

The Imposition of an International Environmental Regime on Chinese Grasslands
-- by Dr. Dee Williams

Introduction

This paper is based on a year of anthropological fieldwork conducted among ethnic Mongolian herders who live in a remote desert area of the Inner Mongolia Autonomous Region (IMAR) of China. I plan to describe briefly the dramatic environmental and social changes that have occurred in local settings as a result of new government land use policies imposed across national rangelands since decollectivization began in 1980. I will then argue that major international development institutions such as UNDP (United Nations Development Programme) and IFAD (The International Fund for Agricultural Development) have played significant roles in advocating and enabling the misguided and culturally biased policies that attempt to privatize and parcelize grassland resources among minority populations. The main point is that unfamiliar technologies and land use strategies have been thrust from the outside world upon native residents in the name of modernity and economic development, actively undermining local traditional concepts of environment, community, and identity with manifest negative consequences. This example helps to illustrate some larger policy concerns associated with the recent emergence and growth of international environmental regimes around the world.

I use the phrase "environmental regime" to identify and explore what appears to be a powerful integration of cultural assumptions, scientific understandings, and administrative institutions (involving both national and international actors) which mutually influence each other on a global scale to reconstruct local space and environmental conditions, often contrary to the immediate interests of the majority of native residents. This usage is consistent with other recent scholarship which speaks of influential "epistemic communities" (Haas 1989, 1992), and "intergovernmental environmental domains" (Frank 1997), and "world associational arenas" (Meyer et al. 1997). In previous articles I have documented the relevant cultural assumptions and scientific understandings in conflict between ethnic Mongol herders on the one hand, and Nationalist Chinese and international scientists on the other (Williams 1996, 1997a, 1997b, nd). A key point is that in great contrast to the large body of Chinese and international scientific literature on desertification (which uniformly portrays dune sand in negative terms), Mongol herders perceive dune sand as a necessary and welcome component of their ecological environment, as well as an important marker of ethnic identity. The focus of this particular paper, however, is primarily the fact of imposition of an international environmental regime (coming from within the UN system) that is obsessed with privatization and rationalization of production.

My familiarity with the situation in Eastern Inner Mongolia is based upon fieldwork conducted over a period of twelve months between the summers of 1993-1994 in Nasihan Township (sumu) of Wengniute County (qi), Chifeng City Prefecture (shi). Nasihan Township is situated in a desert-steppe environment in the western portion of the Keerqin (Horqin) Sandy Lands, where sand soil and moving dunes occupy 90 percent of the regional landscape. The climate is arid, with mean annual precipitation usually ranging between 300 and 500 millimeters. My host unit was the Shenyang Institute of Applied Ecology within the Chinese Academy of Sciences. It operates a small grassland ecosystem research station in the area to monitor weather patterns and conduct experiments in afforestation and dune stabilization.

I engaged in participant-observation and household interviews throughout the entire township, but most of my contact occurred with residents of Wulanaodu village (gacca), where the research station is located. In 1993, Nasihan had a population of 4000 people, which is 95 percent ethnic Mongol. The people still earn 87 percent of their income by raising cows, sheep, goats, camels, and horses. The cash economy remains small, however, with a per capita net income of only 400 yuan per year (50 USD). Nasihan Township thus ranks among the poorest in all of China.

Post-reform Policy and Consequences

It is widely known that land degradation has become an acute social problem on the arid steppelands of Inner Asia. Chinese scientists and officials monitor the situation closely, revising survey data every year. In the most recent public statements, prominent officials classify 27.3 percent of the national landmass as desert area (Jiang 1997). This compares with 16 percent reported in 1993 (Xu 1993). Officials now estimate that grassland is lost to moving sand at a rate of 2,460 sq km per year (Xu 1997), compared with the rate of 2,100 through the 1980s (China State Council 1994:181). The menacing sand belt stretches some 5,000 kilometers from west to east across China's arid northern rangelands, purportedly affecting the livelihood of nearly 400 million people (Wang et al. 1993:1). The situation is particularly severe in Inner Mongolia, where officials report a loss of 3,400 sq km per year and estimate that only 32 percent of total grassland area still exists in undeteriorated conditions (Zhou 1993).

