


FOREWORD

Jennifer L. Turner, Editor



Over the past year, the scope of publications and meetings within ECSP's China Environment Forum has expanded significantly. In addition to our regular meetings in Washington, DC, we held one conference in Hong Kong (April 2001) with green NGOs from Greater China and a meeting in Tokyo (March 2002), in which we brought together cooperative aid agencies, researchers and NGO activists to discuss the potential of U.S.-Japan cooperation in promoting sustainable development in China. Two other publications came out in 2002—the bilingual proceedings from the Hong Kong forum and *Crouching Suspicions Hidden Potential: U.S. Environmental and Energy Cooperation with China*. Despite the growing diversity in our activities, our work still centers on China's environmental challenges and the scope and effectiveness of U.S. governmental and NGO environmental and energy initiatives in China.

We are pleased with the variety and depth of the feature articles in *China Environment Series* Issue 5. In the opening article, Elizabeth Economy highlights the potential environmental threats within China's "Go West" campaign, which is designed to raise living standards in the largely impoverished western region of the country and more tightly integrate the border autonomous regions of Tibet and Xinjiang with the rest of the country. Philip Andrews-Speed, Xuanli Liao, and Roland Dannreuther examine how China's growing energy needs, combined with its limited domestic energy resources, make the country an important player on the international energy stage. They argue that China's expanding energy interests do not necessarily pose a threat to its Asian neighbors or the West—instead these new interests can be used as an opportunity to integrate China into existing and new global and regional institutions. Jessica Hamburger presents a comprehensive overview of the pesticide challenges posing health and environmental threats in China. Despite the small number of promising government and international projects to reduce pesticide residues in food production in China, the Chinese government, she argues, needs to take bolder and more decisive steps to free Chinese farmers from the "pesticide treadmill" and improve the safety of its food. Fengshi Wu's exploration of GONGOs (government organized nongovernmental organizations) in China reveals that in the environmental sphere some GONGOs are developing new missions and building international and grassroots networks in ways unforeseen by the government.

In our second year of soliciting commentaries and notes from the field we gathered a rich collection of musings from individuals in NGOs, universities, research centers, and multilateral organizations. Jih-Un Kim opens the commentary section with reflections on the water problems in Shanxi. Two other commentaries evaluate conservation activities in China—Lawrence Glacy examines more broadly the nature reserves throughout China and Ou Xiaokun reflects specifically on the progress of The Nature Conservancy's Yunnan Great Rivers Project. Improving energy efficiency is addressed from two different angles as well—Robert Watson and Barbara Finamore relate some of the innovative efforts by the Natural Resources Defense Council to promote energy-efficient buildings in China, while Pam Baldinger discusses the potential of energy service companies to facilitate the adoption of energy-efficient technologies in Chinese factories. Since environmental NGOs are a relatively new phenomenon in China, it is not surprising that they continue to be a popular theme with our authors. Kenji Otsuka explains the value of networking with new environmental NGOs in China, while Jane Sayers notes how some Chinese NGO activists are utilizing mass campaigns to promote their green work. Timothy Hildebrandt reflects on both the potential and limited role for NGOs in assisting Beijing in greening the 2008 Olympics. Wen Bo contributes for the second time to the *China Environment Series* (in Issue 2 he authored "Greening the Chinese Media") to recount his trip to Xinjiang searching for environmentalists and insights into ecological problems in this remote region of China.

In addition to all of the diligent contributing authors, I wish to express my gratitude to a number of people who helped pull *China Environment Series* Issue 5 together. Although he jumped into the process halfway through, Timothy Hildebrandt has been a stellar managing editor, full of enthusiasm and witticisms. Fengshi Wu, who has just completed her one-year internship with me, has gone above and beyond the call of intern duty in her editing and writing work in this issue. Liang Sun, Naomi Greengrass, and Tina Chu-yun Liu helped keep the publication moving forward with their sharp-eyed copyediting. Richard Thomas was once again the creative brain behind the design and layout of the publication. The continued support and encouragement from the rest of the ECSP staff, the Asia Program, and others around the center have been invaluable. While this publication was made possible by a

generous grant from the W. Alton Jones Foundation, I also wish to acknowledge the wonderful support the ECSP China Environment Forum has received over the past year for meeting activities and other publications from the Japan Foundation's Center for Global Partnership, U.S. Environmental Protection Agency, U.S. Department of Agriculture, and the David and Lucile Packard Foundation.



ECSP REPORT 8: JOHANNESBURG AND BEYOND

What are the crucial issues for sustainable development? Why have the linkages between population dynamics and environmental degradation still not penetrated mainstream policymaking? Is there a future for environment and security research? The new edition of *Environmental Change and Security Project Report* addresses these questions by concentrating on issues for the August 2002 World Summit on Sustainable Development in Johannesburg, South Africa and beyond. To receive a copy, please email ecspwwic@wwic.si.edu.

Commentaries

What is to be Done at Johannesburg?

Issues for the World Summit on Sustainable Development

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Population, Poverty, and Vulnerability: Mitigating the Effects of Natural Disasters

George Martine and Jose Miguel Guzman

Migration, Population Change, and the Rural Environment

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Security and Ecology in the Age of Globalization

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Special Reports

Fire and Water: Technologies, Institutions, and Social Issues in Arms Control and Transboundary Water-Resources Agreements

Elizabeth L. Chalecki, Peter H. Gleick, Kelli L. Larson, Arian L. Pregoner, and Aaron T. Wolf

Book Reviews

Colin Kahl on *Violent Environments*; James D. Nations on *Sacrificing the Forest*; J. Ann Tickner on *Gender, Peace, and Conflict*; Leslie Johnston on *Resource Wars*, and many more.

