

Beyond Great Walls

ENVIRONMENT, IDENTITY, AND DEVELOPMENT
ON THE CHINESE GRASSLANDS OF
INNER MONGOLIA

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STANFORD UNIVERSITY PRESS
STANFORD, CALIFORNIA

Land Degradation and the Chinese Discourse

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China has eight distinct gravel desert zones to which the Mongol term *gobi* is applied, and four sandy desert zones to which the Chinese terms *shadi* or *shamo* are applied. Gobi differ from shadi in several respects: they consist primarily of stony or gravel deposits, they lie to the west (windward side) of the steppe zone, and their dunes are more mobile than the semifixed or fixed dunes characteristic of the east (Zhao and Xing 1984: 230). Primarily as a result of strong wind transport, the soils of arid northern China—moving across the grassland from northwest to southeast—generally follow a progressive transition from gravel to sand to loess (Fullen and Mitchell 1991: 26).

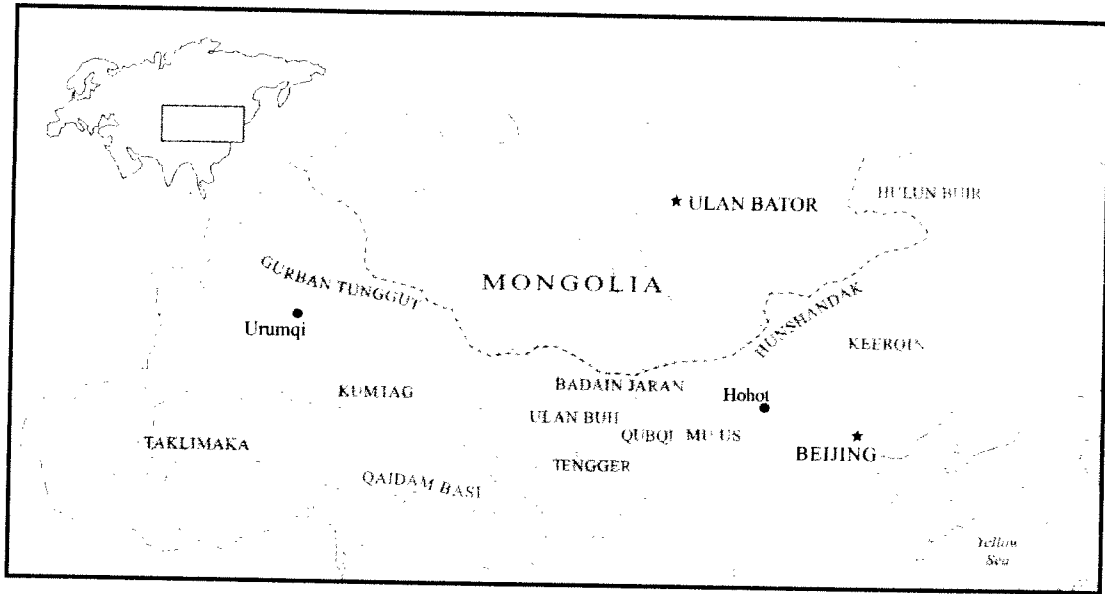
The eight gobi regions, accounting for roughly 42 percent of China's total desert area, include Taklimakan, Gurban Tunggut, Kumtag, Qaidam Basin, Badain Jaran, Tengger, Ulan Buh, and Qubqi (Hobq). The sandy lands, accounting for roughly 58 percent of China's deserts, include Mu Us, Hunsandak (Oitndag), Keerqin (Horqin), and Hulun Buir. Together, these areas link into a sand belt that stretches some 5,000 km from west to east across the northern provinces. The belt extends over the autonomous regions of Xinjiang, Ningxia, and Inner Mongolia, and over the provinces of Qinghai, Shaanxi, Liaoning, Jilin, and Heilongjiang. (Map 2.1 presents a schematic view of China's northern deserts.) The sand belt, however, does not lie inert. Its boundaries change over time, sometimes quite dramatically. Of course, the once popular and foreboding notion of "desert creep" has been replaced in recent scientific literature by a more nuanced and complex imagery depicting pockets of deterioration that eventually enlarge and merge (see Heathcote 1983; Nelson 1990). Nonetheless, desert areas are known to be dynamic and may expand (or contract) over time.

