In China, Dam's Delay Spares a Valley for Now

By **SHERYL WUDUNN** APRIL 18, 1989

CHINA'S efforts to build the world's largest hydroelectric project - a structure that would block the Yangtze River, obliterate some of the nation's most famous scenery and force the removal of a million people - have suffered another setback after six decades of debate.

On April 3, Deputy Prime Minister Yao Yilin announced that China would delay construction to allow further discussion of its environmental consequences.

The decision was a victory for environmentalists, here and around the world, who have vigorously opposed the proposed dam at the Three Gorges, whose majestic cliffs and gushing waters have inspired Chinese poets and painters for centuries. But the victory may be only a temporary one, a disruption in a project that will resume when China can better afford it.

The story of the dam is a Chinese epic, in which the supposed benefits and the purported risks are both on a huge scale. Proponents say it would control the floods that for thousands of years have destroyed crops and killed peasants - 330,000 in the last 60 years. It also would provide electricity that China needs to fuel its industrialization and open the waterway to large ships.

Opponents say the dam, planned to be 607 feet high, would inundate a spectacular tourist attraction and would flood about a million peasants out of their

homes. Critics say such a huge project is simply too ambitious for China to tackle. The project is one of very few issues upon which it is respectable here to disagree. Ordinary Chinese have protested through letters and petitions to the Government. The official Chinese press has covered the proposal extensively, reporting the views of both sides. Environmentalists in the United States and Canada also have joined in the campaign, but so far the Government has not suggested, as it has on other political issues, that the foreign voices are interfering in China's internal affairs.

"We can't just take the word of our leaders on this matter," said Tian Fang, a former deputy director at the State Planning Commission and an opponent of the project. "We have a long feudal tradition to break. The Three Gorges debate will test our democracy and science."

The dam, which officials say would cost about $10 billion at today's prices, is designed to produce up to 18 million kilowatts, equal to about one-fifth of the electricity now generated in all of China and more than any other hydroelectric dam in existence. Energy is one of China's most crucial needs, and already many factories around the nation are restricted to working three or four days a week because of power shortages. So while the dam project would be immensely expensive, proponents assert that there is no better investment.

"We must put money in the right places," said Cao Lean, technical adviser to the Yangtze Valley Planning Office. "The electricity supply for our country just is not sufficient."

Last month, it appeared that the Chinese Government might finally approve the project, after press reports said that an official technical study by government engineers would recommend its approval. Another $11.8 million research effort, completed late last year by a Canadian consortium with consultation from the World Bank, also seemed to support the technical and scientific aspects of the project, although the full report has not been made public.

Yet a fiery debate broke out in the last few weeks during the annual session of China's legislature. Probably in response to the opposition, Mr. Yao, the Deputy Prime Minister, announced that the project should be studied further and that construction would not begin until 1996 at the earliest. The ground-breaking for the project had been scheduled for 1992.

Nevertheless, the project is far from dead. Chinese policies have a way of reversing themselves unexpectedly, and the Government is continuing to provide funds to research the proposal. Prime Minister Li Peng is an engineer with much

experience in hydroelectric projects, and although his position on the dam is not clear, he probably could revive it quickly if he wanted to. Moreover, the nation's electricity shortages may grow more acute, and that will bolster the arguments of those who favor the dam.

"It has definitely not been shelved," said Mr. Cao, the technical adviser.

Opposition Is the Challenge

China's Ministry of Water Resources and Electric Power says it is confident that the dam eventually will be built, and it has no doubts about the technical challenge of constructing the dam over about 20 years. The ministry points out that China already has built more than 80,000 large dams.

"We have solved all the technical problems," said Yang Qisheng, a research fellow at the ministry who participated in China's most recent feasibility study. "The challenge lies in convincing our adversaries of that."

China's most recent feasibility study will be presented to the State Council this summer, officials in the Ministry of Water Resources and Electric Power said. Opponents cast doubt on the thoroughness of the studies and the feasibility of the project.

But the most disturbing effect of the dam would be the forced relocation of about one million people who farm and work in the agriculturally rich and relatively developed areas around the dam site.

"Whatever the government says, this problem just can't be resolved," said Dai Qing, who recently edited a book of essays opposing the project.

Only Place to Move Is Up

The Chinese Government has said little about its plans to resettle the residents. Last year the Canadian Government granted $3.4 million to a Canadian consortium to study the problem.

"Resettling so many people is the biggest ecological problem," said Lu Qingkan, an advisor to the Three Gorges research team on flood control. "The only place we can put them is up, that is, up in the mountainous areas, where it is not easy to build homes and factories."

Mr. Lu said smaller, less costly projects could supply energy within five years but would do little to control flooding in the Yangtze Valley.

On the technical side, sedimentation appears to be the largest problem. When water collects in an artificial reservoir, silt tends to collect with it. The Chinese have proposed using a silt-flushing mechanism whereby the flow of the water would

carry the silt down the river. China has used this method successfully at another recently completed hydroelectric dam.

But some argue that unlike other dams, the Three Gorges project is supposed to serve several purposes at once: control floods, provide electricity and improve navigation for large ships. Some engineers agree that silting would not be a problem if strong currents were allowed to carry the silt away. But they argue that the dam cannot protect people from strong currents that flood the valley, and at the same time discharge the silt.

"You can't store flood water and flush silt at the same time," said Grainne Ryder, a water resources researcher at Probe International, an environmental organization based in Toronto. "The two just don't go together."

But other engineers say that even mild currents, possible even under flood control, would carry away the silt. 'Bias From the Very Beginning'

Environmentalists have said the construction of the dam would erode the soil of nearby farmland, as well as damage thousands of different species of marine life. And the area could lose an important channel for flushing out pollutants and other toxic wastes, they add. They also contend that unforeseen events, like war or an earthquake, could break the dam and release an enormous tide of water. Critics also say that planners have calculated only the most basic costs for the project, and that researchers have not considered secondary effects in the reports.

"The research group has had a bias from the very beginning," said Qiao Peixin, a former deputy of the People's Bank of China, China's central bank. "The official figure leaves out many hidden costs."

Mr. Qiao says that often costs cannot be calculated because of uncertainty, like the possibility of water flowing above the level of the dam, forcing immediate relocation of settlers in the area.

"If this expensive project is implemented, it would start a vicious cycle of inflation that the people would not be able to bear," Mr. Qiao said.

A Chinese newspaper editor says the proposed dam probably will continue to be vigorously debated among competing interests. He noted that the Grand Coulee dam in the United States was the subject of intense debate until it was built as a public works project to revive the economy during the Great Depression.

"To build the dam?" he asked. "It would probably take an economic depression."

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