

OUR LAND IS UNDER SIEGE

TAN ZUOREN

A Chinese environmentalist sees democratization as a necessary element of effective environmental policy.

Wang Yi's view that "our homes are under siege" is well known, and I am entirely of the same mind.¹ But while Wang Yi is referring to social politics, the economy, culture and social values, there is another kind of large-scale invasion in progress against China's ecology and environment, which will eventually spread to the global ecology as well.

There are more than 600 large- and medium-sized cities in China; of these, more than 400 (67 percent) are experiencing surface subsidence of several millimeters or centimeters annually. For example, excessive extraction of ground water in Shanghai's old city district and in the Pudong new district has led to compression of ground strata and an annual surface subsidence of 2–4 cms, causing buildings constructed in recent years to subside, develop cracks and threaten collapse.

While seawater is invading Shanghai and Tianjin, Beijing has turned into a virtual funnel exceeding one thousand square kilometers in area; in Chengdu, the water table has dropped three meters; and the Big Wild Goose Pagoda has developed a tilt due to surface subsidence. Purely in terms of physics, China's current invaders include desertification, the spread of wasteland, salinization, dust storms, geologic disaster, flooding, soil erosion and water and soil loss. Other encroachments, such as those on plant and animal life, wetlands, streams, lakes, glaciers, climate and air purity by overpopulation, as well as social factors such as creeping urbanization, economic disparity, political turmoil, media lapses, cultural dilution, moral collapse, social conflict and public crisis, are becoming regular and widespread challenges to China's political system and a civilization that traditionally advocated the unity of nature and humanity.

Through the fog of history, let us trace the struggle between Chinese civilization and its challengers, and reflect on the interdependence of the people and the environment through 5,000 years of cultural vision and 50 years of modern development. In particular, I would like to explore the merits of the Great Wall, the fate of rivers and streams, the limits of our ecological resources and the difficulties of building a harmonious society.

Entrenched behind the Great Wall

The Great Wall is often invoked as a symbol of China's 5,000 years of glorious or inglorious history. When China became a society ruled by imperial power, building the Great Wall became the primary political task of generations of rulers. Along with grain storage and dynastic succession, wall building was a key strategy for political and economic development of the state during those early centuries. In the name of preserving China from dishonor by foreigners, tyrannical rulers usurped luxuriant primitive forests to scar China with innumerable walls. The earliest of these city walls was the Qi wall, begun in 555 B.C., and the most recent is the Qing wall, the blockhouse section in western Hunan's Fenghuang City, over a hundred li long. Including four 10,000-li great walls, the structures accumulate into 100,000 li of coiling dragons and crouching tigers as they wend across mountain after mountain, gaunt scars against a desertified backdrop. Ostensibly laboring to protect their country from foreign assault, but in fact the victims of internal repression and infighting, the Chinese people exhausted themselves constructing a wall that became the philosophical nucleus of the "Chinese box."²

The Great Wall created an image of the Chinese people as defensive, closed, introverted and self-constraining. The political boundaries drawn by the Great Wall physically and psychologically were far more significant than its military value. History shows that building the Great Wall did not bring a harmonious society, defense from outside attack or world peace.

Perhaps coincidentally, the Great Wall traces the division between China's north and south. The northern great wall (Mongolia, Hebei, Shanxi, Shaanxi, etc.) coincides with China's 400mm rainfall line; to the south lies the semi-arid warm temperate zone with its forested sylvosteppe; north of the wall are the arid mid-temperate and cold temperate zones with their desert and desert steppe. The south, an agricultural region, suffers primarily from water erosion, and the north, a pastoral region, mainly from wind erosion. Throughout history the wall has coincided with geographical regions of China, becoming a rainfall line, a sandstorm line, the border between the warm and cold temperate zones and a marker for political administrative borders, and serving as an enduring spiritual and cultural totem for the Chinese people.