At a national level, desert expansion has generated a great deal of gov-

ernment concern and public anxiety. Prominent officials now estimate that grassland is lost to moving sand at a rate of 2,460 km² per year (Xu Youfang 1997; Xinhua 2000c), compared with a rate of 2,100 km² per year throughout the 1980s, and a rate of 1,560 km² per year throughout the 1970s (China State Council 1994: 181). They now classify 27.3 percent of the national land mass as desert area (Xinhua 2000c), compared with 15.9 percent reported in 1993 (Xu Youfang 1993). Desert expansion purportedly affects the livelihood of nearly 400 million people and causes direct economic losses estimated at more than U.S.\$3 billion annually (Wang, Wang, and Zhang 1993: 1; China State Council 1994: 180). Although official figures tend to vary inexplicably from one source to the next, all domestic reports do seem to agree on the fundamental premise of an accelerating ecological crisis.

In Inner Mongolia, a high government official reported in 1993 that regional deserts were expanding at a rate of 3,400 km² per year (Zhou Weidi 1993). Of an estimated 86.7 million hectares of grassland (nearly 70 percent of the total land area), officials consider 34.5 percent to be deteriorated, and 21.6 percent to be seriously deteriorated or unusable. That leaves, at most, only 43.9 percent in decent usable condition (NRC 1992: 18), while some estimates put the figure as low as 32 percent (see Zhou Weidi 1993). Furthermore, officials estimate that since 1965, total grass production has declined by 30 percent (NRC 1992: 18; *Neimenggu ribao* 1990). On average, each hectare of land produces only about 750 kilograms of haystraw per year, though the range of edible offrake fluctuates tremendously from pasture to pasture (Longworth and Williamson 1993: 81).¹

Within Wengniute banner of Chifeng City prefecture, animal husbandry officials report that roughly 603,000 hectares of grassland, or 87 percent of the total rangeland, is now deteriorated. That figure is up from 413,000 hectares in 1965, and 493,000 hectares in 1976 (Longworth and Williamson 1993: 188). Within Nashan township of Wengniute banner, sand or moving dunes occupy 90 percent of the land, and officials estimate that only 51 percent remains at least marginally useful for livestock production. The most fertile pastures were enclosed in the 1960s under collective authority; this was done to reserve land for autumn hay production in order to tide household animals through the long winter months. This vital area, however, occupies only 3 percent of the total rangeland, and yields from even this limited area are said to be declining yearly.



MAP 2.1. Deserts of northern China

TABLE 2.1
 IMAR Land Quality Estimates at Provincial, Banner, and Township Levels
 (% of total land area)

	IMAR	Wengniute banner	Nashan township
"Unusable" (a)	22	9	46
"Deteriorated" (b)	34	78	51
SUBTOTAL (a + b)	56	87	97
Remaining "Good Pasture"	44	13	3

SOURCES: NRC 1992: 18; Longworth and Williamson 1993: 188; Nashan sunu official document 1991.

Table 2.1 summarizes the reported figures of land quality at the township, banner, and provincial levels. These numbers indicate that the problem of desert control is especially acute in the field site of Nashan.

Conventional Explanations of Desert Expansion

Chinese government officials, scientists, and scholars widely attribute the cause of land degradation and desert expansion to past and present anthropogenic forces. Though climatic and physical processes first formed the deserts of China, humans have contributed to their enlargement. Officials within the Ministry of Forestry have estimated that only 500,000 km² (or one-third) of the current total desert area was formed by nature—"the rest has been the making of human activities" (Bureau of the Ministry of Forestry 1990: 22). One Chinese scholar contends that in the Ordos region, the rate of desert expansion owing to human factors since the 1960s exceeds the natural rate of expansion over the previous 2,000 years (He 1991: 24). According to Zhu Zhenda, one of the foremost authorities on the subject, sand dune encroachment by natural causes accounts for only a tiny percentage of the current ecological problem. He asserts that "only 5.5 percent of lands of desertification results from invading sand dunes; the great majority, 94.5 percent, may be described as having undergone desertification *in situ* initiated by human activities" (1990: 70).

The causes for land degradation in Inner Mongolia are especially attributed to anthropogenic pressures. Explanations of human impact usually begin with an account of exponential population growth: "too many people and too many animals are pressing too hard on a fragile ecosystem" (NRC 1992: 33). In Wengniute banner, officials begin any discussion of rangeland management by pointing to "excessive" numbers of

people and livestock. Without a doubt, there have been significant demographic shifts over the twentieth century that deserve a brief summary.

