

Pastoralists, Patch Ecology and Perestroika: Understanding Potentials for Change in Mongolia

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Introduction

An alternative view of pastoral livelihood systems has begun to emerge in recent years that places much greater stress on the need to understand ecosystem dynamics. It draws particularly on empirical work in African drylands as well as theoretical debates around environmental change. One such influence is the notion of 'patch ecology', focusing attention on the strategic importance from a management point of view of high quality resource patches within the landscape.

This view has important implications for pastoral development policy and practice. It acknowledges that indigenous resource management strategies with low external inputs are geared towards the incidence of 'unusual' stresses, rather than being adapted to some 'average' set of conditions [Ellis and Swift 1988]. Key resources — such as localised, moist depressions in dry areas — play an important role in such strategies [Scoones 1990]. In most pastoral contexts, customary land tenure arrangements have evolved to regulate herders' access to these resources [see Swift, this *Bulletin*]. Development practices that fail to recognise them may reduce rather than enhance pastoralists' control over their own livelihood security. Instead, macro-level legislation should seek to build on and facilitate customary management practices at the local level, rather than aiming to supplant or otherwise constrain them.

This article considers the relevance of these ideas in the context of contemporary efforts to reform the Mongolian herding economy under perestroika. For Mongolia to manage this major economic transition while protecting some of its notable achievements in the sphere of social welfare is a challenging task in its own right. But arising out of a unique history and political economy, Mongolia's experience also offers potentially valuable lessons for dryland development elsewhere, especially in Africa [Swift and Mearns 1991]. Contemporary glasnost and perestroika have made more real than ever before the possibility of gaining a better understanding through field research of Mongolian pastoral management institutions.

Mongolian development and environmental change

Mongolians see themselves much as we in the West see them: a proud people descended from Chinggis Khan, 'born and bred on horseback', and herding animals on the vast, empty steppes of central Asia. This strongly felt sense of national identity with livestock herding is one thing that is not about to change under the contemporary imperatives of perestroika. What is now in question is precisely how that herding economy will be managed.

With a total human population of only two million occupying a land area almost the size of Western Europe, Mongolia can hardly be said to face environmental degradation significant on a world scale. A quarter of the population live in the capital Ulaanbaatar, and about half live in rural areas as members of herder cooperatives, leading a still essentially nomadic lifestyle. The 2.6 per cent average rate of population growth over the last 40 years has been largely absorbed by even more rapid urbanisation, although this has slowed during the 1980s [Central Statistical Board MPR 1986]. But the apparent abundance of pasture at an aggregate level masks important local production constraints and seasonal bottlenecks. In an economy where food security is so intimately linked to livestock production, Mongolians rightly perceive that they cannot afford to be cavalier about prospects for sustainable rangeland production in the long term.

Discussions around the issue of rangeland degradation are already taking place at central level in a climate of growing environmental awareness in Mongolia. The Mongolian Nature and Environmental Protection Association is one of the largest of the mass organisations now proliferating in the country, having run campaigns since 1972 [Academy of Sciences MPR 1990], and has been joined by a new Green Party. Even making allowance for the imported influence of Eastern European 'green politics', where environmental groups played an important role as surrogate opposition parties in shaping events leading up to the momentous political upheavals of 1989 [Redclift 1989], there are undoubtedly perceptions of real trends of locally important environmental change in Mongolia.

Options currently under consideration in Mongolia for reforming land tenure policy — regarded as one of the principal ways to increase productivity in the rural sector — need to be designed with a view to long term ecological sustainability. On the principle that prevention is better (and cheaper) than cure, the current situation at least provides a certain room for manoeuvre in policy terms. Now is the time to strengthen or introduce land management practices to ensure future sustainable production, using a full range of administrative, legal and economic policy measures. Such an experience could in turn suggest ways forward for policy reforms in other countries, especially in Africa, where pastoral livelihoods are already threatened by land alienation and environmental degradation.

The Mongolian economy has been transformed over the last 70 years. Considerable investments in the industrial sector, especially in mining, power and construction, have resulted in a major increase in the share of these industries in both GDP and national employment. Per capita GNP in 1989 stood at around US\$660 [Sanders 1989], which puts Mongolia on a par with Egypt, Zimbabwe and other lower-middle-income countries.¹ Agricultural employment has fallen as a proportion of the total, from 61 per cent in 1960 to 34 per cent in 1985 [Central Statistical Board MPR 1986]. While the relative contribution of agriculture to GDP has declined from 62 per cent in 1940 to 17 per cent in 1985 [Academy of Sciences MPR 1990], agricultural production and exports have increased in absolute terms. The rural sector remains of major importance to the national economy, and contributes many of the raw materials on which the industrial sector is based (wool, hides, etc.), as well as supplying food.

