which are protected; and
- 15 species of reptiles, including the fully protected king cobra.

Since the reserve is also adjacent to the Krau Game Reserve, there is a large wildlife population roaming freely between the two areas. Flooding Lakum would endanger the lives of the animals, as they would have to survive in a smaller area, with less food.

The Kelau River contains at least 40 fish species which will be affected by the thermal, chemical and biological changes in the reservoir water.

Equally important, transferring the Kelau flow into the Langat River in Selangor will increase the river flow by 70 per cent. This may increase erosion along the riverbanks, affect mangroves and fishery spawning grounds in the river's estuary, and cause flooding in Selangor.

### **Forced resettlement of indigenous people**

One Orang Asli (indigenous) village will be relocated to make way for the dam, totaling 325 people. Although the project proponents claim that the people are agreeable to the project, the Centre for Orang Asli Concerns (COAC)<sup>5</sup> found that the affected Temuan families did not give their free, prior and informed consent to the relocation (see below).

In the past, resettlement of dam-affected indigenous communities in Malaysia has left economically self-sufficient communities highly impoverished and socially and culturally dispossessed. Such impacts can be seen on those communities affected by the Batang Ai, Bakun and Selangor Dams.<sup>6</sup> With such a poor record of resettlement in Malaysia, one must question the wisdom of resettling yet more indigenous people before examining alternative options.

## **COMPLIANCE WITH JBIC AND WCD GUIDELINES**

### **Needs/Options assessment**

Both the World Commission on Dams (WCD) and JBIC's environmental guidelines stipulate that there must be adequate consideration of alternative options prior to a decision on funding any particular projects. According to the WCD, this assessment of options must be based on a full and comprehensive analysis of people's needs for water.

As shown above, water wastage is the root cause of the present high consumption levels in Selangor, and project proponents have failed to justify their future demand projections. Selangor is in serious need of an independent, comprehensive and long-term assessment of water needs and of the various options for meeting these needs prior to funding any additional water supply projects. A demand management plan for Selangor's consumers should be developed prior to new capacity additions.

### **No free, prior, informed consent from affected people**

The World Commission on Dams (WCD) states that decisions on projects affecting indigenous people should be guided by their free, prior and informed consent achieved through formal and informal representative bodies. According to the village chief,

It's true I say I support (the project). Because we Orang Asli have been weakened. Others weaken us. They say resettle, we have to resettle. ... Officers come in and say, "Tok Batin, resettle" and we are forced to resettle. They pressure us until we cannot think anymore. If we have a choice, we want to stay where we are. The land is our ancestors' land. We have been there for a long time. But what can we do? The Government wants to give water to Selangor.<sup>7</sup>

In a series of interviews<sup>8</sup> conducted by Sahabat Alam Malaysia, it was found that none of the interviewees had knowledge of compensation, housing and livelihood options for the future, nor of the appropriate legal mechanisms to ensure compliance. In fact, a number of them had already been made to sign a consent agreement prior to the signing of agreements on compensation. This cannot be considered free, prior and informed consent as recommended by the WCD.

### **Consultation and information disclosure**

JBIC's new guidelines stipulate that sufficient consultations with stakeholders must be conducted by disclosing information from an early stage when alternative proposals for the projects may be examined.

However, a "multi-stakeholder" consultation process that has been conducted to date has not been adequate or genuine. Civil society groups were invited to a federal-level meeting after the EIA of the project had been approved and key decisions had been made. Officials used the meeting as an opportunity to refute concerns raised by civil groups. Instead of opening up a new forum to debate the project, the meeting became an opportunity for officials to restate their case under the pretext of a public participation process. JBIC should not gauge "sufficient consultation" by the number of meetings, but by the quality of those meetings, and whether stakeholders are given the opportunity to contribute to the decision-making process.

## **RECOMMENDATIONS**

We believe that JBIC should try to comply with its new environmental guidelines as much as possible even though the request for funding from the Malaysian Government was made prior to October 2002, when the guidelines partly came into effect.

JBIC should withdraw its plan to fund the proposed project as the dam will only encourage further wastage and will not ensure the sustainability of water supply for Selangor. Instead, JBIC should assist the Selangor state government in undertaking an open, participatory and comprehensive needs and options assessment for Selangor state and a demand management plan prior to funding any new water supply projects.

If there is a need for additional water supply, civil groups have already submitted three proposals on alternative methods to conduct interstate water transfer to Selangor with the least ecological impacts and expenditure, by constructing pipelines from two existing dams in the northern states of Perak and Trengganu via railway lines, established water pipe corridors and road reserves. The cost of this is between RM 740 million and RM 3 billion.