Without detailed investigation, we cannot prove the cause

and effect relationship between construction of the wall, the depletion of environmental resources and the destruction of the eco-environment, nor is it possible to lay the blame for large-scale desertification entirely on the Great Wall. However, we do know for certain that construction of the wall, which depleted the resources of several dynasties, in no way achieved the purpose for which it was built. China's despotic and ignorant feudal lords abandoned their cities to incursions by the intrepid peoples of the north, while the construction of this ineffective wall weakened state power through widespread popular indignation and discontent.

The real relevance of the Great Wall, both in the environmental and military context, is in its symbolism. Setting aside the bogus claim that the Great Wall is the only man-made structure that can be seen from the moon, the significance of the wall is in its reflection of the shoddy constructs of modern spiritual culture, as well as on the real motivations behind physical projects large and small. In road construction, bridge building, replanting, deforestation and particularly in the national dam-building movement of recent years, we see the shadow of the wall—the feudal will and private interest hidden behind the public works. Even the current project to repair the Great Wall replicates this feudal mindset.

Five thousand years ago, our Chinese forebears gathered in the Yellow River basin and, passing from gathering, fishing and hunting through pastoral nomadism to agriculture, produced one of the four great civilizations of the ancient world. Under ancient Chinese culture, ecology flourished along with the hundred flowers blooming and contending in the schools of ancient Chinese thought. Yet from the Qin Dynasty onward, that is, starting with the construction of the Great Wall, the feudal emperors became their people's tyrants. Befriending distant states while attacking those nearby, these rulers came to define national policy and mainstream culture through cultural

despotism, political attacks and confiscations. As traditional mores valuing the common people over the nobility were overturned, China's natural and social ecology likewise began to pay the environmental and social costs of national unity under feudal imperial rule.

Studies have shown that the "yellow earth" loess plateau of northwestern China, where dust storms now obscure the sun, was once covered with primitive forests whose branches brushed the sky, and that the barren stretches of Henan Province were once filled with wild elephants and flowing grasses fed by abundant waters. The source of the Yellow River, the plains at its Great Bend and the central Shanxi plains, were once places of great biodiversity, the cradle of Chinese civilization, a true primeval forest. In the course of two thousand years, the small-scale agricultural economy that provided for a feudal bureaucracy and nobility gradually depleted the resources that had been laid up over millennia, transforming the region into the wastes of the Gobi, a sea of sand.

The Great Wall and the Yellow River at some points run side by side, at others intersect and overlap, taking each other by surprise. In the great north, at 35–40°N, they mark out a fragile yellow ecology in arid wastes where sand has been gradually elbowing out human habitation and forming the northern sand plain. The physical progression of the planet's northern latitudes, from mountains to lakes to rivers to the sea, is echoed in the three stages of development of Chinese civilization from north to south, and in the trail of humans driving out nature before them. The high-latitude, high-elevation Yellow River civilization has been abandoned; the mid-latitude, mid-elevation Yangtze civilization is already having a hard time bearing the pressure of human existence, and the lower-latitude, lower-elevation land downriver and in the coastal regions is even now being overloaded with human ecological migrants as they develop their new civilization.



The Great Wall, a symbol of exploitation in the name of the public good? Photo: Reuters

From the Yellow River civilization to the Yangtze River civilization to the coastal civilization, population and the economy have moved continuously southward, leaving wasteland and desertification in their wake. The Muslim peoples who emigrated early on to the arid region of the northwest are ecological migrants in a historical sense, while the farmers of Hunan and Anhui who today roam China's coastal cities are ecological refugees in the present sense. According to analysis by the State Environmental Protection Agency, some 186 million people in 22 provinces need to migrate for ecological reasons, but existing resources can only absorb 30 million.

What mode of existence over the last 5,000 years has turned China, from east to west and north to south, into a model of dehydration and desertification? We Chinese should consider this well.