Mongolia covers a wide range of ecological conditions, from desert and the Gobi semi-desert region in the South, through extensive steppes in the East and central belt, to forest steppes and high mountains in the North and West, where there is also a lower-lying valley of lakes. Common to all areas is a sharply seasonal, continental climate. Annual mean temperature variations are in the order of 40 °C to 50 °C, with maximum and minimum temperatures of over 40 degrees above and below freezing. Most of the annual precipitation falls in the summer months, but is generally very low. It varies regionally from 300-400mm in the mountains to less than 100mm in the Gobi and desert regions. Over a period of 44 spring-summer periods for which there are continuous records, the Gobi has experienced up to 14 successive drought years [Academy of Sciences MPR 1990].

¹ Mongolia's GDP was previously reported as being much higher, owing to differences in the way national income was calculated. In fact even US\$660 is likely to be a significant over-estimate under present conditions. Mongolia should properly be considered a low-income country by international standards.

Some precipitation falls as winter snow, which covers the ground for around 5 to 8 months of the year, again varying regionally. The growing season is necessarily very restricted.

Less than 1 per cent of Mongolia's land area is classified as arable. There was almost no crop production before the 1921 revolution, but the area under cereals increased rapidly as state farms were set up from the 1940s onwards. In 1941 less than 30,000 hectares were sown to cereals, expanding to 790,000 hectares by 1985 [Central Statistical Board MPR 1986]. Some 70 per cent of the cropped area was in private hands in 1941 but during the 1950s private cropping disappeared. Around 60 per cent of the total cropped area is under cereals (primarily irrigated wheat grown under heavily mechanised conditions on state farms), the remainder being sown to fodder crops (barley, oats and millet) and relatively small amounts of potatoes and vegetables. Agricultural collectives have a much smaller share in overall crop production than the state farms, but grow a larger proportion of fodder than of cereals.

The harsh climate also places severe constraints on livestock production. For much of the year forage is abundant on open pastures, but during the harsh winter/spring period it is scarce or covered by snow. Stocking rates under existing management regimes are therefore low, with the winter carrying capacity of open pasture as the apparent limiting factor. There may be limited winter nutrition supplements of cut hay and fodder, but their availability is a key constraint to livestock production in particular areas and during critical periods. Large numbers of animals have to be slaughtered around October/November at the risk of cutting into breeding stock and adversely affecting herd composition.

Total livestock numbers for the five major species (sheep, goats, cattle/yak, horses, and camels) have remained stagnant at around 23-25 million since the 1960s. Trends in productivity indices for individual animals (including liveweight, birth and death rates) and livestock products have been disappointing from this time onwards [Swift 1990]. A likely explanation for this poor performance in productivity despite considerable resources devoted to the livestock sector is the shortage of herding labour, in addition to the seasonal animal fodder gap.

Historical evolution of the herding economy

Mongolian social scientists claim, with some justification, that the Mongolian People's Republic is the only country to have made the transition from feudalism to socialism with no intervening phase of capitalism. The evolution of herding management institutions, and contemporary efforts to liberalise the economy, need to be seen in this historical context. It

points up the enormity of the challenge of building a structure in which prices reflect real marginal costs. For example, now that Mongolia has to pay for imports of fuel from the Soviet Union in hard currency, it will no longer be able to carry hay as air freight from fodder-surplus to fodder-scarce regions, as has been known to happen in recent years. Table 1 provides a thumbnail sketch of the major periods in modern Mongolian history, within which to situate important moments in the evolution of today's management structures.²

Table 1

Major periods in the modern history of Mongolia

1680s-1911	Period of Manchu-Chinese imperialist domination over stratified, feudal society, with Lamaist-Buddhist religious structure in parallel with secular hierarchy.
1911-1921	Period of Mongol autonomy following independence from Qing Dynasty in 1911. Struggles for power led eventually to Bolshevik-inspired revolution in 1921.
1921-1990	Mongolian People's Republic (MPR) under the control of the Mongolian People's Revolutionary Party (MPRP): period of Soviet-influenced, socialist central planning.
1990-	Multi-party elections in July 1990 officially ended 'leading role' of the MPRP within MPR. Rejuvenated MPRP still forms majority government but with goal of building a 'state-regulated market economy'. Moves towards perestroika include developing economic relations with the West.