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<sup>1</sup> *The Malaysia Water Industry Guide 2002*. Water Supply Branch, Public Works Department and The Malaysian Water Association, Kuala Lumpur.

<sup>2</sup> Official written reply to Consumers' Association of Penang (CAP) July 19, 1999.

<sup>3</sup> Eighth Malaysia Plan 2001 – 2005, Economic Planning Unit, Prime Minister's Department, Kuala Lumpur.  
[http://www.epu.jpm.my/rm8/front\\_rm8.html](http://www.epu.jpm.my/rm8/front_rm8.html)

<sup>4</sup> Arlosoroff, S. (1998) "Water Demand Management" in *Promoting Sustainable Consumption in Asian Cities*, United Nations Center for Human Settlements (Habitat), Nairobi.

<sup>5</sup> Centre for Orang Asli Concerns (2000) *Comments on the project EIA submitted to the Department of Environment*.

<sup>6</sup> Please see <http://surforever.com/sam>, and Hong, E. (1987) *Natives of Sarawak Survival in Borneo's vanishing forests*, Institut Masyarakat, Penang.

<sup>7</sup> Centre for Orang Asli Concerns (2002) *The Orang Asli position in the proposed Kelau Dam Project*. Report submitted to Friends of the Earth, Japan.

<sup>8</sup> "Context of consent: *Mesti, ikut dan terpaksa* in Kelau," *Utusan Konsumer*. December 2002, p 16-17.

# Conclusion

**J**BIC-funded dam projects in Asia have been fraught with problems, which have led to serious and unmitigated social, environmental and economic impacts, affecting many thousands of people. The projects reviewed in this report reveal common problems regarding JBIC's funding operations. Some of the common problems may be summarized as follows:

## **1. Failure to properly assess social and environmental impacts prior to approval**

JBIC's project appraisal process is seriously deficient and needs radical improvement. In all of the projects reviewed in this report, JBIC failed to adequately assess the project's social and environmental impacts prior to project approval, instead relying on information provided by the government and/or the project developer. Such failure has resulted in impacts far beyond what was originally predicted, destroying the lives and livelihoods of many thousands of people. The projects described in this report alone have directly affected around 200,000 people, with many thousands more experiencing indirect impacts that are unaccounted for.

## **2. Inadequate needs and options assessment**

JBIC's failure to undertake adequate needs and options assessments prior to project approval has led to the funding of many projects with dubious economic benefits. A proper assessment of a country's need for energy and water services, and a full analysis of the different options for meeting these needs, would have resulted in more successful



JBIC projects. For example, reducing system losses and undertaking demand side management measures could avoid the need for the Kelau Dam in Malaysia, and could save the Malaysian government millions of dollars.

In the case of Zipingpu Dam in China, the target area to be irrigated is almost exactly equivalent to the amount of land currently being irrigated by the 2,200 year-old Dujiangyan waterworks, which will most likely be destroyed as a result of the dam. A proper needs and options assessment process would have explored other options for improving irrigation capacities in the area.

### **3. Poor Project Performance**

Several of the projects reviewed in this report have performed badly, saddling the borrowing governments with onerous debts that cannot be repaid from project revenues. For example, the Power Purchase Agreement between the San Roque project developers and the Philippine government is heavily biased in favor of the developers, resulting in mega-profits for the San Roque Power Corporation and higher tariffs for Philippine electricity consumers. Lam Takong Pumped Storage Project is not currently operating due to design flaws in the upper reservoir, and Koto Panjang is producing far less power than predicted due to water shortages. The poor performance of JBIC-funded dams is a cause for concern, and must be addressed if the agency is to have validity as a development institution.

#### 4. Failure to ensure proper consultation and release of information

In all projects reviewed in this report, JBIC and the project developers failed to release adequate information to affected communities and the public. In many cases, JBIC simply refused to release critical documents such as environmental impact assessments and resettlement plans, citing lack of government approval. This is not acceptable – as a taxpayer funded development institution, JBIC has an obligation to disclose all relevant information prior to project approval, including feasibility studies, environmental impact assessments, environmental management plans, mitigation and compensation agreements, economic analyses and needs assessments.

While JBIC's new environmental guidelines mandate a higher standard of information disclosure than previously, JBIC is still refusing to release important documents for projects already funded or in the pipeline. In the interests of public accountability, JBIC should act in accordance with its new guidelines as much as possible, even for projects in the pipeline or under construction.

