no benefits to Sichuan Province let alone to the greater southwestern part of China. And in the upper reaches the dam will cause Wuxian County to be submerged and threaten the area around Chongqing. The dam will not benefit navigation and will cause sedimentation to accumulate in the upper reaches of the Yangtze and increase the likelihood of flooding.

"We reported all of this to Premier Zhou. Zhou asked my personal opinion about the project and I said frankly, 'Let future generations decide this issue.'"

"The article claims that 'As early as 1959 Premier Zhou Enlai placed Zhang Aiping . . . in charge of tests of air defense for the proposed Three Gorges project.' But, in reality, the tests only used hand grenades and small bombs. The nuclear tests in Xinjiang were also limited and didn't really achieve the expected results.

"All in all, Three Gorges defense research after 1959 focused primarily on defense against nuclear attack. But since it comes so swiftly, and because we could never predict such an attack, we concentrated on passive defense methods such as reinforcing the dam base and releasing water before an attack. But we were not sure of the measures' effectiveness. As for the notion that we can predict when war will break out, I don't know what to say about that!"

As Zhang makes clear, there are no easy solutions to the problem of defending the Three Gorges dam, and research into the problem has been woefully insufficient. The 1987 Assessment dealt with the problem by simply assuming that no war would ever threaten the dam and unleash the destructive powers of the water which lies behind its wall.

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Epilogue

The New Golden Triangle of China

Richard Hayman

"Don't you understand? We can't guarantee your safety!" barked the gravel-voiced Public Security officer. The radio was crackling from headquarters: "How did they get there? They can't stay! Send them down!" I translated for my two friends who were having their first encounter with the rude officiousness of the Chinese police.

It was November 1995, and we had come to hike into the highland region known as Shennongjia, home to many prized rare plants and animals, including the legendary ye ren ("big foot") primate. These mountains, on the borders of Sichuan and Hubei provinces, rise to over 10,000 feet in sheer cliffs and steep ridges over rushing tributaries of the Yangtze River in the Three Gorges region. The cliffs are riddled with ancient caves of unknown depth, many of which will be flooded by the reservoir. We had met herbalists in the town of Dachang on the Daning River and examined many odd roots and fungi. Our guide, Old Zhu, offered to take us up into the highlands and introduce us to collectors. Little did he know how much trouble he would get us into.

We had been riding in the back of a local truck eating dust and diesel fumes for six hours. The steep mountains rolled past, climbing ever higher. The slopes are deforested and studded with gray boulders. Mud-walled houses nest in bamboo groves. Farmers hoe sweet potatoes and harvest chili peppers. At one turn in the road, majestic cedars stood above a government office. "They're only for scenery. The rest are gone," noted a truckmate. We got off the truck in Guanyang, a town of mud buildings with one street paved with large flagstones. There was an unusual hubbub on our arrival. A crowd of wide-eyed mountain people stared at us and examined our packs. The driver was worried because the police were calling over to us. They had never had foreigners here before.
“Dragon” caves along the river likely to be flooded. (Photo by Audrey Topping)

Our protests were for naught. “For our safety” we would leave as soon as a military jeep was summoned. I could not persuade the grim-faced police and Party officials that we would assume responsibility for our own safety while hiking, as we often had in other counties. “There are no bandits, but no, you can’t go in. It’s decided,” the cop grunted.

Later, out on the street, I noticed a large new government center with bright tiled walls that was under construction. It seemed like an odd building for such an out of the way hill station. The crowd of onlookers was pressing on us again, so I asked them about the herb collecting in the area. They started giggling and muttering quietly, so I asked the question again. Finally, a youth blurted out: “There’s lots of opium!” Some of the others shouted at him to be quiet and then slipped away, but the cat was out of the bag. A local official then came over, shooed everyone away, and ushered us into a jeep. Soon we were bouncing away in a stream of dust on our way down to the lowlands.