Grassland degradation was already quite advanced when the long process of decollectivization began in the early 1980s. But Chinese officials hoped to protect against further ravages expected to follow from minority herders grazing

private livestock on public range. They introduced the "double contract" household responsibility system of management, whereby local production brigades distributed land use rights (in 1984), as well as animals (in 1981), among independent herding families.

Privatization of rangeland resources was supposed to be just the first step in a long series of adjustments intended to "rationalize" the animal husbandry sector. Li Yutang, Director of the Grassland Division of the Ministry of Agriculture in Beijing, has outlined the basic reform strategy: first, distribute animals to private households; second, distribute grazing lands; third, enclose and assign carrying capacities for each plot of land; and finally, implement incentives and sanctions to enforce a sustainable balance between animals and vegetation at the household level (NRC 1990, 33; Li Yutang 1992). Fence-wire was the favored medium to fix people and animals in space, although implementation of policy goals remains subject to the initiative and financial capabilities of each household.

In theory, enclosed land would force every household to confront personally the extreme contradictions between forage demand and forage availability once livestock was contained inside a bounded territory. In practice this has not happened, and the national rangelands have actually eroded further, in no small part because livestock largely remains outside private enclosures. Contrary to the purpose of parcelization, residents graze their animals as sparingly as possible on enclosed land. Since decollectivization, those households who could actually afford enough costly wire to enclose their pasture allotments have faced no external pressure to alter their mobile grazing habits, and so keep livestock outside their own fences so long as forage is available on the wide unenclosed range. They essentially pick clean the grass of those too poor to fence, saving their own for hay production or emergency grazing during winter and spring.

Elite residents with the resources to acquire fencing early have thus enjoyed a tremendous advantage in local competition for present and future grassland resources. Although community land and livestock were originally distributed among households in approximately equitable fashion, the fact remains that without fence wire to protect the integrity of land use rights, community resources quickly polarized. Those with the greatest financial leverage have enclosed the most immediately productive tracts of land, sometimes oblivious to proprietary contracts held by others. Furthermore, they have roped off far more than their allotted share of rangeland, squatting until the day that neighbors dare to push them back on rightful boundaries. Over time, more and more households have gained the financial capacity to claim some portion of rangeland, but they have in turn adopted the same exploitative grazing strategies. The bottom line is that privately enclosed land area has slowly expanded since 1980 while a minority of residents have increasingly grazed large numbers of livestock on highly vulnerable unfenced rangeland, thereby accelerating wind and soil erosion processes across vast territories only to protect their own isolated pastures.

The social landscape has deteriorated along with the physical landscape. Enclosures have quickly broadened disparities of household wealth, leading to new problems of economic stratification and community fragmentation. A government newspaper reported that the average income ratio between the top and bottom 20 percent of households in rural areas across the nation grew from about 3:1 in 1981 to 5:1 by the summer of 1994 (China Daily 1994). In Wulanaodu village, my data indicate a change in the same wealth share ratio from roughly 3:1 in 1981 to roughly 7:1 by 1993.

Such rapid stratification has significant implications for community residents. One important emerging development is the increase in outmigration of labor. Downwardly mobile households have started sending young and naive family members into distant urban centers to earn wages performing tasks of menial labor, usually in unhealthy settings such as brick factories. They often come back with physical injuries or horrible tales about people who cheated them out of their money. Labor patterns among village residents who remain at home have also changed in association with recent enclosure proliferation. Environmentally privileged households find themselves more and more in need of labor to keep up with their expanding production. They hire neighbors to help them herd animals, cut hay, harvest fodder crops, shear sheep, comb cashmere, construct homes, and to weave wire into more fencing to expand their land base further. Some households have even begun hiring neighbors to cook and clean house. In contrast, the environmentally underprivileged households face unwelcome cutbacks in their own production, and so they are forced to sell their labor to survive.

Wealthier households who articulate with the urban markets enjoy greater cash flow and use that advantage to exploit their neighbors further. They buy up grain supplies from local stores, stockpiling it until inevitable shortages allow them to sell it to hungry residents at a higher price. Some even accumulate enough capital to conduct trade in livestock, buying low in the village and selling for marginal profit at the stockyards. Meanwhile, stratification also redistributes the quality of living standards in areas like nutrition and housing, as well as access to government services in education and health care.