Plus: Official Statements on Environment, Population, and Security Issues
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The Alatau Mountain Range in Xinjiang (Photo: Wen Bo)

China's Go West Campaign: Ecological Construction or Ecological Exploitation

By *Elizabeth Economy*

China's "Go West" campaign is designed to raise living standards in the largely impoverished western region of the country and more tightly integrate the border autonomous regions of Tibet and Xinjiang with the rest of the country. The campaign harkens back to Maoist, and even Imperial, approaches to development and national security, embracing large-scale infrastructure projects and mass mobilization efforts. Traditionally, these grand-scale campaigns wreaked havoc on the natural environment. However, China's leaders are betting that by embracing "ecological construction" as one of the major tenets of the Go West campaign, they can avoid the environmental excesses of their predecessors and protect the already fragile ecology of the region. Early indications, however, are that the substance of the Chinese leaders' commitment to environmental protection is lagging far behind its rhetoric, raising serious concern among Chinese experts and environmentalists as to the environmental and economic future of the West.



As China's leaders seek to establish a balance between economic development and environmental protection, a key testing ground for their commitment to the latter will be the process of the "Great Opening of the West" (*xibu dakaiifa*). Launched in March 2000, the "Go West" campaign is designed to "reduce regional disparities and eventually materialize common prosperity" ("China's Premier," 2000) by developing six provinces (Gansu, Guizhou, Qinghai, Shaanxi, Sichuan, and Yunnan), five autonomous regions (Guangxi, Inner Mongolia, Ningxia, Tibet, and Xinjiang), and one municipality (Chongqing) in western China.¹ (See Map 1)

The Go West campaign follows a long tradition of grand-scale campaigns designed to develop the Chinese economy and unify the country. Its centerpiece is a series of large-scale infrastructure projects, such as the Qinghai-Tibet Railway; the West-East gas pipeline from Xinjiang to Shanghai; massive afforestation projects; and water management ventures on the upper reaches of the Yangtze and Yellow rivers. The stated purpose of the campaign is not only to equalize living standards between the interior and coastal regions of the country, but also to integrate more tightly with the rest of the country politically troublesome regions such as Xinjiang and Tibet.

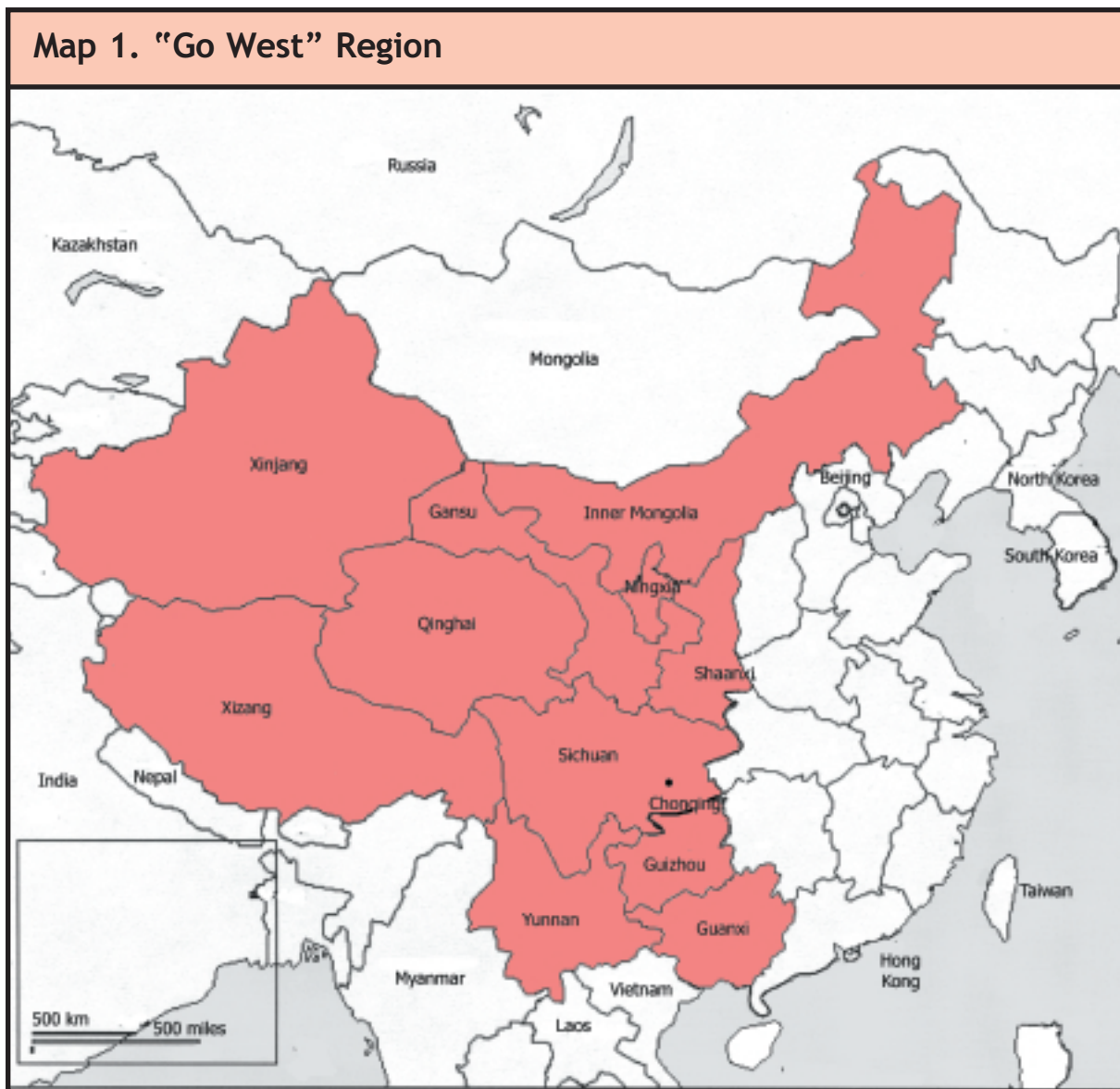
Traditionally, such development campaigns have wreaked havoc on the natural environment, contributing to wide-scale soil erosion, flooding, and desertification. The Go West campaign, however, embraces "ecological