Unilateralism has held sway for five thousand years

In 5,000 years of history, 50 years is just a blink, yet during this blink, ancient China has given way to a modern international state. This dual motion of giving way and lumbering forward has deprived China of its equilibrium as it searches for its next foothold. It is in these same 50 years that the environmental bedrock of Chinese civilization has come under siege in the rapid exhaustion of natural resources.

In 1955, the National People's Congress (NPC) unanimously passed the Comprehensive Report on Regulating the Yellow River, which included the Sanmen Gorge Dam. Even outside the meeting, only Huang Wanli (son of NPC vice committee chief Huang Yanpei) and a hydrologist by the name of Wen Shanzhang raised objections: Huang opposed the dam on principle, and Wen advocated a smaller dam. As Huang predicted, not long after the water conservancy project was built, the lower reaches of the Wei River silted up, and 1.5 billion tons of mud engulfed 800 kilometers of Qinquan, including 10 million mu³ of arable land. Ultimately, the dam's 360 meter submergence line was abandoned, and three years later they were forced to blast open the sediment sluice gates at the bottom of the dam. After several attempts to rebuild the dam, it was abandoned.

Disabled dams and reservoirs such as these cripple China with alternating water shortages and flooding. The near total failure of the Sanmen Gorge project prompted the Shaanxi People's Congress to call annually for its destruction, and caused political friction between Shaanxi and Henan provinces. Viewing the results of regulation of the Yellow River fifty years on, we see that its flow is intercepted by some dozen large hydroelectric dams on the main current and more than a hundred smaller ones on the tributaries. The great Yellow River that once breached its banks twice a year and changed course over centuries is now moribund. The river simply stopped flowing for periods of time during 22 of the 28 years from 1977 to 1999. In 1998 alone, the river's flow halted six times for a total of 226 days, or 62 percent of that year. Experts on the Yellow River Commission stated: "It is a foregone conclusion that the Yellow River is becoming an inland river with a seasonal flow. This is irreversible."

In the early 1980s, the controversy over whether the Yangtze would become another Yellow River led to the Yangtze Protec-

tion Project, which won temporary reprieve for the Yangtze, but also led to the controversial Three Gorges Project. Today, the question of whether the Yangtze will become another Yellow River is being raised again. What people should be asking is: Why should a river be placed in such a precarious state?

The ancients' method of water conservancy was to dredge while guiding. Yu Di, visionary founder of the Xia Dynasty (2205–2197 B.C.), opened gorges and channeled the Yellow River eastward to what is now Sichuan. Li Bing, governor of that same region in 256 B.C., built the Dujiangyan Irrigation System, which distributed the waters in accordance with natural principles. Such marvels of eco-environmentalism have blessed generations over thousands of years.

The ancients used water conservancy methods suitable to conditions, accomplishing great things with little effort, but today's water conservancy favors grand gestures that accomplish little through great effort. The Huai River control project spanned departments, provinces, cities and counties, but with all the best intentions, the result was disappointing. After 10 years and billions of yuan in investment, the Huai is dying, with little hope of revival. Nowadays water is controlled in the same way as people: all but the most "beneficial" water channels are blocked, and only a single voice is permitted. Are such controls what is meant by "harmonious"? To attribute such sophistry to "China's situation" only makes the matter worse.

Fifty years ago, the economist Ma Yinchu was persecuted for advocating family planning, and as a result, several hundred million more Chinese were brought into the world. Western-educated architect Liang Sicheng was attacked when he argued for conserving Beijing's old walls, and now Beijing is defaced.⁴ Hydroengineer Huang Wanli's opposition to the Sanmen Gorge dam was suppressed, resulting in the deterioration of the Yellow River. Mao's excoriation of educator Liang Shuming's warnings against revolution in Chinese culture eventually led to the persecution of millions. For many years, the battle between outstanding personalities and manmade disasters has been one of the fundamental roots of China's ecological ills. The problem is that the politically powerful inevitably get their own way, while great thinkers suffer, singly or in groups, for expressing their opinions. Meanwhile the perpetrators grow fat from the very disasters they wreak through crime, fraud, violence and corruption, but ultimately both sides end up as losers sacrificed to the system. Public servants, caught on the conveyor belt of power, find their reputations abandoned for profit; one reckless move and they become another sort of eco-refugee. Pan Yue, vice-director of the State Environmental Protection Agency (SEPA), showed admirable prescience when he said, "The environmental issue is in fact a political issue."