Back in Dachang, we reported to the police station. They wanted us to leave immediately for the county seat, but the only means of transportation were the river craft that depart at dawn every day and travel through the gorges. Unable to leave, we returned to the small inn where we had stayed earlier, and wandered around the ancient village. Dachang has
many exquisite buildings that date from the 1500s, a few of which are scheduled to be dismantled for reconstruction in a new, higher town when the Three Gorges dam floods the valley. We talked with a few townsfolk and farmers who confirmed that opium is indeed being grown in the area. They explained that opium had become a booming export business, carefully guarded by the police and military.

The area had been a major opium production area from the mid-1800s until the rise of the Chinese Communist Party (CCP) in 1949. The drug was a source of cash for the local warlords and a competitor of Indian opium brought in by the British and Americans. The “Wanxian Incident” of 1927, when British gunboats bombarded Wanxian on the banks of the Yangtze, was precipitated by the struggle to control the opium trade. Now it appeared that the cultivation of opium is enjoying a resurgence in southwest China. “The Communists used to suppress the trade, now they do it themselves,” said one local farmer.

Conversations about the Three Gorges dam led to similar expressions of dismay. “How are we going to live? The resettlement land up above is all rocks!” Billboards in the hills mark the elevation to let everyone see how high the reservoir will rise. Above, in the steep mountains, work crews use explosives to blast new terraces for the resettlement program. We hiked up to see the new fields. A farmer was piling rocks for terrace borders, but the soil was mostly broken rock. “How will you grow anything in this?” I asked. “I will bring soil and fertilizer up the mountain,” he answered with a forlorn look. Another more outspoken farmer chimed in: “We will not survive, but we can’t do anything about it.” “Can you protest?” I asked. “How?” was the reply. “That is just asking for trouble. The nation says to move. We will see what happens when the waters come.”

The solution for many farmers forced to move up to the marginal lands may be to grow opium. The reality is that it may be the only cash crop other than tobacco that can support the ever-growing rural population. Official plans call for industrial development to provide jobs for displaced peasants, but the poor state of roads, low education levels, and lack of resources belie these plans. Meanwhile, the opium trade grows.

I was told by locals that the state tobacco companies have their hands in the processing, and that the police and military successfully transport the opium through official checkpoints. Opium paste and refined heroin is sent by truck to Chongqing, Chengdu, and Kunming and then flown to Guangzhou for international shipment. Ever more of the drug is spilling out onto the streets of China, used by bored underemployed youth. It keeps them passive and ready for exploitation, and it is evident in labor mills and widespread prostitution.

The involvement in the opium trade of local officials out for personal gain is a poorly kept secret. Higher officials certainly know about it and have attempted to impose some controls. But this region, as the old saying goes, “is far from the emperor.” The extra cash may also be needed to make up for local shortfalls in funding for the resettlement costs of the Three Gorges dam. It may sound farfetched to suggest that opium profits would be used to defray social costs, but similar situations have occurred in Colombia where some drug money has been used to build local projects and to reward “cooperative” communities. As long as foreigners are kept out (as we were) and official inspectors are well treated, there is no stopping this easy money.

Later, we were escorted out of Dachang and down river to the county seat of Wushan which crowds the banks of the muddy Yangtze at the entrance to the Wu Gorge. A police detachment met us at the dock with its sirens blaring and led us through the crowded streets to the police headquarters for a long day of questioning. We were handled fairly politely because of my position with a shipping company that brings much business to Wushan. I had my friends protest loudly in English while I bargained apologetically in Chinese. The police insisted on inspecting our packs, but allowed me to conduct the search. I unpacked our camping gear onto their desks and made as much of a mess possible. Then I opened the container which held the gas for our camp stoves and prepared to pour it out for inspection. Anxious policemen quickly extinguished their cigarettes. With the first two sleeping bags rumpled in a disorderly fashion across the desks, I was about to open the third stuff-sack when the police said they did not need to check it. There were about 40 rolls of exposed film hidden in the bottom of that third sack.

We were then asked to hand over our film and notebooks. We had prepared fake notes and rolled back blank film for just such an occasion. When they insisted on developing the film, we went to a local photo shop that could not develop slides. I had put in one exposed roll of scenery which I suggested might come out. It was all green and vague, but seemed to satisfy the police chief's curiosity. The other rolls would be sent out to be developed later in Chongqing.