Enclosure competition has soured community relations so that households have increasingly atomized their production operations and commoditized their labor exchanges. Most inter-household labor cooperation is now conducted

between close kinship relations, such as brother-brother or father-son. When informal labor swaps do occur outside that context, usually during the months of September and May, they are quite limited in duration (a day or two) and quite specific about reciprocal obligations. New patterns of crime and violence also testify to declining community solidarity. Enclosure disputes have motivated many neighborly feuds, even between families or friends that once enjoyed close and cooperative relationships. Heated arguments arise practically whenever a new fence goes up, if for no other reason, than because property boundaries have never been clearly identified. Vandalism or outright theft of fencewire and livestock frequently occurs, especially just after a new enclosure is erected. Neighbors often interpret private enclosure expansion in the context of greed or hostility, and so respond venomously in order to vent their envy or insecurity. Of course, intermittent political campaigns generated a great deal of violence during the Maoist era, but such chaos was generally instigated by outsiders and never became routinized behavior. During interviews, contemporary residents unanimously complained about the rise of crime and violence since the beginning of land reform.

The Culpability of International Institutions

A great deal of social momentum for rangeland parcelization has come from grassland scientists within China who clearly support the recent proliferation of household enclosures. The following statement is representative of contemporary conventional wisdom on the subject: "Grass yields have been doubled or quadrupled merely by fencing the original pasture....Productivity will be enhanced if pasture improvement and scientific management are put into practice" (Zhou Li 1990, 44). Similar praise can be found in virtually any Chinese account of grassland problems and solutions (see Wang et al. 1993, 31; Hu 1992, 210-11; Chang et al. 1990).¹ In addition to ameliorating ecosystem conditions, fences are also widely recommended on principles of social cohesion: they are said to empower private citizens to work in partnership with the government to rehabilitate national rangelands (see Ba 1993; Xinhua 1985).

I believe much of the domestic enthusiasm for rangeland enclosures derives from the influence of international organizations and their agents who have directly and indirectly encouraged household enclosures, especially in Chifeng City Prefecture and throughout Wengniute County. For example, at the beginning of the reform era, the United Nations Development Program and the Chinese Bureau of Animal Husbandry jointly financed and collaborated on a project demonstration center devoted to grassland development. It was located along the banks of the Xilamulun River in eastern Wengniute (it was referred to simply as the "Wengniute Ranch"). From 1979-1983, the project attempted to test the viability of mechanized fodder production and to demonstrate recommended methods of livestock management to local herders. One specific priority was to increase and improve the use of fence-wire, and to teach principles of rotational grazing within enclosures. Toward that end, the project erected some 37 kilometers of permanent boundary fencing, as well as additional fencing to close off dune areas for stabilization, and to secure other sites for artificial seeding. In addition, foreign technicians demonstrated various bracing techniques necessary to improve fence wire tautness (Kernick 1980:8). The Ranch originally operated these enclosures under collective management, but the assets and the techniques passed to private households upon decollectivization.

Another direct route of international influence on household enclosure proliferation in Wengniute occurred via the International Fund for Agricultural Development (IFAD). IFAD, a United Nations agency based in Rome, supported the first multilateral assistance loan to China, providing a total of \$35.4 million interest-free, as part of a project whose total cost ran about \$64.6 million. From 1981 to 1988, the Northern Pasture and Livestock Development Project (NCPLDP) attempted to introduce and demonstrate improved technologies and practices in grassland forage and livestock production. It provided funds for a wide range of investments in fodder development, dune fixation, seeding, irrigation, breed improvement, dairy development, and marketing and transport operations. It was supervised by the UNDP, and affected eight counties: four in IMAR, three in Heilongjiang Province, and one in Hebei Province. Four of the eight counties (all of the IMAR sites) were located in Chifeng City Prefecture, including one in Wengniute itself.

IFAD fully intended to make a significant impact on local production methods, as the 1981 annual report explained: "Although limited to a small fraction of the country's pasture resources, the project is expected to have a substantial demonstration effect and the possibility of extensive replicability" (IFAD 1981:34). The largest investment category for the NCPLDP project was that of "pasture development", which IFAD (1989) explicitly defined as the

¹ A notable exception is found in a study by Liu (1990, 97-100), who explicitly recognized the relationship between expanding enclosures and grazing pressure intensification in surrounding grasslands.

introduction of improved grasses, seeding, fencing and shelter belts. The fundamental development strategy assumed that "properly designed, located and installed fences would contribute to fodder production and improved rangeland management" (1989:4). Originally, project funds were utilized for strategic collective enclosures operating under collective management. Over time, NPLDP project implementation evolved to keep pace with rural decollectivization, so that funds were increasingly distributed to "specialized households". As land was contracted out to individual households, IFAD loans were also allocated to households over a 5-10 year repayment period, with an interest rate of 1.5 percent. By 1988, a total of about 20,000 loans had been disbursed, primarily to independent or small groups of households (IFAD 1989:10).

