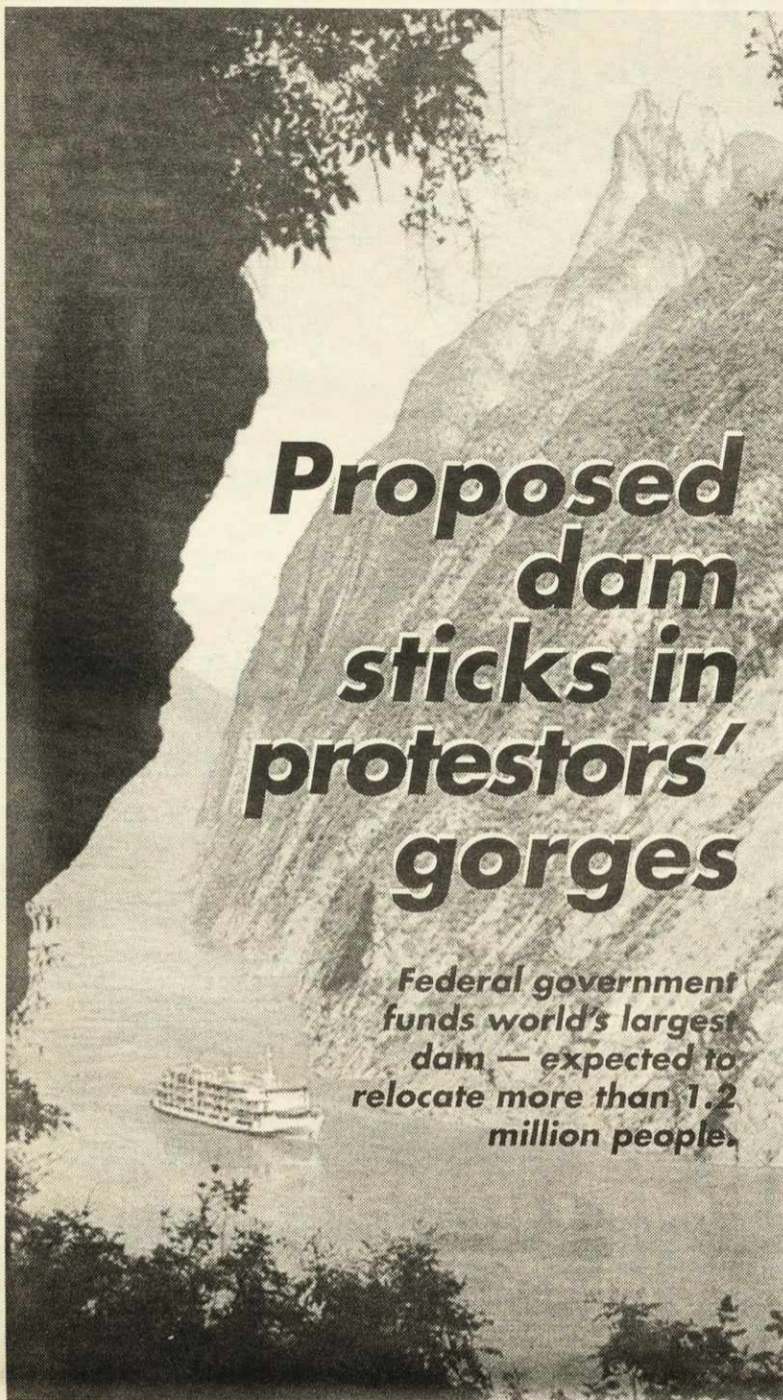


SCIENCE & ENVIRONMENT



Proposed dam sticks in protestors' gorges

Federal government funds world's largest dam — expected to relocate more than 1.2 million people.

BY KIP KEEN

Endlessly snaking itself across China, carving itself deeply into the land, the Yangtze river, almost as long as Canada is wide, is the world's third largest river, by length and water flow.

As a result of this hydrological beast are The Three Gorges, a section of the river where immense cliffs hide the water below from as high as several hundred meters. It is the Grand Canyon of the Orient — three times more awe-inspiring.

It is also the construction site for the world's largest dam, an idea conceived at the beginning of the century, but not officially initiated until 1991. This hydroelectric monolith is touted proudly by the Chinese government as being the greatest capital project undertaken by the state since the painstaking building of the Great Wall of China.

It too should be visible from space by creating a reservoir, an artificial lake, six hundred and thirty two square kilometres in size, flooding 69,000 acres of land. The dam itself will tower 185 meters above the river bed, and is hoped to produce at least 18,200 megawatts of power, outstripping the generating of any other dams.

The rise in water created by the dam will dampen the allure of the gorge's cliffs, reducing their height from 120 meters to 35 meters at the Western gate. It will also mean the loss of many historic and archeological sites, including the village of Daxi, the ancient capital of the mysterious Ba' people who disappeared from the region more than two thousand years ago.