I was interviewed for a formal transcription about our breach of security—illegal research, talking to locals, photographing government installations (bags of herbs at collecting stations), and unauthorized travel.
made an obsequious apology assuming all responsibility and appealed that Old Zhu and the local people we talked to not be punished. "Good attitude!" beamed the police chief.

After signing a confession and a receipt for the confiscated film, notes, and an old mushroom found in my bag, we were released on the condition that we take the first ship out. Opium was never mentioned.

**Progress on the dam**

As 1996 comes to a close, the Three Gorges dam project in China’s Yangtze River Valley is developing rapidly. The construction is surprising in both scope and pace. And it is now evident that the region is undergoing a dramatic and reckless transformation as a result of the dam.

I recently spent three months traveling in the dam and reservoir area, working as an advisor for a new tourism project on the Yangtze. A fleet of six new river cruisers is being launched to carry the growing number of international visitors rushing to see this unique and endangered area. Whatever one’s opinion of the Three Gorges dam project, the world is coming to witness the spectacle of its construction. It must be seen to be believed. The world’s most magnificent river scene is rapidly becoming its most tragic.

Dam construction is well underway. As a priority project in the current Five-Year Plan, over U.S.$1 billion a year is being poured into the project. The summer of 1996 saw the completion of the coffer dam along the south bank of the river. A large diversion abutment is ready at the head of the coffer dam, which will divert the full flood flow of the river—over 100,000 cubic feet per second—around the natural riverbed while the main dam is being built. It is projected that the current in the diversion channel will be so strong as to require massive tug boats to tow much of the river shipping around the dam site. Long traffic delays are expected.

The navigation authorities have given notice that a rise of a few meters in the mean river levels may occur after the diversion. The effects may not extend beyond Zigui—75 kilometers upstream of the dam site—but it has been suggested that a higher water level may force reluctant residents to move before the year 2003, when the reservoir is scheduled to rise. If this is true, the coffer dam, which now stands about 15 meters above the average river flow, would need to be raised.

The north bank has deep cuts in the hills where the lock systems are being built. The five-step flush locks and one-tank shiplift already have their entrance channels prepared. People’s Liberation Army demolition teams have dynamited out the hills on the riverbank to form the locks.*

Massive earthmoving equipment is kept busy carving out the banks of the river, while gravel works lay substrate. A deep pit has been dug at river-edge on the north bank to prepare the foundation for the massive dam.

Rising above each bank, at the center of the site, is a series of giant placards with large red characters which read: “Yi liu guanli, yi liu zhiliang, yi liu shigong, wenming jianshe,” or “First Class Management, High-Quality Workmanship, First-Rate Construction.”** On the south bank even larger placards proclaim: “Kaifa sanxia, fazhan Changjiang,” or “Build the Three Gorges, Develop the Yangtze.”

Just downstream of the dam site, a graceful suspension bridge over one kilometer long has been completed by the Wuhan Bridge Construction Company. The bridge has already alleviated the long lines of traffic that used to wait for ferries. Along the north bank, the highway from Yichang is mostly complete, bringing ever more traffic to the booming metropolis. The steep canyons along the river have been filled with rubble from the road construction. Nearby cement plants are in full operation, providing cement facing along the river banks. A new dock on the north bank allows visitors to disembark at the new city center where the project management, research, and training offices are located.

In the Xiling Gorge at Xintan, cliffs that overhang the river channel are being reinforced by a mining engineering company. These towering rocks are likely to be undermined by the reservoir waters and collapse. Should the rocks give way and slide into the reservoir, massive waves would surge forth and cause significant destruction.† A landslide in 1984 on the north

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*Construction gangs overseen by the Hydropower Control Department of the People’s Armed Police are also involved in the project, along with an unknown number of prison laborers. *Wen Wei Po* (Hong Kong), May 28, 1996.

**Problems encountered in the course of construction and the importance of project quality control have already become the source of concern by some Chinese leaders who are intimately familiar with the perennial problems of engineering in China’s hydroelectric sector, such as the Gezhouba dam which has already shown severe signs of structural deterioration despite its recent completion in 1989. See, statement by Qiao Shi, Xinhua, June 19, 1996.