In the past, politics was simply autocracy; later, politics assumed command of the economy and ignored the environment. Now it's become a counterproductive agenda of grasping the economy, talking about politics and glossing over the environment. A responsible government should put the protection of ecology and the environment ahead of politics.

Humankind can endure, but the environment cannot. Environmental retribution will fall to our generation, with compound interest. The political and economic disasters of the late

1950s were followed by the destruction of our ancestors' mountains and the obliteration of our descendents' forests. The Three Years of Famine were direct retribution, when starving masses across the nation ate bark, grass and earth, and each other's children. In the late Ming and early Qing, the "eighth great king," Zhang Xianzhong, killed six million people in Sichuan, inscribing his name in the annals of the Qing. Ten years after the founding of the People's Republic, the "king of the southwest," Li Jingquan,⁵ starved 12 million people in Sichuan to death, about 17 percent of the province's total population, and no one paid any attention.

Unilateralism in politics inevitably leads to despotism and social calamity. The current regime's "people first" unilateralism simply applies the law of the jungle on a broad scale to rationalize humanity's exploitative use and abuse of the environment and other species. If this sort of behavior continues, even another 10 planets would fail to satisfy humankind's destructive capabilities, and billions more people will be starved to death by leftist "kings," be impoverished by "those who get rich first" or perish from environmental causes.

One third of China's village population does not have clean drinking water, and 400 cities have perennial water shortages. Two thirds of what water remains in China's seven great rivers is polluted, more than a third of it seriously. The Chinese people, famous the world over for a social system based on water conservancy and an "Asian mode of production,"⁶ are moving toward an ecological impasse in which they will have no potable water.

Difficult choices for the Tenth 5-Year Plan

In January 2005, the total population of China reached 1.3 billion, up from 450 million at the time the People's Republic was founded. One third of China's 9.6 million square kilometers of land is uninhabitable, and over the past 50 years water depletion and soil erosion have eliminated another third. The average land area per person has fallen from 13,333 square meters to 2,308 square meters, a reduction of nearly 83 percent. China's population density is three times the world average, while its natural resources per person are half the world average. The amount of cultivated land per person is also half the world average, its water resources per person are one-fourth the world average, and its fresh water use per person is one-sixth the world average. China's human carrying capacity on the basis of fresh water usage is 320 million persons; on the basis of cultivable land, 260 million persons, and on the basis of forested land, 170 million persons. Presupposing a huge crisis in existing resources, SEPA's Pan Yue has repeatedly stated that the current issue is not of benefiting later generations, but of securing the existence of the current generation.

China is on the verge of ecological crisis, but government and society continue to maintain an illusion of prosperity and a showcase economy that wantonly damages the eco-environment. For example, the national dam-building movement that began with the 10th 5-Year Plan effectively transformed China's rivers into ATM machines to prop up the GDP. At present the only river in China that has not yet been brought into the development plan is the Yarlung Zangbo River, and the only one on

which construction work has not yet begun is the Nu River (13 cascade hydroelectric plants have been proposed for the Nu, but preliminary work was halted due to widespread opposition).

Disproportionate attention to development at the expense of ecology is drying up catchment areas, laying waste to agricultural areas and turning recirculation regions into open channels and reservoirs. More than half of the world's 49,697 large-scale manmade dams are located in China. Adding in all varieties of hydroelectric stations, China has built 86,000 dams and 84,800 reservoirs, and China now leads the world with 17 percent of its surface water "reservoired." The resulting electrical power, produced at the sacrifice of a thousand years of river ecology, is disproportionately applied to high-consumption, high-pollutant industries and low-grade processing industries.