How influential was the project in relation to household fencing? It is hard to know conclusively. The enormous sweep of reforms opening rural China to trade, travel and capital flow during the same time period make it virtually impossible to isolate or measure the direct effects of the IFAD project. Still, according to domestic Chinese news reports circulated at the end of the project term, the original intention to "transform pastoral areas" came to some fruition, as manifest by the following details: IMAR project sites expanded grassland fodder production by 39,000 hectares, expanded fenced grassland by 18,000 hectares, and expanded timber resources by 11,000 hectares. The project also sent many individuals abroad to learn advanced livestock management techniques (Xinhua 1988). According to internal IFAD reports, a total of about 2000 sq. km were fenced in IMAR over the course of the project (1989:16).

Brown and Longworth (1992:1667) likewise assume that the injection of large sums of money over eight years made the IFAD project a significant source of new investment in Chifeng City Prefecture. With some surprise, however, they report that the project apparently had little impact on the rate of household investment in fencing or on household incomes when compared to non-project townships (1992:1669; see also Longworth and Williamson 1993:317). A number of explanations for this interpretation are possible. The authors themselves explore several, including the possibility that some of the loan income was diverted for other uses, or that loan funds were made available to non-project townships to spread the benefits over a broader area (Longworth and Williamson 317-8). I would make two additional points. First, the non-project townships used as control data to assess IFAD influence may well have enjoyed their own sources of fence-wire acquisition. Wulanaodu, for example, acquired a substantial supply by virtue of its status as a "model collective". Second, the opposite scenario must be considered. Given the scarcity of fence-wire in the region under normal circumstances, it is possible that even households who did acquire loans with the intention to purchase wire might not have been able to find it during the specific years when control data was gathered, thus diluting the appearance of IFAD project influence.

Without more knowledge of such intervening variables, it is difficult to assess the full impact of IFAD or other development assistance programs on the proliferation of household enclosures throughout Chifeng or Wengniute. Yet the probability of their influence cannot be downplayed. Even if the influence of international projects on regional purchases of fence-wire over specific time periods could not be directly measured or confirmed, the many years of IFAD and UNDP enclosure rhetoric delivered to county officials and private households over a critical phase of policy formulation could not have failed to accelerate the domestic social momentum favoring rangeland parcelization, at least in these few project sites, if not in all of North China.

Parallel to this international exposure at a regional level, China at a national level began to engage the administrative bodies of the world economic order during the same years. China and the United States established mutual recognition and full diplomatic relations on January 1, 1979, in tandem with the new economic program. China became a member of the World Bank and the International Monetary Fund by 1980, and became a party to GATT's Multifibre Arrangement in 1984, requesting full participation by 1986. Participation in these organizations gave China new access both to world capital and foreign opinion, but also committed its leaders to a series of international obligations that would make the export-oriented economic reforms more difficult to reverse (Jacobson and Oksenberg 1990:85).

By mid 1983, the World Bank was primed to expand development loans to China. But first it wanted to analyze long-term development issues and options in the light of relevant experience from other nations. A subsequent report on the China livestock sector was eventually published in 1987, which expressed concern to increase the amount of animal protein in the national diet. The report stated: "Many of China's grasslands are overgrazed and probably cannot provide additional meat and wool in the short to medium term without further degradation. An urgent requirement is therefore to match livestock numbers with the land's carrying capacity, through herd reduction and improved range management" (World Bank 1987:45). Through such new channels, World Bank officials and other international experts could engage influential Chinese officials in extensive dialogues about policy options, and thereby influence the direction of resource management on specific issues (Jacobson and Oksenberg 116).

