ALTERING THE TAO OF THE GREAT RIVER

"Take grain as the key link, practice animal husbandry, forestry, fisheries and side occupations to create all around rural prosperity."
-Mao Zedong

By Dan Armstrong

Early into the new millenium the world's largest hydroelectric dam will come to completion in China. A confluence of flows from the snowy ranges of Tibet, surging from the headwaters of Everest like the Great Knowledge, the Yangtze River will be bridled by twenty-six mammoth generators, creating 18,200 megawatts of electricity to power electric lights and televisions for a quarter-billion Chinese. The electronic village will grow by nearly twenty percent. And so, it is speculated, will the number of world consumers. Though large dams are no longer considered ecologically viable by experts in the West, this gargantuan $50 billion, 20-year project holds the hopes of all China and, as Wall Street oh, so delicately banks on Asia, an integral part of the world's economic future.

When set in historical perspective, the building of the Three Gorges Dam conjures a sense of the mythic. The undertaking is just so huge and proceeds so slowly, it seems some twenty-first century pyramid or Great Wall. More than 345,000 tons of rebar and 27 million cubic meters of concrete will go into the construction of this 180-meter tall, two-kilometer wide river partition. And tied, as it is, so intricately inside and out, to large international financial concerns, the damming of the world's third largest river assumes the quality of a monstrous physical allegory: the New World Order's corporate networking bet against the limitations of the land. In no small way, China's prosperity is staked to altering the Tao of its single most important natural resource, the Yangtze River.

Industrialization of the developing world already offers a serious challenge to the world's environment. Trends in arable land, clean water, and atmospheric chemistry task world food resources and, in the years to come, will enter into the balance of long-term international

economic stability. Poised upon these critical trends are China's industrial future, grain prices worldwide, and the integrity of the international financial community. The Three Gorges Dam, offering multi-billion dollar investment opportunities and untold environmental impact, sits Sphinx like at the intersection of these converging forces. Arguably, the very viability of the capitalist free market is hinged upon the outcome of this gigantic project, taking place, ironically, in the People's Republic of China.

"TheYangtze River Valley, encompassing an area roughly one-fifth that of Canada, is China's agricultural and industrial heartland. Supporting roughly 400 million people, one third of China's population, the valley produces 40 percent of the nation's grain, 70 percent of its rice, and 40 percent of China's industrial output."[1] Throughout China's history, however, Yangtze floods have caused death and devastation. Five floods have occurred this century alone, "killing a total of 300,000 people and leaving millions homeless."[2] As far back as the fifth century BC, Chinese scholars pondered ways to manage the Yangtze's ravaging waters. The first serious proposal to dam the river came from Chinese Nationalist Sun Yat-sen in 1919.[3] The project has been researched and surveyed many times over in the eighty years since. Western industrialists and governments of all colors have come and gone from the orient, hoping to gain this critical foothold in Asia's sleeping giant.

The dam entered into the long-range plans of the Communist Party in 1949 and was sanctioned by Mao in 1958 as an essential project for the future.[4] It is becoming a reality now primarily because of the recent wave of western investment in awakening China. While other Asian countries struggle amid a late-nineties' slow-down, there is still great hope for the opening of Chinese markets to the rest of the world. Multinational corporations vie daily for access to China's vast low-cost labor force and large-scale manufacturing opportunities. American brokers breathlessly track the whims of the Tokyo, Singapore, and Hong Kong stock exchanges, wondering how the Red Piece fits into the Asian puzzle. In the background, the G7 banking community waits and watches, hovering about the East with its ledgers and billion-dollar loans to provide capital for vast expansions of infrastructure. And this dam in the Three Gorges is at the center of it all. It must succeed. The delicate surface of a huge international speculative bubble expands and contracts with each cubic meter of concrete poured.