and environmental protection and building" as one of its six major tenets² and China's leadership reiterates frequently its commitment to protect and even improve the natural environment in the West, even as it promotes rapid economic development. Yet many within China appear to question the substance of the government's commitment. Increasingly, regional officials, as well as experts from throughout China, are voicing their alarm at the potential environmental costs of the government's campaign. Already, the region suffers from extensive ecological degradation—soil erosion, desertification, and water scarcity pose serious threats to people's welfare as well as to the future economic development of the region. For example, nearly 25 percent of China's land is desert, and of that, 90 percent is located in the western region (Liu, 2001).

Whether China's leaders can successfully integrate environmental protection with economic development in the Go West campaign remains to be seen. While early signs are not promising, pressures from both the international community and domestic actors may yet persuade the government to rethink its campaign approach.

THE CAMPAIGN TRADITION

Mobilization campaigns in China often have served a dual purpose of consolidating power and developing the economy. Generally, they have had dramatic and often devastating consequences for the environment. The first



emperor of the Qin dynasty (221-206 B.C.), for example, united six states and formed the first centralized state in Chinese history, an accomplishment that historians of China laud to this day. The emperor and his officials also constructed major irrigation works and canals to promote economic development and to assist in the centralization of the state (Hong, 1997). Yet, the reality of state building as it was executed placed an enormous burden on both the natural environment and on the people of the time. As Qu Geping and Li Jinchang (1994, p. 17) detail:

Unification by military force killed more than a million people and lay waste to 13 cities. Deaths related to hunger and displacement outnumbered those related to battle. After unification, large-scale

construction detracted from other productive activities, leaving people with little respite. About 400,000 people helped build the Great Wall. Another 500,000 guarded mountains and suppressed riots. And 700,000 build the E'fang Palace and Qin Shihuang's tomb at Lishan Mountain (site of the Terracotta Warriors)....Although unification of the Qin was a great contribution to history, its rulers extorted taxes and forced military service on the people. The population of the Qin fell to below 20 million. Construction efforts during this period caused large-scale environmental degradation to forests and other natural resources. The poet Du Mu of the Tang dynasty approved of unification and the glory of E'fang, but lamented

deforestation: 'Six states conquered, the world was united...with Shushan Mountain bare, E'fang Palace rose to glory.'

Through the centuries, such campaigns denuded forests and degraded land to the point that devastating flooding of the Yellow and Yangtze rivers became commonplace, Qu and Li (1994, p.25) note; "[c]ultivated areas and cities of the Han and Tang dynasties in the north and northwest were literally submerged by sands during the Ming and Qing reigns," and there were large-scale population migrations engendered by resource degradation and scarcity.

While individual leaders and officials in ancient times displayed knowledge and understanding of the environmental consequences of their development practices, for the most part their attitudes and policy approaches reflected a desire to understand but then overcome nature in order to utilize it for man's benefit.

Mao Conquers Nature

China's more recent history, in particular the campaigns during the tumultuous period of Mao Zedong's leadership during the 1950s to early 1970s, reflects an even more aggressive approach to campaigns than in ancient times and an explicit understanding of the environmental havoc Mao's development campaigns wreaked. As historian Judith Shapiro (Shapiro, 2001, p.8) notes:

The Mao-era effort to conquer nature can (thus) be understood as an extreme form of a philosophical and behavioral tendency that has its roots in traditional Confucian culture. State sponsored resettlements and waterworks projects; extensive and excessive construction of dikes for land reclamation, political campaigns to change agricultural practices, and environmentally destructive land conversions in response to population shifts can be found in imperial times.

Indeed, Mao forswore even the pretense of maintaining a respect for nature. China scholar Rhoads Murphey has described Mao's conception of nature as such: "Nature is explicitly seen as an enemy, against which man must fight an unending war, with more conviction and fervour and with a brighter vision of the ultimate results than even the Darwinian-Spencerian West held" (Murphey, 1967, p.319).

In 1958, Mao's belief in the ability of man to conquer nature and his desire to achieve great power status came

together in the launching of the Great Leap Forward, a mass-mobilization campaign designed to catapult China into Communism and surpass the industrial achievements of Great Britain and the United States. While the most devastating result of the campaign was certainly the starvation of tens of millions of Chinese, the environment also fell victim to the irrational practices embraced during the Great Leap Forward campaign—skyrocketing pollution from backyard iron and steel furnaces; the destruction of forests, wetlands, lakes and rivers from huge land reclamation projects to increase grain production; and great losses to local ecosystems from massive infrastructure development and specious scientific experiments.

Just five years later, Mao initiated a second "revolution," the Cultural Revolution, with equally devastating consequences for the country and the environment. The Cultural Revolution brought a renewed emphasis on grain production to the exclusion of forestry, animal husbandry and fisheries. Forests and pastures were destroyed; lakes were filled; and man-made plains were cultivated to grow grains. One such grain-growing campaign—to expand the amount of cultivated land in northern Manchuria and Xinjiang—was "bound to fail since nothing could really be done to lengthen the north Manchurian growing season or ameliorate its soils, except at prohibitive cost" (Murphey, 1967, p.330).