More than half of the world's 49,697 large-scale manmade dams are located in China.

Since the late 1970s, an anti-dam movement has arisen in Europe and the U.S., resulting in the demolition of more than 500 mainstream and tributary dams in the U.S., and more than 1,000 in Europe. The movement to demolish dams has liberated rivers from their muddy fetters and restored them to nature and to the animals and plants that also depend on them. It is my hope that the Chinese government and enlightened intellectuals would think carefully before building any more dams. Dam construction is profitable only in the short-term (large and medium scale dams have a lifespan of 50 years), but the negative environmental impact is far-reaching.

My opposition is not to dams *per se*. The problem is that many dams have been illegally constructed, some in secret deals or as projects based on false appraisals or pseudo-evidence. In early 2005, the State Environmental Protection Agency issued instructions to halt 30 illegal projects that had not passed the Environmental Impact Assessment (EIA); 26 of these were dam projects. A few days later, SEPA made public a second list of 46 illegal electric power projects, including 19 large-scale state-registered enterprises. Just over a year after implementation of the EIA Regulation, other departments with conflicting interests united to oppose and eliminate it.

In the past 20 years, regional discrepancies in development tactics have been allowed in order to speed the pace of development. This has been largely responsible for skewed development that has endangered an entire generation and deprived a region's residents of the benefit of their resources. In the China's Western Development Project, western power resources such as gas and oil have been sent east, and southern water has been diverted north in a host of pipelines and transport lines carrying western resources down from the mountains. The material basis by which western development could be sustained is filched from the original residents, leaving the west even poorer. Meanwhile, the east revitalizes its old industrial base, and the putative trickle-down to the west from the Central budget turns out to be negligible.

In many industrial cities, resources have dried up; mining

areas have been stripped bare and mines and processing companies have ceased operations, producing a large number of industrial eco-refugees and migrants as the economy shows signs of “Latin Americanization.” In its development strategy and industrial plan, China has adopted simultaneous development and use of resources without effective planning and controls or protection for natural resources. This leads to resource destruction, haphazard development and short-term economic behavior.

When textile exports double year on year to pull in more foreign exchange, who pays the eco-environmental bill?

Former Premier Zhu Rongji leaped into the world fray, signing the WTO with one hand and brandishing China’s 8 percent GDP growth in the other. His vast economic program gave no thought to the environment and bypassed political reform. He handled great affairs of state through a temporary expediency that ended up slamming the door on further “reform and openness” while authorizing rentseeking and fostering behavior detrimental to the environment. Yet, as China’s “business premier” who “pays no attention to politics but only to the economy,” what other choice did he have?

After the Yangtze flooded in 1998, environmental protection finally achieved the status of a “homeland security” issue, and the battle to protect the environment began with a complete ban on cutting in natural forests. Yet, because of lack of control at the local levels, systemic defects and incorrigible interest groups, plundering continued unabated. Now the need for economic cooling provides an excuse for political regression. This abnormal situation could explode into crisis at any moment.

Reflections on facing the ecological crisis

Prosperity is here, the rivers are dry, the flowers are gone and people are more ruthless.

In the course of more than 20 years of reform and openness, the calamitous plundering of resources has accelerated before the new gods of capital and the GDP. Politicized, the GDP has become a wild horse wreaking havoc all around it. With investment accounting for upwards of 40 percent of GDP, the government at all levels concocts innumerable political vanity projects that creates an illusion of prosperity while the economy stagnates. An idling economy relies on a central economic theory of the omnipotence of productive forces in which production becomes an end in itself, and in which scarce resources are converted into a surplus of products.