Nothing is guaranteed, of course. But economists worldwide generally agree that China is a nation of the future. Since the death of Mao, China has become a different animal, aggressively assessing its future needs, enacting strict population control, radically increasing its grain productivity, and steadily offering modern economic reforms. Industrializing at a startling rate, China's economy grew in excess of seventy percent in the nineties[5] and nearly two hundred percent since 1985. In spite of all this progress, however, China remains incredibly poor and backward. Its economy is estimated to be something less than a fifth of the United States'. Mechanized farming is limited. Huge portions of its population exist without electricity or running water. And the incident at Tiananmen Square remains an untouchable subject to Chinese leaders. Still, western investors are flocking to China's yet unrealized potential. "The rocket-like growth and absolute size of (China's) middle class should…create some of the biggest business and financial opportunities in history," predicts *The Economist* magazine. "Far-sighted western firms and their workers stand to profit immensely from this."[6] Who could resist this capitalist call? Not even the Reds, says noted Sinologist and author William Hinton in his book *The Great Reversal (The Privatization of China)*:

> Make no mistake. The leaders in Beijing are not motivated by communist ideals; they are not motivated by revolutionary ideals; they are not revolutionary planners or socialist builders. They are newly constituted bureaucratic capitalists, busy carving the economy into gigantic family fiefs, ready, in true comprador style, to sell China to the highest bidder. [7]

And that is exactly what is happening now in a series of world-wide construction bid offerings and loan applications targeted at road building, factory construction, telephone systems, and the Three Gorges project. After a visit to China in the late 1990s, award-winning journalist William Greider detailed this picture in *One World, Ready or Not (The Manic Logic of Global Capitalism)*:

> China was undertaking a staggering agenda of $155 billion or more in infrastructure projects by 2000—twenty major power plants, 280 million new telephone lines and digital switching equipment for nine provinces and cities, new airports at Guangzhou and Beijing, an express train Siemens planned to build from Shanghai to Beijing. AT&T set up a branch of Bell Laboratories in Shanghai and vied with Nynex, HK Telecom, Canada's Northern Telecom and others for the privilege of wiring China—a $90 billion market potential in the coming decade.[8]

Despite the boom and bust of several key Asian markets, China is a separate entity, managing her coming out with a measured awareness for capitalist promise. President Jiang Zemin's visit to the United States in November of 1997 was exemplary of China's new position and attitude. Jiang toured the country like a hot new entertainment property—a celebrity, not a bludgeoning political boss. This is the way of the New World Order. Jiang was on a business trip. He was here to speak to corporate investors of economic opportunity, not debate human rights issues. Today, politics is business. Government officials step to the back, while CEO's wave contracts and make deals. Each side has something to sell. In the world of international market arbitrage, Jiang was merely stylin'. Greider elucidates:

> The process of global economic integration is broadly driven by market forces, in particular the competitive price pressures to reduce costs, but the actual events of industrial movement depend crucially upon political transactions—irregular deals that often offend the reigning principles of free-market enterprise. When a multinational corporation seeks to shift productions to low-wage labor markets, a process of political bargaining ensues with the governments competing for the new factories. Concessions are offered, deals are made, investment follows.
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> Given the worldwide thirst for economic development and the abundance of willing governments, these political arrangements are now so commonplace that almost everyone regards them as normal. The multinational companies usually have the leverage to stipulate terms for their capital investment, but the leverage is reversed in some important cases (*China*) and nations can dictate terms to the firms.[9]

Dollar by dollar, China is opening itself to the rest of the world. It is projected to have the same kind of success in the international market as Taiwan, Singapore, and Hong Kong. There is also a fair chance we will see loan re-servicing. IMF and World Bank incursion. Another Malaysia. Another South Korea, Indonesia, Thailand. China added to the heap of indebted countries. The international economy doesn't need it. The dam's success will play heavily in the world's balance of payments.

So how does China fit the pattern of Third World countries taking on debt from the G7 financial community? This is not easy to assess because Communist China has no real track record. She has always remained unto herself—until now. In any regard, development is an economic tight wire in the free market arena. Only a select few nations have been able to escape the initial pit fall of loan reconstruction and then its economic quicksand. It's true—especially when you are entering the G7 monetary system from the outside.