As Qu Geping commented about this period, "[t]he few environmental regulations in industry, agriculture, and urban constructions were repudiated and negated as bourgeois and revisionist restrictions. Cases of environmental and ecological damages rapidly increased to a terrifying degree" (Qu, 1991, p.213).

Campaigns in the Reform Era

China's post-Mao leadership has condemned the excesses of Mao's campaigns. Yet in the first decades of reform, China's leaders emphasized large-scale infrastructure projects such as the Three Gorges Dam to develop the economy and advanced a "get rich quick" mentality that largely ignored environmental protection. In so doing, China's reform era leaders have arguably produced as much harm to the environment as any of Mao's determined efforts to conquer nature.

More recently, President Jiang Zemin, Premier Zhu Rongji, and others within the Chinese leadership have replaced the notion of "conquering" nature or ignoring environmental protection for the sake of development with the ideal of integrating environmental protection with economic development. Still, there is little evidence at the early stages of the Go West campaign that this ideal

has in actuality been incorporated into the campaign. Instead, the initial thrust of the campaign has been to develop the economy and consolidate the border regions of the country. Environmental protection has been addressed largely through a series of secondary campaigns to afforest the region, clean up the water, and ban logging. Here, too, preliminary evidence is that the campaign framework is largely inadequate and even inappropriate for the environmental protection needs of the region.

THE NATURE OF OPENING THE WEST

China's West, as defined by the Go West campaign, encompasses approximately 5.4 million square kilometers and a population of 285 million people (56 percent of the land and 23 percent of the population of the country). While the region is rich in natural resources—including gold, oil, natural gas and coal—much of it is difficult to access. Moreover, unlike the coastal provinces, the region remains poorly connected to the outside world, and infrastructure within the West is weak. Approximately 90 percent of the 80 million Chinese estimated to live in poverty resides in western China (Browne, 2000). Guizhou, one of the poorest provinces in China, boasts an average per capita income only 8 percent that of Shanghai (Smith, 2000).

In order to exploit the potential wealth of the region and raise local standards of living, Beijing has aggressively courted overseas business and aid agencies, as well as investors in China's wealthy coastal provinces and Hong Kong. Within the Go West campaign, the Chinese government seeks investment and aid for infrastructure needs in the region in areas such as: telecommunications, railways, airports, electric power grids, and the \$15 billion West-East gas pipeline from Xinjiang to Shanghai that is targeted to transport 12 to 20 billion cubic meters of natural gas annually beginning in 2007.

The Chinese government's development goals also are designed to quell political challenges in the West. The western region of China presents a potential political challenge to Beijing in that the West has the highest proportion of non-Han minorities in the country, including 20 million Muslims, as well as Tibetans and other ethnic minorities (Browne, 2000). Despite a massive influx of Han Chinese since 1949 to both Xinjiang and Tibet, Uighurs and Tibetans outnumber Han in both regions.

In some ways reminiscent of the Qin Dynasty's efforts to unify the country through major public works projects, China's leaders today view the Go West campaign as essential to their solidification of control over border regions such as Tibet and Xinjiang. According to the

Chinese leadership, the campaign is the "fundamental guarantee for us to foster national unity, to maintain social stability, and to consolidate the borders" ("Top Chinese leaders discuss," 2000). General Chi Haotian, in a ten-day swing through the region in May 2001, discussed the vital role of the development drive in "consolidating national defense and realizing the country's long-term security and stability" (Plafker, 2001, p.9).

In meetings with party officials from Tibet, Hu Jintao, the likely successor to Jiang Zemin as Chairman of the Chinese Communist Party, also stressed the importance of "stability as a premise" for economic development, noting, "In the new situation, it is inevitably required by the stability of the overall situation of the whole country to maintain the stability of Tibet. Herein lies the fundamental interest of the people of all nationalities in Tibet and the guarantee for Tibet's development. We should unswervingly safeguard unification of the motherland and oppose separation with a clear-cut stand" ("Hu Jintao on Development," 2000).

Such obvious plans to "colonize" further the region already have become problematic for Beijing. In 1999, a proposed Chinese-World Bank plan to resettle 58,000 Chinese farmers onto fertile lands historically inhabited by Tibetans drew international opposition from those who claimed that ethnic Chinese would swamp the culture and autonomy of the resident Tibetans (Philips, 1999). After initially approving the resettlement loan, the World Bank later withdrew its support when an independent committee criticized the plan heavily for failing to protect ethnic minorities and subjecting them to a "climate of fear" by not guaranteeing confidentiality when consulting their views on the project (Reynolds, 2000).

Xinjiang, too, has been an area of special concern for the Chinese leadership. It is the site of frequent bombings, protests, and even riots by separatists and independence advocates. Over the past five years, the Chinese government has repeatedly arrested and executed those suspected of fostering separatism either through armed or intellectual pursuits.³ Especially in the wake of the terrorist attacks against the United States on September 11, Beijing has reiterated its commitment to routing out "terrorist activities" in Xinjiang in order to ensure the success of the Go West campaign. Just one month after September 11, Zhang Guobao, vice-chairman of the State Development and Planning Commission (SDPC) stated that "[t]errorism would be purged in the Muslim-dominated Xinjiang province in order to provide a stable investment environment," specifically citing a concern over the potential sabotage of large-scale energy projects (Chan, 2001, p. 9).