Additionally, JBIC's failure to involve affected communities in decision-making, and to respect the rights of indigenous people to free, prior and informed consent, has resulted in projects proceeding without the involvement or participation of affected communities. In the case of the San Roque Dam in the Philippines, the project proceeded despite being in violation of the country's Indigenous Peoples' Rights Act. At Zipingpu Dam in China, affected communities are prevented from speaking out against their resettlement. Communities at Koto Panjang faced intimidation and harassment from the Indonesian military when they demanded fair compensation and a role in resettlement planning.

#### 5. Inadequate monitoring and evaluation during and after project construction

JBIC's monitoring and evaluation procedures are clearly inadequate. The *modus operandi* for JBIC in the past has been to disburse funds and then leave the project to the government to implement. As a result, communities are left to suffer impacts with no recourse to the project funders. In many cases, promises of compensation were not honored by the government or implementing agency, yet JBIC refused to discuss these issues with affected communities, and directed communities to the government instead. This was JBIC's approach with problems at Koto Panjang, Lam Takong and the Metro Manila Flood Control Project.

As many of these projects would not go forward without JBIC funding, JBIC has a responsibility to ensure that the projects are proceeding in accordance with JBIC guidelines and international human rights standards.

In addition, in cases such as San Roque, while JBIC did undertake regular monitoring missions as a result of pressure from affected communities and Japanese NGOs, there was very little follow-up to these missions and no means of ensuring the JBIC recommendations were adhered to by project developers and the government. While we understand that JBIC did slow disbursements at some stage of the process, project construction proceeded and financing continued with very few improvements in compensation or mitigation measures.





## 6. No mechanism to deal with outstanding problems

Most of the projects in this report have resulted in communities being worse off than they were before. Yet JBIC has no mechanism for dealing with the leftover problems created by its projects. At Lam Takong in Thailand, four hundred people have had their livelihoods destroyed as a result of blasting during project construction. At San Roque in the Philippines, most of the 4,400 people who have been resettled for the project are struggling to survive with no sources of income or livelihood, 3,000 gold panners have lost an essential part of their income, and thousands of Ibaloi people stand to lose their land and livelihood.

At Zipingpu in China, 40,000 ethnic Tibetans and other people will be forcibly resettled, likely under poor conditions as is the case with most forcible resettlement in China. At Koto Panjang in Indonesia, 3,861 people are suing the Japanese government in attempt to get redress for the devastating impacts of the dam. At Laguna Lake in the Philippines, the project will affect the land and livelihoods of around 76,000 people who depend on the lake for fishing and farming. And the list goes on. JBIC needs to take responsibility for repairing the harm caused by its previously funded projects through allocating resources for retroactive compensation and mitigation measures.

## A WAY FORWARD

In order to ensure that such problems do not occur in the future, we make the following recommendations to JBIC:

### **Recommendation 1:**

JBIC should adhere to the World Commission on Dams' recommendations when appraising all current and future dam projects. The WCD recommends that comprehensive and participatory assessments of people's water and energy needs, and different options for meeting these needs, should be developed before proceeding with any project. In addition, no dam should be built without the "demonstrable acceptance" of affected people, and without the free, prior and informed consent of affected indigenous and tribal peoples.

### **Recommendation 2:**

Project funding agreements should include conditions on the protection of the environment, provision of sustainable livelihood sources and just compensation to affected communities, and adherence to local laws and JBIC guidelines when planning and implementing the project. Violations of these conditions should be grounds to stop or withdraw funding. The conditions should be made public and subjected to independent monitoring.

### **Recommendation 3:**

JBIC should initiate regular monitoring missions during project implementation and for at least five years after project completion to ensure that project impacts – both foreseen and unforeseen – are addressed. Such monitoring missions should include direct dialogues and hearings with all stakeholders, including affected communities. When monitoring missions reveal serious problems in project implementation, JBIC should consider halting disbursements until the problems are rectified.

### **Recommendation 4:**

JBIC should establish an independent review team to comprehensively assess the social, environmental and economic impacts of its dam projects. The team should consist of a range of stakeholders, who should have full access to all relevant information. JBIC should make a good faith effort to implement the recommendations from the independent review and should place a moratorium on funding any additional dam projects until the review is completed and the recommendations implemented.

### **Recommendation 5:**

JBIC should establish a process for dealing with the unresolved social and environmental impacts of its projects. JBIC should ensure that all people whose livelihoods have been harmed as a result of JBIC-funded dam projects have their livelihoods restored and their standard of living improved. JBIC should establish a reparations fund for financing the measures required to restore livelihoods.

Based on these case studies, we hope JBIC will reconsider its support for these destructive developments, take steps to repair the damage caused in past projects, and ensure that the mistakes are not repeated in the future. This is a challenge we offer to the Japanese government and the Japanese people, and one that we hope they will not refuse to address.