†Not according to Chinese officials, however, who claim that even under the "worst-case scenario [of a landslide], the waves would raise the reservoir level by 2.7 meters at the dam site, posing no threat to the dam or other structures." Xinhua, June 16, 1996.
in hopes of cashing in on the “natural wonders” to be lost to the reservoir. Travel agencies around the world advertise “last chance” tours and cruises, falsely claiming the reservoir will flood the region in 1997. The advertising is working—the number of visitors to the Three Gorges area is growing by 25 percent per year. And cruises through the region (from Chongqing downstream to Shashi or Wuhan) are now a standard feature of many tours of China.

There are now more than fifty river cruisers offering various grades of service plying the Yangtze’s waters in the Three Gorges region. Among the many new ships recently launched is the Three Kingdoms, designed like a third-century warship complete with flags, bells, faux cannon, and oars painted on the hull. Another new ship, the Qianlong, is in the shape of a gigantic dragon: bridge officers navigate through the teeth of the dragon’s head and a golden tail rises aft. The hull is built in early Qing dynasty (1644–1911) palace style, with numerous plastic ornamentations and scenery viewing pavilions. These two ships are owned by the Pinghu Company of Yichang, which is partly owned by the Gezhouba Dam Authority, which reinvests profits from the dam.

The most expensive and elegantly designed of the new ships is the Shenzhou, or Sunshine. It has large cabins and a two-tiered dance floor, private karaoke rooms, and a Japanese garden complete with a flowing stream. The Sunshine was financed in part by the State Council for use by national leaders and their guests. The dining room features a large mural of the completed dam, in all its misty glory.

Meanwhile, outside of all the picture windows, the life and death of the Great River unfolds. On any given day, bodies can be seen bobbing in the Yangtze’s rapids, the tragic victims of treacherous waters in a land where few people learn to swim. These shui da bang, or “waterlogs” in Sichuanese, are rarely retrieved from the water, eventually becoming “water ghosts.”

The summer of 1996 saw record floods in the middle reaches of the Yangtze. Most of the flood waters flowed from the Han and Xiang rivers downstream of the dam site. The Three Gorges dam would not have stopped the floods. The levees on the Jianghan Plain in Hubei Province had to be reinforced to hold back the surging waters which reached 28 meters above mean low at Wuhan, a historic high. Near Dongting Lake in Hunan Province, numerous villages were washed away, and 10,000 people were drowned. Much of the flooded land was part of flood diversion areas that had been filled in or reclaimed in recent decades; it eroded away
swiftly. Fishermen I spoke with in Yueyang lamented the loss of life but showed me their bounty of large fish. "This year the fish had plenty to eat!" they said.

Upstream from the dam site, another new bridge is under construction near Wanxian. A high arch bridge, it is reputedly the largest of its design in the world. The footings are set into the cliffs at a narrows in the river and seem to be set so low that they may soon be under the reservoir water level. The bridge will certainly be a boon to this region which will be hardest hit by resettlement. New terraces are being cut high in the mountains to accommodate farmers, and lowland soil is being carried up in bamboo backpacks to add to the rocks. Many farmers have resigned themselves to the fact that farming will be difficult, if not impossible, in the mountains. They will accept a one-time resettlement buyout and try to find new ways to make a living. This is the critical test of the social impact of the dam project.

Politically, the most important recent change was the designation of Chongqing as a national municipality on par with Beijing, Shanghai, and Tianjin, with its authority extending to the border of Hubei Province. The official population of the city-region is about 14 million, making it the largest municipality in China. Many expect Chongqing to become the Shanghai of southwestern China, to drive the development of the interior, and to complement and keep up with the more prosperous coastal areas.

As a political entity independent of Sichuan Province, Chongqing now has considerable latitude to make reforms and arrangements according to "practicalities." The local papers trumpet gaige kaifang—reform and opening up—as a great opportunity. The underlying reality is that the region must reinvent itself economically to survive the engulfing of the busy towns and productive land.