INVESTMENT CHALLENGES

To finance the tremendous infrastructure and development needs of the Go West campaign, Beijing seeks significant external support. It already plans to use more than \$6 billion raised from treasury bonds to finance various infrastructure projects, including “building roads, railroads, and schools; boosting public security; expanding law enforcement; renovating irrigation projects; encouraging tourism; (and) protecting the environment” (“China’s west,” 2001). However, the Chinese government desperately desires the involvement of the international business community, which currently is based overwhelmingly in the coastal region.

The response of the international community to China’s Go West campaign, thus far, has been fairly muted. The World Bank and Asian Development Bank each already have targeted at least \$1 billion to assist China in its efforts. In addition, several high-profile western companies are stepping up to the plate to expand their presence in the West. Motorola, for example, has participated in a joint venture in Sichuan since 1995 and recently pledged approximately \$80 million to establish a software research and development center. Moreover, a Japanese and French consortium has put on line the first wholly owned build, operate, and transfer (BOT) water treatment plant in China in Chengdu, Sichuan. Although conceived well before the onset of the Go West campaign, if the plant manages to be profitable, other international investors undoubtedly will be attracted to the region (“Water plant litmus,” 2001). Nevertheless, from an environmental perspective this water treatment plant raises some concern. Consortium officials have acknowledged that they could not guarantee the purity of the water reaching the public. They could not control the pipe quality nor could they prevent wastewater from entering the distribution pipes, which had a 40 percent leakage rate (“Water plant litmus,” 2001).

Much of the rest of the international community remains skeptical. The head of the British Chamber of Commerce has stated frankly, “Specifics are needed as the hinterland is a big place” (Kwang, 2000). Even the 71 CEOs from Hong Kong, who spent ten days traveling to Xian, Beijing, and Chengdu during May 2001, were hesitant to commit more than \$30 million to the endeavor. An editorial in one Hong Kong newspaper noted the “poor fit” between the expertise of the Hong Kong businesspeople and the development needs of western China (“Delegates Can Sow,” 2001).

CRITIQUE WITHIN CHINA

Within China, the Go West campaign has stirred

substantial controversy on several fronts. Some Chinese scholars doubt the practicality of the campaign as currently configured. Chinese economist Hu Angang, for example, has articulated several factors that he believes will limit the efficacy of the campaign (“Economist calls,” 2000):

- China’s past economic development policies (such as the Ninth Five-Year plan) have not curbed the growing economic disparities between the coastal and interior provinces;
- The restructuring of the global economy also has weakened the comparative advantages of China’s western regions in agriculture, energy, and raw materials;
- Western China’s relative advantage in resource exploitation has become eroded because the supply of raw materials currently exceeds demand within China’s domestic market; and,
- China’s entry into WTO will offer great opportunities to the coastal region, but create more challenges than opportunities in the western region.

In light of these challenges, Hu suggests that human rather than physical capital needs should be restructured first in order to expand job opportunities, provide poverty relief, lower the birth rate, and improve population quality in the West.

Other Chinese scholars have stepped forward to support the program, although they stress the importance of the government adopting a new approach to campaign politics, one in which the role of Beijing is substantially diminished. Chinese Academy of Social Sciences Professor Wu Jinglian, for example, argued in an interview with a group of reporters that “We are already at the doorway of having a market economy; we should use the methods of market economics to open the West” (“Xuezhe Weiyuan,” 2000). Or, as Dong Fu articulated in the same interview:

The Go West campaign is the first big change in China’s regional development strategy. The campaign must have new thinking and new strategy....The investment demands of the West are relatively big, as a result the campaign should also receive help from the NGO and foreign sectors. Otherwise, this is going to be a very difficult road. Without policy support, the development of the West would take a very long time. These policies, such as preferential policies for tax collection and personnel, should be produced within a short period of time. If this does not happen, people will be content to stay in the

eastern regions, where they are comfortably situated....Next, the development of the West must be focused. The West of China covers such a huge area, and many areas are barren. The money would disappear like salt being mixed into water; it would disappear in a flash. So the development of the western regions should be focused on key areas, key industries, and key projects. We should focus and open up these areas.

Yet Dong also raises a point of central concern to many others that the ecological environment of the West is extremely fragile and economic development in the region “must take into account the protection and improvement of the environment” (“Xuezhe Weiyuan,” 2000). Indeed, China’s western region already has suffered severe ecological degradation from rampant deforestation, mining, overgrazing, and plowing of cropland. The litany of damage to Tibet is telling, for example:

- Up to 40 percent of the old growth tropical and subtropical mountain forests have been clear-cut and shipped east;
- Many rare plant and animal species in Tibet have become extinct as Chinese officials have exploited them for foreign markets;
- Grasslands have become degraded as the demand for meat has led to overstocking of yak, goat, and sheep and the loss of Tibetan traditional herding and grazing practices; and,
- Mining also has contributed to degrade the land, with only 20 percent of China’s mines boasting satisfactory environmental safeguards (“The Scorched Earth,” 1992).

Xiao Zhouji, Professor of Economics at Beijing University, has echoed Dong’s call for caution when developing the West:

The development of the West must completely respect the protection of natural resources and the environment. The illegal logging and development of forestland in the West is a constant occurrence. Soil erosion is serious, and desertification is intensifying. The plundering and exploitative nature of mining is a very deep lesson. Therefore, as we develop the West, we must pay attention to protection of the environment, protecting the resources, maintaining the ecological balance, and promoting sustainable development (“Xuezhe Weiyuan,” 2000).

In their speeches and reports, China’s leaders have been careful to cite “ecological construction” as one of the five major tenets of the Go West campaign. Xie Zhenhua, director of the State Environmental Protection Administration (SEPA), has stated, “In the process of developing the West, environmental protection programmes must be considered in general development plans; new environmental sacrifices must be avoided” (“China: Checking pollution,” 2000).