Economic theory says capital import is the way for a country to develop. Records show, however, that once a loan is re-serviced and economic conditionalities are imposed, things get very tough. The examples of failure greatly outnumber the successes. Credit has been extended and extended again to Mexico, Brazil, Argentina, Ecuador, Peru, Bolivia, and almost all Africa's sub-Saharan nations. Old loans threatening to default are invariably saved by new loans that are saved yet again by another new loan. Over and over again, developing countries have fallen victim to IMF austerity programs and trade liberalization. Clearly the Chinese could face the same fate. But the feeling is that China is different—more careful, more controlled.

Communist China entered the trust of the G7 monetary system in 1992 in a ground-breaking agreement offered through a Taiwanese investment firm, involving Merrill Lynch & Co. of the United States and the Lippo Group of Indonesia. This special access was "provided on the condition it provide financial support for the (Three Gorges) dam's construction."[10] The dam has become the unholy symbol of this inter-ideological wedding. In spite of the high odds for failure in the peculiar high stakes game of capital import, Wall Street believes China can make the money work. And hydroelectric power is an essential step in doing so.

Odd as it may seem to westerners, Communist China has chosen to evolve into a business entity. Red has become brown. It will be strict, totalitarian, single-minded, and fascist. Behind all facades of political misgivings, Wall Street depends on this. To some the incident at Tiananmen Square is either good reason to stay out of China or minimally a card to play in the structuring of development loans. To others this very strictness of the society, the very presence of the Red Army as a workforce, is all the more reason to invest. China may be no less corrupt or brutal than any other totalitarian nation, but the Chinese, say insiders, manage their greed better than cultures south of the equator. "China's rulers still run enough of a police state that they can break any factory-floor militancy and keep wage rises below productivity increases,"[11] brags *The Economist*. Simply, they can make austerity pay.

And in spite of all this hope for new economic frontier in China, quite possibly because of it, ecologists have attacked the building of the Three Gorges Dam just as frantically as money from all over the world has been invested. Nearly every large environmental group in the world has filed protest against this twenty-first century monolith. As Dan Beard, onetime commissioner of the U.S. Bureau of Reclamation, said, "It is a serious mistake for any region in the world to

use what we did on the Colorado and Columbia Rivers as examples to be duplicated;"[12] large dams are an ecological disaster. No one should be building them. All over the world they are being decommissioned. At best their lifetimes are a hundred years. And with that comes vast impact to the land and its biology. Rivers carry the life blood of the earth. Arteries cannot be blocked and clogged in healthy ecosystems any more than they can in healthy human beings. And China is already deep amid environmental stress. The fifteen years of Mao's "Grain First," followed by fifteen more years of agricultural reform, was thirty years of irrigation and increasing amounts of chemical fertilizer. Soil degradation is widespread. Clean water is scarce and poorly managed. Aquifers are low. They are just completing a large dam on the Yellow River. Its impact is an unknown. To risk further strain to the nation's overall environmental health by adding another huge dam is fool-hearty. Some 1.8 million square kilometers of river drainage are effected; untold freshwater and estuarine fisheries, vital expanses of wildlife habitat, and general water quality will all suffer.[13]

In 1981, the Chinese invited a group of American engineers to study the site and offer assistance in the planning of the Three Gorges Dam. The Americans discouraged the project from the onset. It was too big. It would not solve flooding problems. It would not increase the navigability of the river, and the huge reservoir could have large-scale geological impact, conceivably triggering landslides or earthquakes.[14] On top of this, it is strategic nonsense to focus so much power generation at one facility. It makes an obvious target of war or terrorism. Building a series of smaller dams upriver on the various tributaries could affect the same energy goals with less widespread impact. The dams could be done one at a time. The costs could be spread out over a longer period.[15] Even flood management would be more adaptive and efficient. Though this initial report did cause the Chinese engineers to scale down their first plan for the dam, the project, the late Premier Li Peng's personal favorite, remained essentially the same. They were still building the largest dam the world has ever seen—by a factor of thirty percent!