POPULATION GROWTH

The integration of Inner Mongolia into a single political entity of China proper occurred during the Qing Dynasty (1644–1911), when both territories were conquered by neighboring Manchus. In the closing decades of Qing rule, government officials permitted the settlement of Han farmers into the grasslands, and finally even encouraged it. They were eager to alleviate mounting political instabilities that resulted in part from widespread famine and desire for land. Incrementally, Han colonization expanded across traditional Mongol rangeland. The influx intensified after 1911, when the new Chinese Republic declared that all Mongol lands belonged to China and that land titles were henceforth invalid unless ratified by local Chinese authorities (Latimore 1934: 105; Jones 1949: 61). By 1924, when the railway line was extended from modern-day Zhangjiakou to Hohhot and Baotou, Han settlers immigrated by the millions, scattering Mongols from their most fertile grazing pasture. The population of Inner Mongolia in 1912 was roughly 2.04 million, with a ratio of 1.3 Han to every Mongol (Ma 1984: 111). By 1990, the total population rose to 21 million, with a ratio of 6 Han to every Mongol.² In Chifeng City prefecture, the numbers tell a similar story: The population of 1912 totaled about 700,000, with 1.37 Han to every Mongol resident. By the beginning of the reform era in 1979, the population reached 3.51 million, with nearly 11 Han to every Mongol (Ma 1984: 111).

According to nearly all historical accounts, the large-scale changes in land use and the increases in demographic pressures associated with Han colonization did escalate ecological changes within the steppe zone. During the 1930s, for example, Latimore was attentive to the problems caused by migrating settlers who had no experience handling livestock and used the land in the only way they knew how—cultivating it, despite inadequate rainfall and unrelenting wind force. He wrote:

The type of colonization created by the rapid building of railways demanded quantity rather than quality . . . [because] no supply of colonists with capital of their own was available. Consequently the land came under the control of capitalists who could afford to take over large holdings and place tenants on them. The colonists had no experience in handling livestock. . . . In order to produce financial results, land had to be farmed even if it was naturally more suitable for

grazing than for ploughing. The good soil is then blown away, and sand begins to work up from below. . . . Such districts become totally unproductive, for even if they are abandoned, the old growth of grass will not come back; at least not for many, many years. Human action is rapidly extending the desert areas in Mongolia. (1962: 421–422)³

He also described the implications of agricultural extension for areas that remained pastoral:

Pastures have become overcrowded, and the decrease in real nomadism means that herds are kept too long on the same pastures, with the result that the pastures become “stale” and the herds less fertile and more subject to cattle plagues; while the overcrowding of sheep and goats, whose sharp hoofs cut the turf, has a ruinous effect in destroying the topsoil and creating first erosion and then sand dunes that is little less wasteful than the agriculture of Chinese colonists. (ibid.: 446)

Mounting demographic pressures have not abated since the founding of the People’s Republic. Since 1950, the vegetative yield of China’s grasslands has shrunk by half while the number of livestock has quadrupled (Hinton 1990: 84). Throughout Wengniute banner, symptoms of overgrazing have appeared since the 1960s, with declining pasture yields increasingly manifested in a “marked decline in animal yields and an increase in mortalities despite the adoption of improved livestock breeds” (Brown and Longworth 1992: 1666; Longworth and Williamson 1993: 188). In Nashan itself, the human population has more than doubled, from 1,728 in 1958 to 3,957 in early 1993, while the animal population (in sheep equivalent units) has fluctuated, rising from 64,432 units in 1959 to a high of 95,358 in 1965, then shifting downward again to 65,467 by 1992 (Nashan sumu official document 1993).

SHRINKING LAND BASE

While human population pressures have consistently increased, the land base available for extensive livestock herding has shrunk significantly. First, the historic decision to expand cultivation in pastoral areas during the national campaigns of the Great Leap Forward and the Cultural Revolution greatly reduced the productive rangeland available to minority pastoralists. Calling for maximum local self-sufficiency in cereal production in the wake of the Great Leap Famine, Mao encouraged farmers to plow up pasture land that was unsuitable to dryland agriculture. High-ranking Mongol leaders in IMAR who denounced this campaign in favor of livestock production were arrested or demoted