Despite the leaders’ repeated assurances that environmental protection is a top priority in the Go West campaign, many Chinese environmentalists continue to express doubts. On 7 March 2000, *China Environment News*, a SEPA-run newspaper, published several articles critical of the “western development craze.” One of the articles pointedly noted that China’s western region suffers from “widespread soil erosion, low agricultural productivity, water shortages, and water quality problems,” and that “irrational development could cause significant ecological damage” (U.S. Embassy, Beijing, 2000). A recent conference on the role of the non-state sector in the development of China’s West was also noteworthy for the skepticism voiced. One conference participant—a researcher from the Sichuan Academy of Social Sciences—complained that Beijing had failed to consult scholars from the West, and described the campaign as “western exploitation, eastern development.” She also feared that any real attempt at “ecological reconstruction” would harm those already struggling, noting that in Yunnan, the four million farmers who had restored their land to forest and grass had now relapsed into poverty (Fu, 2001).

Not noted publicly, but widely acknowledged privately, is the concern among many environmentalists that SEPA is not included within the 22-agency leading group charged with developing the Go West campaign. Without the direct input of SEPA at every stage of the planning process, many fear that the necessary comprehensive approach, integrating appropriate environmental, conservation, and efficiency technologies with development plans, will not occur. At least one leader of China’s nascent environmental NGO movement has pledged to raise the issue of SEPA’s inclusion to the Chinese leadership.

Concern over the apparently low priority Beijing has attached to environmental protection in the Go West campaign is compounded by an additional concern over the policy approach China’s leaders have adopted to address the region’s environmental challenges. In discussing environmental protection in the West, China’s leaders are proposing environmental campaigns to address

much of the challenge, including: afforestation campaigns, bans on logging, and campaigns to clean up local rivers and lakes.

ENVIRONMENTAL CAMPAIGN WOES IN THE REFORM ERA

Since the death of Mao Zedong, China's top leaders have frequently used environmental campaigns to bring pressure to bear on local officials on a full range of macro-environmental threats: deforestation, desertification, as well as water pollution and scarcity. However, these campaigns suffer from a number of shortcomings:

allocated \$11.6 billion to fund this effort. By 2001, the Chinese State Forestry Bureau reported that it had already pursued 2.2 million cases involving the destruction of forests over the past five years ("China makes stable," 2001).

Such statistics showing the success of logging bans and crackdowns are, however, contradicted by other reports of flagrant disregard for logging restrictions. Indeed, with entire local economies dependent on the timber industry and well-known collusion between local authorities and business to undermine central regulations, it would be surprising for such a ban to elicit such a

Despite the leaders' repeated assurances that environmental protection is a top priority in the Go West campaign, many Chinese environmentalists continue to express doubts.

- (1) Such campaigns tend to be highly politically charged with significant investment up front but little follow-through past the stated target of completion;
- (2) Central government officials rarely consult local officials to engage them in the campaign; and,
- (3) Environmental campaigns often do not employ the best policy approaches, technologies, or incentives to change behavior.

Logging Bans

Recently initiated environmental campaigns in the West already are encountering significant difficulties in implementation and suggest that this approach is unlikely to resolve the future environmental challenges engendered by the Go West campaign. In 1998, for example, after devastating floods of the Yangtze River, Premier Zhu Rongji announced a ban on logging for huge swaths of western Sichuan Province. Since that time, the ban has been extended to 17 provinces, autonomous regions, and municipalities. Reports regarding the progress of the ban to date, however, are conflicting, suggesting that many local officials are ignoring the ban. According to one report, logging reductions in Manchuria, Inner Mongolia, and Xinjiang have led to layoffs of 740,000 wood workers. Moreover, from 1997 to 2000 China's timber production plummeted 97 percent (Pomfret, 2001). According to this same report, Chinese loggers have offset the losses from the ban by clear cutting wide swaths of forest in Burma. In addition, toward the end of 2000, the State Forestry Bureau announced a ten-year campaign to crack down on illegal logging and the central government has

dramatic change in such a short time. An investigation conducted by the State Forestry Bureau in late 1999 found that officials in many localities were ignoring the ban and issuing permits in excess of their authority. As a result, logging in many areas exceeded legal limits by more than 150 percent (U.S. Embassy, Beijing, 2000). The UN Food and Agriculture Organization statistics also indicate virtually no decline in Chinese timber production during the 1997 to 1999 period. Chinese environmentalists, apparently not convinced of the success of the logging ban, have voiced their concern that at the current rate of timber production, China's forests will be completely depleted in about ten years (Pan, 2001). Moreover, without supporting social policies, such as a social security system for the approximately one million lumberjacks who will be left jobless, many are likely to return to their previous jobs (Jiao, 2000).

Afforestation Campaigns

Even afforestation campaigns, with their long history in China, have been plagued by inappropriate technology, poor oversight, and a failure to provide appropriate incentives for rural citizens, local governments, and businesses to change their behavior. In discussing the massive afforestation projects in Shandong, the Yangtze River Basin, and across China's northern provinces during the late 1980s, one survey by the Northwest Institute of Forestry in Xian revealed that "[h]alf of the reported national afforestation claim was false, and the survival rate of planted trees was no higher than 40%" (Smil, 1993, p.61). Planting trees too close together, poor forest management, and planting trees without consideration

for the viability of the tree species in the local landscapes all have limited the efficacy of past tree planting campaigns.