Four years later, the Three Gorges Working Group, a consortium including Morgan Bank, Bechtel Civil and Mining, Merrill Lynch Capital Markets, and the U.S. Army Corps of Engineers began positioning offers for the job.[16] Not since before the Communist revolution had western industry been welcome in China. A Canadian Engineering Group associated with the World Bank immediately countered. At this time criticism from environmentalists all over the

world surged to the debate. The World Bank ordered another appraisal of the job. Then controversy erupted within China over the project. To Li Peng's chagrin, the National People's Congress ordered a complete reappraisal in the spring of 1989. Two years later, the massacre at Tiananmen Square took place. The foreign money that China needed to build the dam got locked up in moral debate. But finance came finally in 1992 through the before mentioned Merrill Lynch, Lippo connection. The project once slated to begin in 1984 entered into construction in 1993. The main channel of the Yangtze was officially closed in mid-November of 1997.

In Taoist philosophy, there is a concept called the path of least resistance. Its clearest example is the natural flow of water, from the skies, down the mountain valleys, from gurgling brook to meandering river, across the countryside to the oceans, and then evaporating back into the skies again. Water always follows the easiest route, twisting and turning here and there to the whim of the land, like the spill from a garden hose curling down the sidewalk. This image in nature is at the core of Chinese philosophy and culture. The path of least resistance is respected both as a natural law and a lesson in the economy of human nature. It has also been a central tenet in the centuries' long debate on what should be done or not done to the Yangtze. Traditions of the Great River have been imbedded in the people and the land over millennia. The river is the living Tao running through the center of their life. The way of the Yangtze is the way of China. The perseverance of Chinese pastoral life is a reflection of trust in this. And at the heart of the Three Gorges debate lies this classic socio-ecological tension: industrialization intruding upon traditional cultures. A bigger picture evinces more of China's delicate situation.

In the years between 1959 and 1961 some thirty million Chinese starved as a result of a nation-wide famine. The extent of this human disaster did not reach western news sources at the time. Only since the death of Mao have the details of the incident been revealed. It occurred during the period of Mao's "Great Leap Forward," when all China's energies were directed to industrialization and modernization. Farmers were pulled from the land; land was pulled from cultivation, so factories and roads could be built, so a nation of twelfth century peasants could gradually ascend into the twentieth century. The plan backfired. Too many were pulled from the land. A long drought didn't help matters. China could not produce enough food to feed itself, and Mao was too proud to go to the rest of the world for help, creating the largest death toll due to food shortages in the history of the planet.

The devastation left a deep impression on the nation. During the next thirty years, agriculture received top priority. In that period China nearly tripled its grain production. Today it surpasses the United States as the largest producer of grain in the world.[17] Together, China, the United States, and Canada produce more than half the 1700 million tons of grain grown each year. Of the three, however, only China still needs to import small quantities of grain to meet the needs of its 1.2 billion-population.

Now China ventures into another era of industrialization. Again the cost will be agriculture lost to the building of manufacturing plants, roads, parking lots, telephone lines, and dam reservoirs—some 67,000 acres of cropland will be lost to Three Gorges Dam alone. A nation that proclaimed in 1995 it would never import more than five percent of its grain is putting itself in a rather precarious position. In his book, *Who Will Feed China,* Lester Brown, President of the Worldwatch Institute in Washington, D.C., presents an extremely convincing argument for growing grain shortages in China in the years to come.

Brown parallels the development of Japan, Taiwan, and South Korea to China's—as four heavily populated agrarian countries entering rapidly into capitalization. He projects that the land lost to China's meteoric industrialization will eventually sabotage the people versus arable land equation of food production. Though Beijing immediately refuted Brown's analysis, the examples of Japan, Taiwan, and South Korea argue to the contrary. All three of these countries have lost approximately half their grain land to industrialization in the years since 1950, forcing them as a group to import some 70 percent of their grain. In terms of the ratio of population to arable land, China now stands where Japan did in 1950. To attain the efficiency of land use that Japan does today would be an incredible, if not impossible, task for developing China if Brown's logic is correct:

> Understanding what lies in store for China depends on some knowledge of how rapid industrialization has affected cropland area in countries that were already densely populated before serious industrialization began. There are…only three countries that fit into this category: Japan, South Korea, and Taiwan.
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> The shrinkage in the grain land area in the three countries is remarkably similar. After peaking in 1955, Japan's grain land area shrunk by 52 percent over the roughly four decades to 1994, or some 1.4 percent a year. For South Korea, the area has dropped 46 percent since peaking in 1965, an annual decline of 1.2 percent. The trend for Taiwan is similar—a loss of 42 percent from 1962 to1994, or 1.2 percent a year. For the three countries combined, the grain land area peaked in 1956 at 7.9 million hectares; by 1993, it had declined to 4.1 million hectares.