(Jankowiak 1988: 272; Sneath 1994: 419). Foreign environmental analysts now believe this disastrous campaign sharply accelerated the degradation of China's farm soils, grasslands, forests, and wetlands (Smil 1987: 216). The scars of failed agriculture and loss of tree cover left the earth susceptible to strong winds that both remove organic matter and transport sand. Regional statistics indicate that 21 percent of the total rangeland was lost to agricultural production between 1953 and 1979 (Longworth and Williamson 1993: 305). This figure reflects the pace of change that occurred at a national scale during the Mao era, when an estimated sixty-seven million hectares of high-quality rangeland were converted to grain cultivation, while only eight million hectares of grassland were reclaimed (NRC 1992: 48).⁴

Second, processes of urbanization and the expansion of nonagricultural rural activities in the reform era have contributed to what is now regarded as a serious decline in fertile soil all over China (Orleans 1991; Howard 1988: 57; Hinton 1990: 74). Rural arable land is increasingly lost to housing, roads, factories, and grave sites. The declining land base not only intensifies production pressures on plots that remain under cultivation but also transfers those mounting pressures onto lands of more marginal quality, generally toward the periphery of agrarian areas where minority populations reside.

Third, various processes of land degradation have obviously eliminated large tracts of usable pasture. Soil erosion sets up a positive feedback loop whereby the continuous loss of good soil only intensifies production pressures on the remaining areas, so that they become degraded as well. The end result is that the numbers of grazing livestock exceed the sustainable stocking rate almost everywhere (Longworth and Williamson 1993: 333).

The Chinese Official Discourse

Chinese officials try to deflect responsibility for environmental disaster away from anyone associated with the current regime of reformers. This is accomplished by diverting blame either in space or in time. The space-oriented strategy places blame on local land users far from Beijing, who are routinely portrayed as ignorant, irrational, backward, and uncooperative. The temporal strategy lays responsibility at the feet of previous governmental regimes, especially the Qings, the Nationalists, and Maoist zealots.

BLAME THE LOCALS

Chinese officials and scholars primarily blame local residents for problems of land degradation. They often repeat a standard assertion: "Overcultivation and a surplus of stock in the region are the main causes for the rapid desert expansion" (Xinhua 2000d). A renowned scholar at the Department of Desert Research (DDR) in Lanzhou stated that urban industry and the state are responsible for only 9 percent of desert expansion, while rural peasants are accountable for as much as 85.5 percent of the national problem (Zhu Zhenda 1990: 70). Likewise, in the high-profile document known as Agenda 21, the China State Council (1994: 181) asserted that "the formation of desertification in China is the results (sic) of over-cultivation, overgrazing, and destruction of vegetation." This statement, designed for international consumption, merely reiterated a conventional formula that pervades Chinese scholarship (e.g., Fei 1984; Zhu and Wang 1990; Hu 1990; Kou and Xue 1990).

Chinese officials and scholars often point to the "ignorance" and "backwardness" of minority peoples. In particular, Mongol herders are widely criticized for holding to traditional, "rely on heaven" (*kaotian fangmin*) methods of production. Environmental restoration, it is believed, can begin only once traditional practices have been abolished: "The traditional pasture system that relied entirely on 'Heaven' should be abandoned. Sophisticated farming techniques should be employed to improve pastureland and to cultivate supplementary feedstuffs. . . . In short, economic development and environmental quality will change to a higher and higher standard" (Zhao Li 1990: 270).

Influential figures in China such as Li Yutang, Guo Yang, Xu and Qiu, and Zhao Zhidong, to name a few, argue that traditional Mongol herders have never concerned themselves with grassland preservation under the mobile conditions of their past. They have never learned to look beyond their sheep to the soil, the theory goes, so today they have no regard for the land that farmers have long cherished (Guo 1993; Li Yutang 1992). The following printed statement is representative: "The core of reform in the grasslands must be to introduce a kind of contract responsibility system which would increase the worth of the land in the eyes of those who live on it, and persuade them to protect the grasslands by convincing them that the grass is their living, as well as their fodder" (Xu and Qiu 1995). Han scientists working in pastoral areas sometimes endorse this crude argument directly: "Lack of development in the area is due to deterioration of the ecological environment, a lower level of culture, tech-

nique and productivity" (Zhao Shidong 1992: 2). They may also endorse it indirectly by appealing to common knowledge: "Pastoralists are often said to have little understanding of the delicate ecological balance of the pasture land. As a result of this ignorance they allow their pastures to become overgrazed" (Lin 1990: 88). Sometimes they endorse it even while evoking empathy: "People in these areas don't have a strong awareness of environmental protection and they are also economically underdeveloped. Some don't even have coal to make fires and they just cut the grass to make do instead, thus turning grassland into desert" (*South China Morning Post*, 1994).