In 2000, too, the government called on the people to counter the challenge of desertification, announcing a \$725 million campaign to prevent and control desertification by adding new grassland and forest and increasing the vegetated area throughout the northwest. In some cases, resettled farmers and herders were directed to change the source of their livelihood from agriculture to tree planting. Zeng Peiyan, SDPC chairman and head of the government office in charge of the campaign has suggested Beijing would offer grain from “overflowing warehouses” to encourage peasants to abandon farming on marginal land and plant trees (“PRC to build,” 2000). Yet the plans as articulated provide few details as to future assistance for out-of-work farmers or herders (Browne, 2000). Moreover, despite the promised assistance some regional officials have already complained that Beijing has not come forth with the funds for these mandated reforestation efforts. In Inner Mongolia, the Deputy Party Secretary claimed that Beijing has supplied neither the people nor the financial assistance necessary to reforest his region, which is already 60 percent desert. He has therefore called upon local business people to “invest in saving their homeland” (MacLeod and Lijia, 2001).

Even close to Beijing, where the desert is only 110 kilometers away to the north, villagers are unclear how to respond to the government’s slogans that call for them to “grow trees, stop farming hilly land, and confine livestock in pens to prevent ecological disaster.” Already subsisting on little more than \$50 per year, the response of one villager, Zhou Qingrong, to the tree planting and anti-desertification campaign was telling: “How can we make a living if we do that? Already we don’t even have enough money to buy oil or salt” (Liu, 2000).

Water Pollution Control Campaigns

The “Three Rivers and Three Lakes” (*sanhe sanhu*) campaign to clean up the Liao, Huai, and Hai rivers and the Tai, Chao and Dianchi lakes also has encountered significant difficulty. Government reports in 1999 touted the measures taken by the Kunming government in Yunnan Province to clean up Dianchi Lake:

The Kunming city government banned the sales and use of detergent, which contains phosphorus, which was discharged into the Dianchi Lake valley. It also closed down more than 20 enterprises found to be responsible for pollution. A project to dredge the bottom of the lake is also going on smoothly and

should be completed by April this year (“Yunnan lake,” 1999).

Environmental Protection Bureau (EPB) officials in Kunming, however, report very different results from the clean up campaign. One official noted that the lack of sufficient progress on cleaning up the lake is because the sheer magnitude of the pollution problem is overwhelming:

Over the years, lots of industrial wastewater has been emptied into the upper section of Dianchi Lake. As a result, the lake’s purification ability is very weak. No matter how much dredging we do, there will still be pollutants in the water. Because of years of abuse, the ecosystem is very fragile. Blue algae blooms are common.⁴

Equally problematic is that Kunming EPB officials have no means of preventing the polluters from continuing to pollute. As one official noted:

While the EPB has banned phosphorus detergent and are also promoting the use of natural fertilizer, this program has not really gotten off the ground. This is an area where we would like NGO help. Farmers have been opposed to the natural fertilizer, so there has not been any progress. They [the farmers] need to be educated...I would estimate that approximately 70 percent of all waste discharge into [Lake Dianchi] comes from chemical refineries...the most problematic polluters are state-owned companies. We cannot take [such companies] to court.⁵

The difficulties encountered by a variety of environmental protection campaigns suggest that while campaigns are useful for garnering official attention and mobilizing public support for a particular environmental challenge, they have little chance to address the problems in a meaningful manner. Campaigns emphasize a crisis mentality and grand sweeping gestures, seemingly at the expense of careful planning, long-term investment, and closely monitored implementation. The inherent weaknesses of environmental campaigns and their poor track record suggest that Beijing may need to rethink its approach to the Go West campaign in order to foster better environmental protection in the region.

THE PATH FORWARD

At first blush, Beijing’s development of the Go West

effort fits squarely in China's tradition of development and unification campaigns, with all of their attendant challenges for the natural environment. However, China's current leaders also appear to be poised to take advantage of their new understanding of the relationship between environmental protection and economic development and reorient their approach. Some key areas of possible new focus are highlighted below.

Stronger bureaucratic support. The integration of environmental protection with economic development in the Go West campaign demands stronger bureaucratic support at both the central and local level. Such support might involve the establishment of an inter-provincial coordinating committee on environmental protection. Many of the vast infrastructure projects included in the Go West campaign cross not only municipal but also provincial boundaries. Within the leading group charged with overseeing the campaign, an oversight committee on environmental protection would be invaluable in ensuring that environmental considerations are incorporated into the development process.

Greater role for SEPA. The importance of including SEPA in the leading group coordinating the Go West campaign seems clear. Not only will this help ensure that "ecological construction" becomes more than a rhetorical phrase but SEPA's inclusion also will empower local environmental protection bureaus throughout the West as they seek to fulfill their mandates of environmental impact assessments, as well as monitoring and reporting on local enterprises' environmental practices.

Stronger incentives for clean industries and strengthening rule of law. The Chinese government should develop a system of incentives to promote sound environmental practices in the Go West development projects. China's leaders are currently in the process of developing a new package of incentives to entice international investors to the West. Instead of stressing preferential tax policies as they had originally planned, for example, the leaders have solicited input from the international community and are now focusing on enhancing transparency and rule of law. Even as the rule of law continues to be an issue of concern to international business in the coastal region, it is of even greater concern in the less integrated West. As one international official stated during The Western Forum of China 2001: "Policymakers have to focus on developing an even more transparent and consistent framework based on the law. They need to foster a more even playing field and remove barriers for those wishing to enter. They also need to improve the protection of private property rights and introduce greater fairness, transparency and consistency in the taxation of private

firms" ("Helping firms," 2001).