> This drop of 48 percent over 37 years means the grain land area shrank by an average of 1.2 percent a year.
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> The remarkable consistency in the effect of industrialization on the cropland base suggests a certain inevitability. And it indicates how difficult, if not impossible, it will be for China to avoid a similar loss of cropland.[18]

These trends are already becoming evident in industrializing China. Recent estimates show its total grain land decreased from 90.8 million hectares in 1990 to 85.7 in 1994.[19] This amounts to an annual drop of 1.4 percent—nearly the same as trends in Japan, Taiwan, and South Korea during the height of their industrialization.[20] More importantly, after twenty years of steady grain production gains, price volatility in China suggests that the surge is beginning to level off. In the 1993-94 trade period, China was a net exporter in grain, sending some 8 million tons to other countries. By 1994-95, this situation had reversed, as China imported 16 million tons of grain.[21] Additionally, the price of corn rose to such an extent in 1994 that by summer all exports were banned.[22] Surely this one-year reversal does not establish a verifiable trend, but the reversal is ominous.

If China's industrialization does follow the paths set by Japan, South Korea, and Taiwan, as Brown suggests, it will lose as much as half its cropland by 2030, while adding between 400 and 500 million more people to its population.[23] To meet growing food needs, increased production will have to come from intensifying the farming of existing land—in other words, more irrigation and more fertilizer. These methods have already been pushed too far. Presently half of all China's food production and 80 percent of its grain production is made possible by irrigation,[24] most facilitated by a flurry of dam building and rapacious aquifer pumping in the last twenty-five years. In Northern China the water table is already down some 230 feet.[25] Fertilizer use in China is also near saturation levels. In the United States where farmers fight the same problem, one ton of fertilizer is used for every 15 tons of grain produced. In China that ratio is one ton of fertilizer to 11 tons of grain.[26] And all of this, dams, irrigation, ground water pumping, fertilizer-use, is borrowing from the future and are preeminently erosive methods. It can not be sustained. If some critical breakthrough in biotechnology or hybridization does not relieve this foreseen pressure, China will become heavily reliant on grain imports for the first time in its history—and this is without factoring in the environmental impact of damming its largest river to electrify the recent industrial push.

Of course, if things go as President Jiang and Wall Street hope, then China will have the money to purchase the grain they need. This is how Japan, Taiwan, and South Korea (tentatively) have made industrialization work—they depend on outside sources for food. There is, however, an even bigger picture. Will there be enough grain in the market to meet China's needs? If China's grain production slips a mere 20 percent in the next twenty-five years—which is optimistic—and its fertility rate remains at a tame 1.1 percent—which might also be optimistic if per capita incomes rise, Chinese needs would double present total world grain export demands.[27] In terms of global management, world food pressures are so delicate in some parts of the world right now that it is to the advantage of everyone if China can feed itself. The grain won't be available otherwise—at least not at a price everyone can pay. The free market can be a harsh master. Even more important than the cost of a barrel of oil, grain prices can send huge ripples through the world economic system, starve entire nations, cause outbursts of civil unrest, and rapidly unseat unstable regimes.

Unfortunately, the situation that China faces in meeting its food needs is exactly that facing the rest of the world as a whole. Though annual grain yields worldwide have reached all-time highs, reserves have eroded to all-time lows over the last ten years. Food production today may be adequate for our numbers, but it is so poorly distributed that one sixth of the world's population is chronically undernourished. For the most part this is a socio-political problem. In the eyes of world steward watchdogs like the Worldwatch Institute and the United Nations, there will be a time in the near future when it becomes a resource problem—that is, land and water. In the assessment of the technical papers published by the United Nations in conjunction with the World Food Summit held in Rome during November of 1996, the situation worldwide already appears to be nearing a cusp:

> The overall conclusion is that, without deliberate changes from the normal course of events, many of the food security problems of today will persist and some will become worse. This need not be so, however, if action is taken now to promote poverty-reducing growth and agricultural development as well as to put agriculture on to a more sustainable path…the long-term food security future of humanity will be bleak if action is not taken now.[28]

Worldwatch's Lester Brown echoes the same message, but with darker foreboding:

> Food scarcity is likely to emerge as the defining issue of the era now beginning, much as ideological conflict was the defining issue of the historical era that recently ended. National political leaders everywhere will be thoroughly challenged by he demands placed on them by the prospects of growing food scarcity. Ensuring the food security of the next generation requires fundamental changes in population policy, energy policy, land use policy, water use policy, and, indeed, in the very definition of national security itself. Whether or not political leaders can respond quickly enough to avoid widespread political instability remains to be seen.[29]

As the world industrializes, the quantity of available arable land is on the decrease at about one percent a year while world population annually increases at 1.4 percent. Because there is little arable land economically viable for expanding new cropland, increased food production must come from intensified farming techniques. In the mid 1970s when the first World Food Summit was held, this meant a world-wide push to boost yields with aid programs for irrigation and fertilization—just as Mao's did in the "Grain First" era. Today, however, increased irrigation and fertilization may help keep pace with growing demand, but it is not sustainable. In other words, the harder we farm the land the faster it is degraded—and it has already been pushed near its limits in critical areas—specifically China and the United States. To complicate matters, there isn't enough available water to fill irrigation needs. Recent appraisals from the U.N.'s Food and Agriculture Organization predict that "by the year 2025" overall water requirements, industrial, household, and agricultural, "appear to over commit all accessible runoff by some five percent."[30] Add to this, the fact that the earth's natural water reserves are stored in the ground in vast fossil aquifers, and they have been pumped faster than they can replenish for many years now—to the extent that water tables show signs of depletion in every continent of the world today.

The world's human population is approximately 5.9 billion. At present fertility rates 80 million more people are added to that number each year. United Nations demographers project that the world population will plateau between 10 and 12 billion sometime during the second half of this century. This means we need to find a way to double our food production over the next fifty years on essentially the same acreage of cropland without destroying the land. Biotechnology is one hope. But there has been no significant breakthrough in this field in twenty years.[31] It's already late in the game and we can't depend on drawing to this inside straight.

Throw in the huge question mark of climate change and we appear to enter the twenty-first century betting against the bank—with China being the biggest marker on the table.

Though the push of the G7 corporate community has been for the steady capitalization of the Third World, the central thesis of this essay is that the balance between industrialization and the tolerances of the land is already critically near, if not past, the equilibrium point. The recent Climate Change alarm is cold proof of this. And the problem involves quite a bit more than the price of a loaf of bread. It is a general question of global economic and environmental stability. In many ways the world cannot afford the industrialization of another billion people, not only in terms of food, but roads, cars, gasoline, and certainly carbon emissions. *The Economist* offered these figures based on Vaclav Smil's book *China's Environmental Crisis*:

> China in (the year) 2000 will need an increment of primary energy production equal to the output of present-day India and South Africa combined, extra electricity equal to Brazil's present output, extra steel equal to Italy's, extra cement and nitrogen equal to Japan's, extra grain to all Africa's. It will need extra water equal to Mexico's consumption in 1990. It will be belching an extra America's-worth of particulate emissions into the air, and a West Germany's-worth of sulphur dioxide emissions.[32]

Industrializing China has already entered into vast highway building projects and counts on the automobile as being their mode of transportation in the new century. In 1992 the annual sale of cars, vans, trucks, and buses in China was 1.2 million. It is expected to increase to 3.5 million by 2010.[33] With carbon dioxide emissions already one of the biggest problems facing the world today, who's going to tell the Chinese that there isn't enough clean air left for them to drive cars? If their economy produces, as many expect, no one will tell them "no" because they will have the money to pay for whatever they want!

If this isn't enough to consider, the same kinds of projections we see for China in the next few years exist throughout developing Asia and Latin America because they all aspire to live as we do in America. And there just ain't enough of the good stuff to go around.