Even grassland regulations and policy statements employ language in a way that subtly perpetuates a condescending perspective. For example, they explicitly call upon household contractors to pursue principles of scientific planning (*kezue huafen*), energetic construction (*dali jianshe*), vigorous protection (*jiji baohu*), and rational utilization (*bei shiyong*) (see Chitfengshi caoyuan jianlisu 1990: 7–8; Wengnuteqi renmin zhengfu 1988: 1). Such exhortations are based upon the premise that principles of conservation and initiative are basically absent among minority groups.

A second common criticism is that minority herders are lazy. This aspect of public discourse has been captured and essentialized by the phrase *jin mao dong* (to eat the winter), and it especially raises the hackles of residents in Inner Mongolia. The term is frequently used among friends to refer to the production slack time during winter months. When neighbors greet and inquire after one another, for example, a response of "jin mao dong" indicates no special news. Sensitivity to the phrase apparently arose in the early 1970s, when an assistant to Zhou Enlai delivered a speech in North China in which he referred to it disparagingly, indicating that it condoned slothful inaction. He suggested that the region's major production problem was the laziness of the local inhabitants, who would rather lie inactive during the winter than explore ways to boost productivity. Of course, hard work does continue throughout the winter months, but it mostly involves the routine chores of survival: cutting wood, collecting dung, drawing water, and sheltering animals. Residents do not think it reasonable to expect more than this in such a hostile environment, given current levels of technology and economic opportunity.

Suggestions of laziness also appear in official discourse through other, less provocative phrases. For example, the 1993 annual report of the Wengnuteqi banner government cited both "ideological conceptions that still have not adapted to the requirements of new styles of development"

(*sixiang guannian hai bu shiyong xin xingshi fazhan de yaogin*) and "a passive attitude lacking initiative in thought and action" (*quefa ganxiang, gangan de shouchuang jingshen*) as two of the greatest problems facing regional development (Wengnuteqi renmin zhengfu 1993: 7).

The national media reinforce this discourse by routinely accusing local land users of environmental mismanagement. The following public pronouncement on land degradation by a senior official in the Ministry of Forestry is typical: "The cause is mainly human sabotage. Excessive grazing, rampant cultivation, unchecked digging up of herbs, and misuse of water and land resources have been major factors leading to desertification" (Xu Youfang 1993). The notion of sabotage (*pohuai*)⁵ resonates with other formulaic explanations of land degradation that emphasize a mean-spirited and wanton assault on national assets by peasants.⁶

BLAME PREVIOUS REGIMES

Official discourse also sometimes deflects criticism for ecological decline by removing the problem to an earlier time. Authorities point to the long history of resource abuse and neglect along the national frontier and blame previous regimes for aggravating or ignoring the situation.

Absolve the Maoist era. Considering the history of colonization in IMAR, many officials and scholars since the founding of the People's Republic have laid the bulk of contemporary ecological problems at the feet of the Qing and the Nationalists. In discussing the Keerqin Sandy Lands, for example, a recent publication explicitly blames the Qing for the most recent round of ecological devastation in the region. Charting the ebb and flow of local desert conditions over the past ten centuries, the publication contends that

by the beginning of the seventeenth century, Horqin [Keerqin] had thrived again, with tens and thousands of horses, camels, sheep, and cattle grazing and breeding on the pastures. But after the middle of the nineteenth century, the Qing Dynasty pursued a policy of encouraging people to reclaim wasteland. People were allowed to open up pastoral land and grow crops by paying taxes to the court. In 1907 alone, more than 800,000 hectares of grasslands were destroyed in the area of Horqin Right Wing Central Banner, while the Qing government received an income of 238,000 taels of silver. The destruction of forests and grassland made way for wind and sand which gradually encroached upon the denuded lands. Horqin was turned into the 800 li of deserts. (BMOF 1990: 22)

Similarly, Zhao and Xing (1984: 247) primarily implicate prior governments, basically absolving the People's Republic of culpability. It was

under the Qing, they write, that “large tracts of sandy lands in the southwestern part of the Ordos Plateau were ruthlessly cultivated, resulting in further devastation of grasslands and an extension of the shifting sand dunes. . . . Henceforth, coupled with accelerated human intervention, desertification has been critically intensified.” They date the most critical desertification activities to the ninth through fifteenth centuries, but they also detail further expansion over a period of 300 years from the mid-Ming right up to 1949.