Given the power of the purse, foreign analysts have been able to influence the direction of China's enclosure policy on the rangelands. This has certainly happened in other pastoral areas of the world (Peters 1987; Simon 1993;

Ferguson 1994). Regardless of how direct the influence of foreign actors may have been in accelerating Chinese momentum for household enclosures, the essential point is this: because Chinese reform policies have promoted rangeland privatization explicitly to expand commercial output on domestic and world markets, and because they have done so for the purpose of gaining access to foreign technologies and funds, and because international experts have gained leverage to promote the doctrines of carrying capacity and enclosure just as new animal husbandry policies were being formulated and implemented, the subsequent proliferation of household fence-wire on Wengniute grasslands can indeed be linked to the forces of global capital and the ideologies of international institutions.

Implications for International Development Policies:

In conclusion, I want to consider briefly some of the broader policy implications of this field study. I will confine my discussion to a few key points focused upon the governance issues of compliance, biodiversity, and transition.

A broad body of literature exists to document how cultural definitions of nature and representations of environment can change dramatically over time and circumstance. It is now a matter of conventional wisdom that just within the last two or three decades the scientific understanding of nature as an interdependent global ecosystem has established the intellectual foundation and political rationale for coordinating environmental conservation and discourse at an international scale. This is usually understood as a positive trend because a shared scientific conception of nature is deemed necessary to control the grave and multiple environmental issues that cross national boundaries. Yet there are also some important costs associated with the emergence and growth of dogmatic international environmental regimes which does not receive sufficient attention.

One significant cost is the fact that an international language of resource management necessarily eclipses the parochial perspectives and concerns of local residents, who may in fact have a more nuanced appreciation for sustainable human-environment relations in a particular locale. In this case, Chinese and UN officials and scientists have imposed their own values and agendas on subjugated lands and peoples who do not share their view of nature or vision for the future. The majority of residents do not endorse current land use prescriptions and policies because they rightfully see them as detrimental to their own immediate interests. Yet, environmental regimes are structured and programmed to focus primarily on issues of local "compliance" with prescribed rules and regulations, rather than on the (sometimes very sensible) reasons and social context for non-compliance. Prospects for improved understanding of serious resource management problems are thus hampered rather than promoted.

A related cost is the fact that incorporation within the global political economy tends to reduce the biodiversity and stability of local production environments. The price of development is conformity, which involves a process of self-denial that many groups find intolerable. As Shiva (1995) has pointed out, the global system actually needs to maintain the marginality of some social groups in order to preserve the possibility for biodiversity at a global scale, yet the continual penetration of international market forces and "rational" resource management principles into the developing world threatens to eradicate the very diversity that draws their attention. The recent experiences of Nasihan herders support the contrarian view that the restoration and sustainability of biodiversity in the modern world will require decreasing (rather than increasing) linkages with the global system.

Another significant but underestimated cost of global oversight is the unexpected damage that may occur during the "transition" phase of new policy prescriptions. For example, land reforms take time to implement, but the social chaos that occurs during the transitional period may well trigger a destruction of local resources that has greater environmental impact than the amelioration that is presumed to follow. In Nasihan, rangeland privatization has exacerbated land degradation processes over a timeframe of sufficient duration to merit serious concern about the future prospects of the land. The long transition time also carries negative consequences for the pursuit of social justice and production security.

Many of the transformations that modernization brings may well be inevitable. Yet, the question of how to make the process less painful and traumatic for the people involved is a significant development issue worthy of greater deliberation. Only when the views of rural producers themselves are taken seriously into account can we begin to expect their successful modernization. The story of Nasihan shows (again) that local communities and individuals are viable players in the process of development whom governments cannot afford to disregard.