Presumably market forces will decide whose plate is full, half-full, or empty. Who gets to drive a car and who walks. Who is free and who is not. This may not be a pretty sight. And incredibly enough there is no project underway in the world today that will have more to do with our future than the damming of the Great River. Not that any single enterprise will make or break

our civilization, it's just that this one impacts so many of the tensions at play in our world system.

On one hand if China enters the market in a big way and provides the kind of manufacturing and consumer base some speculate, the Chinese will be buying their food off the plates of the rest of the Third World. If, however, they do not succeed, and fall into either the austerity of their totalitarian regime or the IMF's economic managers, the Three Gorges Dam's electricity will be wasted on a starving populace. They will want rice not situation comedies. And you can also be sure the bankers will still want their regular interest payment.

The recent financial setbacks around the Pacific Rim add to the delicate nature of this situation and reveal the shaky underpinnings of Asia's "robust" industrial growth over the last decade. For all Wall Street's professed belief in the cure-all of economic growth, the Asian bailouts are foreboding for all of us, both in terms of food and jobs. The developed world counts on a healthy Asia to buy its exports. China is essential to all of this. When we try to evaluate the significance of the Three Gorges Dam, ancient Chinese philosophers had it right the first time. To alter the Tao of the Great River is to alter the Tao of China. The difficult question facing us now, two millennia later, is *can the rest of the world afford it?*

Notes:

1. Margaret Barber and Grainne Ryder, *Damming the Three Gorges,* (London & Toronto: Earthscan, 1993) p. 1.

2. Ibid. p. 2.

3. Ibid, p.3.

4. Ibid, p. 4.

5. Lester R. Brown, *Who Will Feed China,* Worldwatch Institute (New York: W.W. Norton & Company, 1995) p. 29

6. *The Economist*, "A Billion Consumers," (New York: The Economist Newspaper Group, Oct. 12, 1993) p.1.

7. William Hinton, *The Great Reversal: The Privatization of China* (New York: Monthly Review Press, 1990) p. 8.

8. William Greider, *One World, Ready or Not: The Manic Logic of Global Capitalism* (New York: Simon & Schuster, 1997) p. 157.

9. Ibid, p. 81.

10. Margent Barber and Grainne Ryder, *Damming the Three Gorges*, (London & Toronto: Earthscan, 1993) p. 21.

11. *The Economist*, "A Billion Consumers," (New York: The Economist Newspaper Group, Oct. 12, 1993) p. 10.

12. Janet Abramovitz, "Sustaining Freshwater Ecosystems," *State of the World 1997*, Worldwatch Institute (New York: W.W. Norton & Company, 1997) p. 66.

13. Margaret Barber and Grainne Ryder, *Damming the Three Gorges,* (London & Toronto: Earthscan, 1993) p. 6.

14. Ibid, p. 5.

15. Ibid, p. 5.

16. Ibid, p. 8.

17. Lester R. Brown, *Who Will Feed China,* Worldwatch Institute (New York: W.W. Norton & Company, 1995) p. 27-28

18. Ibid, p. 56.

19. Ibid, p. 27.

20. Ibid, p. 27.

21. Ibid, p. 100.

22. Ibid, p. 100.

23. Ibid, p. 63.

24. Ibid, p. 68.

25. Ibid, p. 70.

26. Ibid, p. 83.

27. Ibid, p. 96-7.

28. *World Food Summit Technical Papers*, (Rome, Italy: Food and Agriculture Organization of the United Nations, 1996) Synthesis p. 3, 45.

29. Lester R. Brown, "The Acceleration of History," *State of the World 1996*, Worldwatch Institute (New York: W.W. Norton & Company, 1996) p. 18.

30. *World Food Summit Technical Papers*, (Rome, Italy: Food and Agriculture Organization of the United Nations, 1996) Synthesis, p. 21.

31. Lester R. Brown, *The Agricultural Link*, Worldwatch Institute (New York: W.W. Norton & Company, 1997) p. 48.

32. *The Economist*, "A Billion Consumers," (New York: The Economist Newspaper Group, Oct. 12, 1993) p. 8.

33. Lester R. Brown, *Who Will Feed China*, Worldwatch Institute (New York: W.W. Norton & Company, 1995) p. 58.