The Republican and Nationalist eras of government are likewise prominent targets of criticism. In a statement typical of the Maoist era, one reporter explained: “Before liberation the feudal ruling class, Kuomintang reactionaries, and imperialists plundered and destroyed the forests, turning the north and northwest of China and the greater part of the loess plateau into regions nearly bare of trees” (Soong 1972: 23).

Government statements issued throughout the Maoist era tended to reinforce the sense of a magical cutoff date around 1949. In a publication prepared in 1975, for example, the national Department of Desert Research summarized the official view:

Over the years before liberation in 1949, the people living in China’s desert areas were oppressed and exploited. As their natural resources were wasted and plundered, they were forced to retreat before the advance of wind-driven sands. Since the founding of the People’s Republic of China, they have embarked on the mass movement, “in agriculture, learn from Dazhai.” In the spirit of self-reliance and hard struggle that typified Dazhai, the famed agricultural production brigade, . . . comprehensive measures were developed in a cooperative spirit, with scientific and technical personnel working closely with the farmers. As a result, a number of achievements were realized, the basis for sand control established, and considerable progress in animal husbandry and agriculture recorded. (DDR 1982: 4)

Other scholars argued from case studies in eastern Inner Mongolia that the sandy dunes had been subjected to reckless cultivation, overgrazing, and deforestation until 1949, when government-initiated sand control measures began (in the mid-1950s) to stabilize and restore vegetation with tree-shelter belts (Zhao 1990: 263–270; Chonglakoushu and Jisizhengli 1986: 105).⁷

A propaganda piece appeared in the early 1960s about Nasihan (Manduhu and Nasendelger 1963). The article is noteworthy because it illustrates how the official discourse of the collective era attempted to remove problems of production to an earlier period, and because it draws explicit connections between a history of economic exploitation and desert con-

trol—a subject largely absent from official discourse in the reform era. The theme of the article is that “where the rich failed, the poor have succeeded” in bringing prosperity to the grasslands.⁸ Another article, written by a celebrity novelist who visited one of the new communes of Wengnute banner, gushed with enthusiasm: “With the coming of the people’s communes, these sandhills and wastelands are truly being turned into a land of milk and honey” (Lao 1961: 13). Such exaggerated claims are especially interesting when contrasted with the (similarly hyperbolic) praise heaped on contemporary privatization policies by scientists and local government authorities for introducing a new era of prosperity.

In placing the blame on former political regimes, the intelligentsia of the Maoist era felt free to draw explicit connections between resource exploitation and social exploitation. State-run newspaper articles consistently glorified the “liberation” from nature that followed the “liberation” from feudalism with titles such as “The Desert Surrenders”; “We Bend Nature to Our Will”; “How We Defeated Nature’s Worst”; “Hard Work Conquers Nature”; “The United Will of the People Can Transform Nature” (see Murphy 1967: 319; Salter 1973).

Despite the rhetoric of good stewardship and mastery over nature, however, the Maoist era was not so kind to the national rangelands. After taking power, the new government did initiate some new programs and methods to control moving sand dunes. For example, it established and funded the Institute for Desert Research in Lanzhou to conduct experimentation and research on dune fixation techniques. And collective organization in the north motivated some aggressive experimentation in land rehabilitation. Yet, relative to other programs and concerns, land degradation in border regions did not receive all that much attention at the national level. As one scientist in Lanzhou (Dr. Ju Gebing, vice president of the Directorate for Environmental Protection) put it in his opening remarks to a United Nations Environment Programme (UNEP) seminar hosted by China in 1978: “For more than thirty years since the founding of the People’s Republic, work has been done and some results achieved in the control of desertification. But still we would have to say that our work has just begun, that there lies before us an arduous and long-term task” (quoted in Walls 1982: 59).

The early commitments to control desert expansion in the 1950s lost out to other priorities in subsequent decades, as blueprints for the development of the national economy changed (*Remmin ribao* 1991; *China Daily* 1991). Through the long series of collective-era production cam-

paigns, officials reminded local commune leaders repeatedly of the secondary value of protecting the rangeland in relation to other, more pressing objectives, such as increasing grain output and industrial production. During the collective era, national rangelands came under unprecedented demographic strain, yet the amount of money invested per unit of area in pasture improvement was less than one-seventieth the value of animal husbandry products per unit over the same time period (Watson, Findlay, and Du 1989: 226).