References

- Ba Gen, and the Chifeng Grassland Work Station 1993. "Jiating Xuqun Xiao Cao Kulun Jianshe Qianyi" [Overview of householder herd and grassland construction policy] *Nei Menggu Cao Yie* 2:19.
- Brown, Colin and John Longworth 1992. "Multilateral assistance and sustainable development: The case of an IFAD project in the pastoral region of China" *World Development* 20(11):1663-1674.
- China Daily 1994. "Income gap stimulates growth", July 1.
- China State Council 1994. *China's Agenda 21: White Paper on China's Population, Environment, and Development in the 21st Century*. (Adopted at the 16th Executive Meeting of the State Council on 25 Mar.). Beijing: China Environmental Science Press.
- Ferguson, James 1994. "The anti-politics machine: 'Development' and bureaucratic power in Lesotho" *Ecologist* 24(5):176-181.
- Frank, David John 1997. "Science, nature, and the globalization of the environment, 1870-1990" *Social Forces* 76(2):409-437.
- Haas, Peter M. 1989. "Do regimes matter? Epistemic communities and Mediterranean pollution control" *International Organization* 43(3):377-403.
- _____ 1992. "Introduction: epistemic communities and international policy coordination" *International Organization* 46(1):1-35
- (IFAD) International Fund for Agricultural Development 1981. *Annual Report*. Rome.
- (IFAD) International Fund for Agricultural Development 1989. *Completion Evaluation Report for the Northern Pasture and Livestock Development Project, No. 0361-CH, Monitoring and Evaluation Division, Rome*.
- Jacobson, Harold K. and Michel Oksenberg 1990. *China's Participation in the IMF, the World Bank, and GATT: Toward a Global Economic Order*. Ann Arbor: University of Michigan Press.
- Jiang Chunyun 1997. Speaking at the Asian Ministerial Conference on the Implementation of the UN Convention to Combat Desertification, in Beijing on May 13, as quoted in Xinhua News Agency (English report of Chinese address). available on FBIS-TEN-97-006-L at <http://wnc.fedworld.gov>.
- Kernick, M.D. 1980 (May). "First consultant report on pasture improvement and utilization", submitted on behalf of the Pilot Demonstration Center for Intensive Pasture, Fodder and Livestock Production of Wengniute Ranch to the Grassland and Pasture Crops Group of the FAO in Rome.
- Li Yutang 1992. (Executive vice-president of China Pratacultural Association and Senior Economist for the Ministry of Agriculture). Interviewed by author. 5 June.
- Longworth, John and Gregory Williamson 1993. *China's Pastoral Region: Sheep and Wool, Minority Nationalities, Rangeland Degradation and Sustainable Development*. Wallingford, UK: CAB International in association with the Australian Centre for International Agricultural Research.
- Meyer, John, et al. 1997. "The structuring of a world environmental regime, 1870-1990" *International Organization* 51(4):623-651.
- (NRC) National Research Council [ed.] 1992. *Grasslands and Grassland Sciences in Northern China*. National Academy Press: Washington, D.C.

Peters, Pauline 1987. "Embedded systems and rooted models: the grazing lands of Botswana and the commons". IN *The Question of the Commons: The Culture and Ecology of Communal Resources*. Tucson: University of Arizona Press, pp. 171-94.

Simon, David 1993. "The communal lands question revisited". IN *Third World Planning Review* 15(1):R3-R7.

Wang Lixian, Wang Xian, and Zhang Kebin [eds.] 1993. *The Experiences of Combatting Desertification in P.R. China*. Beijing: College of Soil and Water Conservation in the Beijing Forestry Univ.

Williams, Dee Mack 1996. "The barbed walls of China: A contemporary grassland drama." *J. of Asian Studies* 55, 3: 665-91.

_____ 1997a. "The desert discourse of modern China." *Modern China* 23(3):328-355.

_____ 1997b. "Patchwork, pastoralists, and perception: Dune sand as a valued resource among Chinese herdsman" *Human Ecology* 25(2):297-317.

_____ nd. "Representations of nature on the Mongolian steppe: An investigation of scientific knowledge construction" (under review for publication).

World Bank 1987. *China: The Livestock Sector*. Washington, DC.

Xinhua wire service 1985. Beijing (October 11). "Herders contract pastures".

Xinhua wire service 1988. Hohot, IMAR (February 18). "Foreign funds help China's farming to develop".

Xu Youfang 1993. Speaking at the National Desertification Conference in Chifeng, Inner Mongolia on September 24, as quoted in Xinhua News Agency (English report of Chinese address). available in FBIS-CHI-93-184 at <http://wnc.fedworld.gov>.

Xu Youfang 1997. Speaking at the Asian Ministerial Conference on the Implementation of the UN Convention on Combatting Desertification in Beijing on May 15, as quoted in Xinhua News Agency (English report of Chinese address). available in FBIS-TEN-97-135 at <http://wnc.fedworld.gov>.

Zhou Li 1990. "Economic development in China's pastoral regions: Problems and solutions," pp. 43-56 in John Longworth (ed.), *The Wool Industry in China*. Victoria, Australia: Inkata.

Zhou Weide 1993. "A century of China's environmental protection in IMAR" [a news briefing held on October 19 and reported in *Nei Menggu Ribao* (Hohot, IMAR), Oct 21, p. 1.