Enhancing the legal and administrative environment for international investors undoubtedly will have positive derivative consequences for environmental protection. Better enforcement, for example, will help ensure that companies adopt environmental best practices and do not attempt to skirt or evade China's environmental protection laws. However, the Chinese government also could go further to invite international and domestic environmental experts, as well as NGO leaders, to develop the policy framework and specific economic incentives necessary to ensure that as investment is encouraged, environmentally responsible projects receive priority.

Adoption of new environmental technologies. Finally, existing infrastructure in the West needs to be upgraded to support the implementation of new environmental technologies and practices. The potential of improved environmental practices suggested by the widespread entrance of international firms into the China market—such as that of the joint French-Japanese water treatment center—will not be fulfilled unless the basic infrastructure also is strengthened. The benefits of a state-of-the-art water treatment system are significantly diminished if polluted water may re-circulate and scarce water is lost due to high leakage rate in the pipes. Thus upgrading existing infrastructure to support environmentally and technologically advanced systems should be a primary goal of local officials.

Throughout Chinese history, the campaign mentality often has yielded disastrous consequences for the environment. As many of China's scholars and environmental advocates already have suggested, the time has come for China's leaders to formulate a new approach. Adopting these measures in the initial stages of the Go West campaign will help China transform the campaign from yet another potentially environmentally devastating economic development campaign into a showcase for the thoughtful integration of environmental protection with economic development.

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research presented in this piece. She can be reached at: economy@cfr.org

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Endnotes

¹ For the purposes of this paper, and following current usage in China, the phrase "the West" will refer to these 12 areas targeted in the Go West campaign.

² The other five tenets are: (1) speeding up infrastructure construction; (2) strengthening agriculture's position as the basic industry; (3) adjusting the industrial structure; (4) developing tourism (especially in the western region); and (5) developing science and technology education and cultural and public health work (PRC State Council, 2000).

³ While the international community, and the United States in particular, may be sympathetic to China's fear of terrorism in Xinjiang, President Bush has clearly signaled that the U.S. will differentiate between ethnic separatist movements and terrorism.

⁴ Interview with Kunming EPB official, Kunming PRC, June 2000.

⁵ Interview with Kunming EPB official, Kunming PRC, June 2000.

Research on Environmental Management in China, Stanford University

Since the mid-1980s, Leonard Ortolano (ortolano@stanford.edu) and his Ph.D. students in the Environmental and Water Studies Program at Stanford have been researching issues of environmental management in China. Work in this research group combines methods from engineering and social sciences and involves extensive fieldwork to understand how policy implementation actually takes place in China. The monograph, *Environmental Regulation in China*, by Xiaoying Ma and Leonard Ortolano (2000) provides a sample of recently completed work. Ongoing doctoral projects are outlined below.

- ***Japan's Cleaner Coal Technology Transfer to China: Organizations, Technology, and Policy Implementation*** (Stephanie Ohshita—stephio@stanford.edu)

Ms. Ohshita is examining the transfer of cleaner coal technology from the world's largest bilateral donor of environmental aid—Japan—to the world's largest consumer of coal—China. She focuses on policy implementation and analyzes the alignment of interests among government organizations, technology providers, and technology adopters. Her research highlights how environmental technology transfer can take place when interests converge and resources are leveraged across public-private networks. Her work also points to the need for additional incentives that can encourage the widespread diffusion of cleaner technologies during current enterprise reforms in China.

- ***Enforcement Of Water Pollution Control Regulations at Small-Scale Industrial Enterprises In Shanghai*** (Mara Warwick—mara.warwick@stanford.edu)

In recent years, pollution from millions of highly dispersed small-scale enterprises located in rural and peri-urban areas has been a key source of environmental degradation in China. Ms. Warwick analyzes the enforcement of environmental regulations at small-scale enterprises in the peri-urban areas of Shanghai. She investigates the quality of data being collected by the lowest level of environmental agencies: the district environmental protection bureau and the township environmental protection office. Her work reveals inadequacies in information flow and explains these shortcomings by looking at incentive structures and interaction between environmental authorities, enterprises, and citizens.

- ***Implementing Cleaner Production Programs in Chinese Cities*** (Hongyan He—hyhe@stanford.edu)

Over the last decade, China shifted its national pollution control strategy away from traditional “end-of-pipe” waste treatment toward cleaner production (CP) strategies. Many countries have tried to promote CP within industries, but China is unique in attempting to employ city-level CP programs. Ms. He is examining the content of these programs in several cities (Taiyuan, Nantong, and Suzhou) and analyzing the degree to which they have encouraged enterprises to engage in CP. Her analysis seeks to distinguish the influence of city-level CP programs from the effects of other factors, such as regulatory and market forces.

- ***Controlling Pollution from Vehicles in Chinese Cities*** (Cheng Chang—chch@stanford.edu)

In an effort to address the growing problem of transportation-related air pollution, major cities in China have strengthened their vehicle emission control regulations and implemented vehicle inspection and maintenance programs. Mr. Chang is examining vehicle emission control in Beijing and Shanghai, looking at not only the tailpipe controls but also at numerous other measures—including car registration fees, mass transit investments, and land use planning—that affect total emissions from motor vehicles in urban areas. He aims to evaluate the influence of these measures on mobile source emissions.

- ***The Role of Environmental NGOs in Protecting China's Environment*** (Jiang Ru—jru@stanford.edu)

Environmental NGOs have played an increasingly prominent role in protecting the environment in China. Mr. Ru is conducting a survey of 38 national and provincial environmental NGOs to learn about the strategies and activities of these organizations, as well as the interactions between NGOs and the Chinese state. To further understand the role of NGOs in China, Mr. Ru also is conducting three case studies involving NGOs in specific environmental protection efforts: the giant panda in Sichuan Province, the golden monkey in Yunnan Province and the Tibetan antelope in Qinghai Province.