The city is in dramatic transformation. The waterfronts along the Yangtze and Jialing rivers are being rebuilt with highways and new docks. The old shanty houses and warehouses that used to store goods carried off ships and up the muddy riverbanks by coolies are now gone. In their place, a "Great Wall" of concrete has risen: an embankment 30 meters high with tree-lined roads. Now, steps lead down to gangways over the rushing current to floating docks where the ships tie up. Most passengers now dock here and hike up the stairs upon disembarking where the bang bang jun (the "help, help army") of coolies vie for portage work. The landing is unfinished and dangerous, and is especially slippery in the rain. The waterfront is scheduled for completion in spring 1997, but locals say the funds have been embezzled away.

As part of Chongqing’s designation as a national entity, its entire political leadership is being replaced by appointees from Beijing. Local officials are being fired under the banner of "reform" and against a background of profligate corruption. The Party secretary has resigned after revelations that his son was living the high life in Hong Kong, driving a Rolls Royce and engaging in numerous shady business deals. The deputy mayor, Wei Wenli, is in custody and under investigation after losing U.S.$60 million in foreign exchange trading by the city-owned Yu Feng Company. Another deputy mayor is in jail after allegedly embezzling U.S.$2 million in foreign trade dealings.

The suppression of local opposition to the dam may be another reason for the firing of the local leadership and the new federal status of Chongqing and the gorges region. More and more complaints over resettlement and funding are being heard as the realities of the dam project are being felt. Local officials who speak the local language will not be as resolute as outside authorities. Moreover, the vast sums of resettlement money provide great opportunities for corruption. Already, numerous officials have been cited for abuses.

Meanwhile, construction continues everywhere. At Wushan, a new hotel, called the Three Gorges Guest House, has the typical marble and mirror glitz of modern China. When I stayed there, the new but shabby rooms had no hot water in the shower. When I asked the manager for hot water he directed me to the new massage parlor for a "full bath." In downtown Wushan a new billboard details the resettlement schedule. Thousands will be moved each year, even though many facilities are not yet ready. The entire town will be moved before the year 2000.

The town of Zigui is being moved to a new site on the south bank of the river near the dam. New apartment towers can already be seen from the river. The Qu Yuan Temple relocation has also begun, and a new museum is being built to house the stone stele inscriptions of Qu Yuan’s classic poetry. But the most complete relocation program is at Badong, where the new town, just above the old, is largely finished. The construction on the steep hills has caused landslides which destroyed a road and factory at the river’s edge.

Rural relocation has also been tested in Badong County, the most underdeveloped region of the gorges. The native Tuja minority people have been moved up into the mountains, where there is little arable land, increasing soil erosion, and little hope of sustenance. Local officials are seeking industrial investment to provide jobs, but the educational level of
the population is so low and the resources and transportation so lacking that there is little hope. As a result, some officials have turned to opium, which is smuggled out to the south for export as a cash crop.

The new leadership in Chongqing is assuming authority over a city in the midst of wrenching transformations. Entire neighborhoods are being torn down, their residents driven to the countryside. Residents are promised comparable new apartments, and many are eager to move to better conditions with plumbing and electricity, but most are not rehoused for years, while expensive housing sits empty waiting for the nouveau riche. The California Gardens in the Jiangbei section on the north side of Chongqing comprises a dozen 30-storey towers, new malls, and a giant bowling alley. Fanciful “villas” with neon-lit sculptures sit across the valley near the new expressway to the new airport. Nearby, a surviving Song dynasty (twelfth century) ceremonial gate to a lost temple is cramped in neglect between construction rubble and a gas station. The graffiti I saw scrawled on one condemned house sums up the views of many who are forced to move: “No money to go. No place to go.”

Massive office and shopping complexes are rising in the center of the city. One, Twenty-first Century Plaza, has a seven-story atrium that features a lovely waterfall and fountain surrounded by a bamboo garden. Thousands of peasants from the countryside visit the glittering skyline city every day, and more than a few availed themselves of the Plaza waters for practical uses and relieved themselves in it until the fountain was so fragrant that it had to be shut down.