To make things worse, our limited resources are increasingly being shared with others through an excessive reliance on industries geared for export as China’s level of foreign trade has climbed to 70 percent. High-consumption, high-pollution industries declining in other parts of the world flock here to churn out vast quantities of junk products, as enterprises have become generators of foreign exchange. When 800 million pairs of socks replaced one Boeing, who really profits? How much pig or calf skin is required for 600 million pairs of

export leather shoes; how many snow-covered mountains, how much grassland degenerates as a result? When textile exports double year on year to pull in more foreign exchange, who pays the eco-environmental bill? In their dreams of becoming factory to the world, China’s modern administrators have squandered the limited resource on which the Chinese people rely for their existence.

The tremendous cost in terms of environmental resources is concealed by the mirage of a burgeoning GDP. China does not have enough natural resources to hold sway over the world, and does not have the technological system to expand industry. It must give up its grand, deceptive narrative and revert to a social development goal with adequate food and shelter and harmonious development as a baseline.

Some people have observed that the phrase “harmonious society” (*hexie shehui*) is pronounced similarly to a phrase implying food and free expression for all. Likewise, true social harmony requires development in the political as well as the economic sphere. In remedying China’s industrial backwardness, over the past hundred years the government has focused on political authority and economic prosperity, with life itself accorded little importance. With politics in command and the economy at the center, culture has repeatedly become the object of revolutions that have weakened and all but extinguished it in every level of social life, relegating it to museums and collectors. In this way, quality of life has come to be defined in monetary terms, and culture has become disengaged from spiritual quest. The resulting collapse of the social moral value system is a direct cause of the general desecration of ecology and the environment.

The GDP-ism that has dominated China since the mid-1990s is becoming the marginal utility for China’s ecological devastation.⁷ Studies in the U.S. and Sweden have shown that China ranks 133rd among the 146 countries on the Environmental Sustainability Index (ESI).⁸ The studies also indicate that the economic losses China suffers through environmental deterioration constitute 13–15 percent of GDP. Each yuan of output brings an environmental cost of six yuan, the highest cost in the world. China’s GDP energy consumption is three times the world average and its GDP water consumption is five times the world average. China also trumps the rest of the world in chemical consumption of oxygen (COD), emission of greenhouse gases and water pollution.

Let us look at China’s development prospects. Statistics indicate that in 15 years, China’s primary types of mineral product resources will be reduced from the current 45 to just six. In five years, China will rely on imported oil for 57 to 70 percent of its needs, as well as needing to import 57 percent of its iron ore, 70 percent of its copper and 80 percent of its aluminum materials.

In 2020, China’s annual automobile production is expected to reach 20 million, with 130 million vehicles in actual use. Relying on 70 percent imported oil invokes scenes of China’s roads and streets filled with abandoned vehicles and junk iron, like some horror movie. Cars have become the new marketing grail of China’s material culture, and the latest economic signpost for administrators tracking growth. To environmental

NGOs, they are consumers of great quantities of energy and resources and producers of huge amounts of pollution. To people with spending power, they are simply a new item to acquire in China's consumer frenzy.

Our land is sinking, the floods are rising and a tiny minority is robbing us not only of our riches, but of the very straws we clutch at, while using public authority to build themselves lifeboats. In the last few years, some 4,000 corrupt officials have absconded with some \$400 billion in public funds and disembarked on the capitalist shores they profess to abhor. Meanwhile, the majority of Chinese have nowhere to run. All we are lacking is the band that serenaded the doomed on the Titanic.

How shall we protect the land our forebears handed down to us? How shall we cherish the resources we are borrowing from our descendents and be able to look 367 million young people in the eye without shame? How shall we not only live and let live, but live magnanimously and with a clear conscience? All that we need to save ourselves from historical infamy is a little courage and a little conscience.

Our land is under siege, the ecology continues to slip away, the flowers have all withered; there is no turning back.