Absolve the reform era. The reformers who came after Mao added the Maoist government to the list of those culpable for the nation's ecological problems. While they consider the Mao years to be less neglectful than those of the Qing or the Nationalists, they nevertheless use them as a foil against which to prove the superiority of their own policies. The year 1978 has become a new magical cutoff date for the rhetoric of ecological responsibility. For example, Zhao Songqiao of the Institute of Geography (Chinese Academy of Sciences) in Beijing has written that since the founding of the People's Republic of China, great efforts had been taken in the 1950s to combat this desertification process. . . . Then came the so-called Great Leap Forward and Cultural Revolution periods. . . . This led to a dramatic acceleration of the desertification process. . . . Since 1978, great efforts have been again undertaken to harness the Mu Us Sandy Land. . . . Thus, the desertification process is now getting checked, and the de-desertification process is asserting itself. (1990: 265–266)

Likewise, Zhu Zhenda of the Department of Desert Research has written that the present desertlike features across much of the northern landscape have been shaped chiefly over the last 50 to 100 years, but mostly in the last half-century. In the area of the Keerqin desert, he asserts that human-induced desertified land increased from 20 percent of the total area in the 1950s to 53.8 percent by the end of the 1970s (Zhu Zhenda 1990: 62, 65, 70). In Wengniure banner, grassland scientists have claimed that “reckless” (*wu jiezhi de*) land use intensified especially over the last 30 to 40 years (see Kou and Xue 1990).

Frequent praise for a massive afforestation program initiated in 1978 represents another case in point. This project—dubbed “China’s Great Green Wall”—is described as the “top ecological undertaking in the world,” a tremendous feat of engineering (Li 1990: preface). The official spin is that before 1949, “ruthless” deforestation led to widespread land erosion, but after the founding of New China, the people of the Sanbei Shelterbelt Region devoted themselves to afforestation, transforming the

denuded mountains and harnessing the drift sand.⁹ After twenty-eight years of experimentation, a concrete plan for the nationwide development of shelterbelts was put forward. Since then, officials claim, there has been marked improvement of the environment (even as degradation accelerates). Premier Li Peng cited the Northern Shelterbelt as evidence that China (in the post-reform era) has “vigorously promoted scientific and technological research on [the] environment.” He praised the project as a “Great Wall against sandstorms” (China State Council 1994: 3).¹⁰

In contemporary China, the struggle to control the desert is often contextualized in just such a discourse of modernity, invoking the prowess of advanced scientific technologies to dispel the ancient threats of sand drift that menace more backward societies. The consistent political message conveyed to the public since the reform era has been that thanks to the technological harvest of the reform-era modernization process, we will finally subdue and control our northern deserts.

Glowing reports of technological developments surface repeatedly in the media, and they usually tap into both or either of two themes that play an important role in the official discourse: science and internationalism. These themes help to identify the reform era with “modernization” and “globalization.” For example, one of the most favored recent technologies is aerial seeding. China began to experiment with the technique of broadcasting grass seeds from airplanes in 1979, and the successful aerial seeding of an arid region was reported in the press as a great breakthrough, made all the more impressive because stunned foreign experts had believed it impossible (*China Daily* 1988). Proponents of afforestation projects also hope to achieve greater public reverence by invoking an aura of scientism. A recent news report informed readers that “the composition of [the] shelterbelt forest system was based on countless laboratory experiments involving computer modeling and wind-tunnel tests. As a result, the shelterbelt forest was planted in a configuration designed to provide optimum protection for vegetation and the surrounding environment” (Jiang Wandu 1994: 18). Another new method to combat desertification that appears in the media is water-saving biotechnology. Spokesmen at the Soil and Water Conservation Institute under the Chinese Academy of Sciences have proudly reported the development of a chemical that can absorb and release large quantities of water that might be used to promote agriculture and afforestation in arid regions (Xinhua 2000e). Lately, media reports have announced government intentions to breed improved varieties of grass inside satellites that will be launched into space by the year 2003 (Xinhua 2000f).

The political importance of the highly publicized campaign for desert control is further illustrated by the number of bureaucratic agencies (at least sixteen) now charged with responsibility for carrying out the national antidesertification campaign. Indeed, the complexity of the bureaucratic structure seems designed more for the propaganda value of portraying a comprehensive team effort than it does for coordinating effective solutions.¹¹

In summary, past and present political factions in China have found great propaganda value in showing themselves to be at work in taming the desert and in appearing to be more effective at the task than their predecessors. Through public discourse, intellectuals within the current regime claim to have done much to ameliorate the inherited legacy of irresponsibility, yet they also concede that deterioration has not been arrested, mostly because of irrational land use among ignorant or backward herders and farmers who continue to resist modernization. While often critical of shortsighted land use policies from earlier periods, Chinese authorities primarily scapegoat local rural producers.