The invading waters will inundate 19 cities and 326 towns, resettling what Chinese officials say will be around 1.2 million people. Grainne Ritter, however, a spokesperson for Probe International, a Toronto based NGO (Non-Governmental Organization), disagrees with that figure, saying that it's more likely to be upwards of two million people because it does not take into account for population growth, as the completion for the project is not expected to be finished for at least ten years. That figure is almost the total population of the Atlantic provinces.

The price for the project is officially set at 30 billion dollars U.S., but is expected to be exceeded because of unforeseen costs resulting from runaway corruption, and construction problems. The International Rivers Network, a California based NGO, says the cost may rise to as high as 75 billion dollars U.S.

China's auditor general released figures last January announcing that 600 million dollars of the money meant to pay for relocating

area residents had been embezzled, at least 7.4 percent of the entire budget for resettlement. One official involved with the construction has been sentenced to death for stealing money valued at 1.44 million dollars U.S. (12 million Yuan). Another official, Wang Sumei from the migration bureau, has been jailed for life for stealing 60,000 to 200,000 yuan, which she gambled away in games of mahjongg. 14 others are currently subject to criminal proceedings, while 100 have already been penalized.

Acting on the advice from the National Security Council, along with pressure coming from human rights, and environmental organizations, the US Export-Import Bank, a federal agency that lends money to U.S. companies, withdrew its financial blessings for the dam in 1996 by refusing to give monetary support to corporations desiring to invest in project.

The World Bank, along with some private companies and banks, such as Bechtel Group Inc. and Bank America, have shied away from investing in the project amid some wall street investors labelling The Three Gorges as being a white elephant — uneconomical.

Jean Chretien accompanied by Team Canada provided 170 million dollars in funding for the project through deals they made in 1994 on their trip to China. Canada's version of the U.S. Export-Import Bank, the Export Development Corporation (EDC), administered the funding through Canada Account, which has a yearly allowance of 13 billion dollars. The EDC is a crown corporation.

153 million dollars of the money financed the sale of three turbines and generators manufactured by General Electric of Canada, and its subsidiary GE Hydro. The company declined to comment on whether they felt the project was violating human rights.

EDC spokesperson, Rod Giles, stated that Canada Account is managed by the EDC for projects which are beyond its scope to assume associated financial risks, but that the basic objectives and programs of the two bodies are identical.

Under the EDC's environmental framework, guidelines affirm that it makes environmental assessments on the projects it funds, in order to identify the possibility of any "significant adverse Environmental Effects," such as "significant adverse social impacts... significant resource requirements, [and the] generation of significant air emissions, liquid effluent, wastes or noise."

The guidelines state that the EDC will decline assistance if they

believe the adverse environmental effects "cannot be justified by anticipated positive effects of such projects."

In 1997, engineers who visited the Three Gorges Dam site, Leonard S. Sklar and Amy L. Luers, wrote about the project's potential and existing problems. They noted that the Chinese usually use over-compensative building techniques, allowing for a margin of error due to their less advanced building methods compared to West. They report that this is not the case at Three Gorges.

They also warn that in building the coffer dam, which diverts water so that construction can be completed were the river normally runs, no seismic research was done.

Lu You Mei, chairman of the Yangtze Three Gorges Project Development Corporation, is quoted as saying that the main dam would be hazard proof, and that "it will be able to withstand an earthquake of magnitude seven or eight on the Richter scale, while the actual maximum in this region is around six."

Sklar and Luers also report that due to sedimentation after the dam is built, its flood control capacity, one of the main official reasons it is being built, will likely be seriously reduced. Former University of California Professor Luna B. Leopold, says 230 out of 330 major reservoirs in China have a serious sedimentation problem, where the overall decrease in water storing capacity is 14 percent, and in some cases as high as 50 percent.

Leopold declares in a report on *Sediment Problems at Three Gorges Dam* that the flood control capacity of the completed dam could be seriously reduced because in flood seasons it would be necessary "to close or partially close the discharge gates so that potentially destructive floods would be prevented by the storage of [the] incoming water." As a result, the sediment would settle on the reservoir bed, instead of being flushed through, requiring other more forceful removal methods, such as expensive dredging. While building the coffer dam workers had construction trouble because of unexpectedly high levels of sediment in the water.

Such sedimentation would mean that Three Gorges Dam would not be able to effectively protect people downstream from floods, which has claimed the lives of thousands during the last decade.

Complaints have also been surfacing from the urban and rural people being resettled, that they are not receiving enough compensation. Several petitions have been sponsored by affected groups demanding a better deal. Probe International reports that people are not guaranteed to be relocated near their families, and are sometimes being moved onto the land of others, who have been forced to share it with these people. A field report by Wu Ming, who visited the area and interviewed many of those being resettled, wrote that some farmers who had been relocated moved back to their old land which is still slated to be flooded by 2009, because the land they had been given was inhospitable.

For further information contact Probe International at 416-964-9223 ext. 228 or log onto the International Rivers Network at www.irn.org

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