Someone has predicted that China will suffer ecological and economic crises before political and social crises, while someone else has said that whatever crisis breaks out will set off other crises to form a massive general crisis. Any crisis will be a disaster, and we should band together to prevent it. The policies of the present government are to implement a scientific view of development, centered on people and conducive to a harmonious society. Reforming the political system as soon as possible will reduce social costs, increase social benefits and protect against social crisis. The solution to China's environmental problems lies in improving our social ecology, and the path to improving the social ecology is through a tolerant and open humanitarian environment. To improve the humanitarian environment, we must turn political antagonism and confrontation into dialogue and reciprocity, and bring about harmony between officials and people and within society. We must take advantage of the opportunity to unify material civilization, political civilization and spiritual civilization, and bring about a political soft landing compatible with economic development. A political soft landing requires a realistic guarantee of freedom of expression, dissemination and publication if our compatriots are to become genuine owners and defenders of state resources.

Whether stability wins out over all else or is crushed by all else will not be determined by the length or thickness of some "great wall," or by standards of living or dynamics of control, but by the rationality of the system, the empathy of the government and the sincerity of aspirations for social reform. If we unite to strive for survival, we may weather the hard times.

In "guilt cultures" such as Europe and America, crow-like scolds brace up society, but in "shame cultures" such as China, magpies joyfully warble their country down the path of destruction.

What is crucial to saving our land as it is besieged by resource shortfalls and environmental decline is civic participation, a push toward eco-politics and democratization. This will allow all of society to join in restoring social ideals and social trust and constructing an enlightened social order – a truly harmonious society that is "peaceful but not uniform" rather than "uniform but not peaceful" as at present. There is really no other way forward.

Translated by a friend of HRIC

This article is based on a speech presented before the Chengdu Literary Exchange on May 28, 2005. The original Chinese version was published on the Web site of New Century Net: <http://www.ncn.org/asp/zwginfo/daKAY.asp?ID=65122&ad=8/1/2005>.

NOTES

1. Tan is referring to an essay by dissident intellectual Wang Yi, "Meige ren de jiaxiang dou zai lunxian." The essay has been posted on a number of Web sites, including <http://www.blogchina.com/new/display/3832.html> and <http://www.renminbao.com/rmb/articles/2002/9/29/23195.html>. The term used by Tan and Wang in their essay titles, *lunxian*, is more properly translated as "under occupation," but the English term "under siege" works better in the other contexts in which it is used in Tan's essay.
2. "It is Chinese practice to attack an issue with a framework larger than the issue itself. When a crisis occurs, Chinese leaders first detach from it temporally and spatially. They spend time thinking about the issue before action, thus allowing more room for maneuver in the future. This is somewhat like playing with a magic box: first you pack the specific problem and related factors into a box and then fit it into larger boxes with related problems in different levels. Finally, you come up with a framework of highest generality to harness the whole situation." Qiao Liang and Wang Xiangsui, "Chinese-box approach to international conflict," *Asia Times Online*, July 31, 2002, <http://www.atimes.com/atimes/China/DG31Ad01.html>.
3. One mu = 0.0667 hectares.
4. It has been argued that preserving the old city structures would have allowed for better traffic flow in modern Beijing.
5. A Long March veteran, Li took part in liberating southwest China during the revolution, and commanded the troops that liberated Sichuan. By 1952, he was the top leader of all Sichuan, a position he retained throughout the disastrous Great Leap Forward. It was only in 1967, during the Cultural Revolution, that he was labeled a "tyrant of his own kingdom" and purged.
6. One of a series of modes of production recognized by Marx and Engels, characterized by pre-class peasant communities and a despotic but not exploitative governing class.
7. In economics, marginal utility is defined as the increase in utility resulting from the consumption of one more unit of goods. Typically, the marginal utility of goods will at a particular threshold begin to decrease as the consumption of these goods increases.
8. See the summary for the 2005 Report, produced by the Yale Center for Environmental Law and Policy at Yale University and the Center for International Earth Science Information Network at Columbia University, at http://beta.sedac.ciesin.columbia.edu/es/esi/ESI2005_policy-summary.pdf.