Environment, Politics, and Cosmic Harmony

Why would Chinese officials be so concerned to deflect the blame for land degradation away from themselves—what makes their culpability so dangerous? Obviously, there is no single answer, but the long tradition and lasting influence of Chinese natural philosophy provides one path of explanation. Throughout the history of imperial China, the natural environment was conceived primarily in the context of political harmony. For millennia, government authorities based their legitimacy on the notion of a “mandate from heaven.” The Emperor, as Son of Heaven, was responsible for maintaining harmony between Heaven and Earth. Evidence of proper governance was manifest by harmony in both the social and natural order. By the same token, natural disasters could be construed as evidence of disharmony—ordinary citizens associated them with incompetence among the ruling elite and perceived them as a sign of discontent on the part of Heaven (see Needham 1956: 359–363; Huffman 1986).

This natural philosophy found support in the traditional art of *feng shui*. *Feng shui* beliefs and practices permeated Chinese society, influencing people to be closely attentive to nature-related symbols and to the possibility of writing symbols into nature (Bruun 1995: 184). Grapard (1994) notes that

believing in an ideal harmony between the structure of the world and themselves, humans were on the lookout for such signs in nature. The world was then conceived as a text to be decoded. . . . A corollary of these views was that humans might see themselves as the agents of cosmic change, so that whenever disastrous events occurred in the natural world, they embarked on protracted rites of penitence to pacify the moral reactivity of nature, and whenever auspicious events occurred, they performed rituals of gratitude. . . . There could not be a single natural phenomenon without its corresponding cultural echo. (380)

Given this natural philosophy and its pervasive influence, it is not surprising that dynastic rule itself was sometimes the victim of natural disaster in China. Widespread devastation and social turmoil resulting from floods, earthquakes, and famine have historically been major contributing factors to the collapse of imperial authority. For example, the worst drought in the past 500 years hit northern China in the waning years of Ming authority (1634–1643). It contributed to a veritable army of refugees heading north that precipitated social unrest and the eventual fall of the dynasty (Reardon-Anderson 1995: 55–56). These ancient associations have not disappeared with the socialist state. People reacted nervously, for example, when a terrible earthquake hit near Beijing in 1976 (not long before the death of Mao) that claimed 665,000 lives. A popular slogan, charged with national political significance, circulated widely after the event: “Criticize Deng, resist quakes, and recover from disasters” (Huffman 1986: 75; *Renmin ribao* 1976).

The doctrine of cosmic reaction to political governance was by no means unique to China, but nowhere else was it “enshrined as a central part of a philosophical and moral system” (Murphy 1967: 314). Since 1949, however, the Communist Party has tried to institute a radical departure from the traditional views linking nature and governance. In the words of Murphy: “Nature is no longer to be accepted but must be “defied” and “conquered.” . . . Nature is explicitly seen as an enemy, against which man must fight an unending war” (319). To some extent, the new rhetoric of conquest has only intensified the political and potential symbolic importance of nature and the environment for Chinese authorities. Once the metaphorical gauntlet was thrown down, the state could hardly appear to be losing control.

Even into the reform era, many environmental issues have taken on highly symbolic political meaning. National leaders, for example, have been hesitant to permit the growth of green activist organizations for fear that it will serve as a launching pad for political opposition (Lam 1993;

Associated Press 1994). Also, in the debates over development programs in recent years, environmental issues have become symbolic means to question the political and moral legitimacy of factions within the government, if not the entire Communist Party. National debates over wildlife conservation (see Schaller 1993; Carpenter 1989) and the Yangzi River Three Gorges Project (see Dai 1994; Sullivan 1995) are two of the most conspicuous examples. The longstanding public expectation of responsible domination over nature still influences the political process.

China's official discourse about deserts and rangeland policy, therefore, has been neither casual nor unbiased. It affects not only how scholars and officials gauge the scope and severity of degradation, but also how they direct public interpretation of the causes and the culprits and the symbolic significance of desert land. This language perpetuates an important representation that the state has created about itself and the effectiveness and benevolence of its policies in minority areas. The reality of this discourse, and its power to construct knowledge on environmental issues, too often lies hidden behind the authority of scientific pronouncements.