Over 100 million gallons of pollution are estimated to be dumped into the Yangtze every year, much of it industrial toxins. Paper, steel, silk, and chemical factories line the river in Sichuan, often covering the swirling waters with foam or effluents. Some particularly odious pollution sources are being closed, but little money is being directed to refit factories or investigate pollution controls. Recent examinations by China’s Environmental Protection Agency have shown “Class IV” serious pollution at hot spots in the gorges region. The accumulated waste of many towns is simply piled by the river and washed away during flood season. There are laws against all this, but no enforcement. The Yangtze has always been used as a grand flush. Uncontrolled, the discharges will doom the water quality of the reservoir, making the waters virtually useless for irrigation or fishing. One of the official reasons for building the dam is the future diversion of river waters through an aqueduct to irrigate the ever drier north China plain in the next century. The water delivered may be so polluted as to be useless.

Work to salvage the archaeological heritage of the Three Gorges area is as chronically underfunded as is pollution abatement. A Three Gorges Museum was opened in Wanxian two years ago, but it displays only a Ba people hanging coffin and a few photos of Han dynasty guee towers from Zhongxian County.

Financial and political pressures are mounting around the dam project. Competition for funds within the government is leading to increased opposition to the project from other government departments. A series of foreign bond offers has been canceled or postponed since 1995 for lack of interest. A recently offered $120 million in bonds will “test the market” once again. Hundreds of foreign firms are competing to win contracts for the massive dam, especially where their investments are guaranteed by public funds. Key to the confidence of the international community are the “stability” of the government, and an open examination of the dam’s designs—neither assured for now.

This “Great Wall” across the Yangtze is certain to raise the stakes in the ongoing power intrigues in Beijing. The dam is the most divisive issue

*The South-to-North Water Diversion Project will reportedly employ nuclear explosions to cut canals through rugged mountains.
in China, becoming a “Great Leap Forward” on the Yangtze bound for rough rapids. A recent poll taken among CCP cadres before Deng Xiaoping’s death in February 1997 found that most expected “turmoil” after his death.

The dam project may come to a halt with any major political reshuffle. Once Premier Li Peng finishes his current term of office in March 1998—and if he is not appointed to any other position—the dam project may be “reconsidered” and scaled back to a more manageable size without its extreme social and environmental costs. A Japanese government delegation of hydroelectric experts and officials was received in October by Li Peng and took one of my company’s cruise ships to Yichang to inspect the dam site. In an aside to me, one of the Japanese delegates said that the group doubted the claims of the dam officials and did not plan to participate in the project. They felt the dam as planned would not survive Li Peng’s exit.*

Even in that event, a series of low rise dams would likely be built, as recommended by most international consulting agencies. Then the world would certainly rush in to help finish the job, if the river dragon ever allows the waters to be stopped.

*In December 1996, Japan’s Export-Import bank offered credit to Japanese companies bidding on part of the Three Gorges project. The Swiss, German, and Swedish governments have also indicated their intention to provide similar public financing.

Appendix A

Acknowledgments from “General Plan for Population Resettlement”

Li Boning

This volume, Developmental Resettlement Is Good, was compiled at the suggestion of Comrade Cheng Zihua before he passed away.* In 1986, as a member of the Three Gorges Project Coordinating Group under the Central Committee, Comrade Cheng took an extensive inspection tour of the Three Gorges area. He met with and heard the reports of cadres at different levels of government from Sichuan, Guangxi, and various other counties and municipalities and investigated local resettlement trial projects extensively. He visited the experimental rice paddy plot in Zigui County and watched a video titled “The Advantages of Developmental Population Resettlement.”

He gave a very positive review of the experiences gained from the trial projects and subsequently suggested to me that since the Three Gorges project was not well-understood in Chinese society and there was even considerable misunderstanding of it, a volume be compiled describing the good results produced by the trial projects. This, he felt, would help people understand the real situation and ease their worries and concerns. Based on this suggestion, we compiled the first volume of this work and have plans to publish one or two additional volumes.

This volume reflects the experiences of the five-year trial projects. The data and articles contained in it draw from typical experiences in county and municipal trial projects, assessment reports, articles about resettlement prepared by district and municipal leaders, and extensive discussions about relevant issues raised by the trial projects. Although the trial pro-

*This appendix was originally included with Li Boning’s section of Chapter Four.