During the feudal period nomadic herders were serfs bound to the particular geographical fiefs (**sumun**) in which they happened to be born and were forbidden to leave. The **sumun** were administrative units below the level of 'banners', individual banners fell within four overall provinces (**aimag**), and the whole structure was lorded over by the Manchu Emperor. All boundaries were officially demarcated, and the master set of maps kept in Peking. Society was rigidly hierarchical, with largely hereditary ranks. The **sumun** were controlled either by aristocrats claiming descent from Chinggis Khan, or by Buddhist monasteries under high lamas

or 'Living Buddhas'. Aristocrats and high-ranking officials made up some 6 per cent of the male population.³ A further 44 per cent were lamas, in a society where this was the only rank not strictly inherited.

There were two broad classes of serf: the imperial subjects of particular **sumun**, liable to corvée labour, taxes and other levies (26 per cent of the population); and the personal retainers (**khamjilga**) of the aristocracy and serfs of lamas, both of which were inherited ranks (17 per cent in total). The Living Buddhas' property in land and livestock was exempt from taxation, and their personal serfs (**shabi**) were exempt from corvée. Overall it was a highly exploitative system based on a stagnant economy, at least towards the end, although the herding economy must have been relatively efficient to support such large numbers of unproductive lamas.

Under these confined conditions, pastoral management was not so much nomadic as rotational. Pasture rotations were of two kinds: seasonal (transhumance), and according to the animals grazed. Different animals have different grazing habits — sheep, for example, crop so close that horses and cattle cannot get at what is left — so efficient grazing management requires species segregation. Traditionally this had led to spontaneous cooperation among herding families, each specialising in a different herding task, but sharing a mutual interest in quality control. They were allowed to keep private animals in addition to those belonging to their 'herdlords'.

The aristocratic herdlords determined the whole complex of pasture allocation and assignment of families to duties. The restricted range of movement possible in a single **sum** meant herders often had to manage as best they could with mixed grazing on the same pasture [Lattimore 1962]. Voluntary collectivisation under later socialist management retained and gave fuller rein to many of the traditional forms of cooperation and ownership, following failed attempts at full collectivisation. Mongolian scientists today still have great respect for what we might term 'indigenous technical knowledge' in herd management skills [e.g. Purev 1991], as documented in Sambuu's substantial volume 'Advice to Herdsmen'.⁴

There was relatively little change in this stage of affairs during the period of autonomy following the expulsion of the Manchus in 1911, beyond granting former state serfs freedom of movement. In practice, this changed herding techniques very little. The pre-eminent position of the Church was if anything strengthened, and the **khamjilga** system persisted until 1923.⁵

² This historical overview is based on the following sources: Bawden [1989], Brown and Onon [1976], Humphrey [1978], Lattimore [1962:1980], and Rosenberg [1981].

³ Figures given here are for 1918, and taken from Humphrey [1978].

⁴ Jamsrangin Sambuu was leader of the MPR (Chairman of the Great People's Hural) 1954-1972. The National Research Institute for Animal Husbandry bears his name.

Continuing privileges in the early years of the Republic following the 1921 revolution enabled well-connected Mongolian aristocrats and former officials, and some lamas, to become quite rich. The system permitted private enterprise, so as to supplant the Chinese near-monopoly over trading. This period of petty capitalism (the 'Right Deviation') persisted until 1928 or so when leftist purges took place against such perceived counter-revolutionary tendencies. But this was followed by a period of political 'over-correction': the 'Left Deviation' (1928-1932).

The Left Deviation saw forced collectivisation, the forced secularisation of lamas, the confiscation and destruction of monastic property, and widespread expropriation of private property. Petty traders and the middle strata of herders suffered punitive taxation as class enemies not unlike kulaks. By the end of 1930, 30 per cent of all poor and middle herding households had been made members of collectives. The alienation of private owners led to a collapse in national livestock numbers. An estimated 6-7 million animals died between 1929 and 1932, many of them slaughtered by their owners rather than be collectivised [Swift 1990].

At this time the Soviet Comintern advised caution, and warned against moving prematurely towards higher socialist forms of organisation (e.g. communes). The mistakes of the Left Deviation were admitted under the 'New Turn' of 1932. From this period, gradual steps were taken toward voluntary collectivisation, gathering momentum only by the late 1940s and 1950s. Cooperation between herding households — building on traditional institutions at local level — was encouraged by pooling funds, supplemented by state loans, for such activities as boring wells, purchasing hay-making equipment and building winter shelters for animals. Coercion was strictly avoided, although there were continuing purges against higher ranking lamas. Various measures were used to induce lower ranking lamas to join collectives, such as giving them entitlement to a certain number of animals from the monastery herds, and training them in productive skills. In 1955 a decisive measure was adopted to strengthen the growing collectives (**negdel**), by introducing a ceiling on private livestock holdings.

Labour shortages were chronic. Wealthier herders increasingly identified their livelihood security with **negdel** membership, as they found it difficult to employ wage labour to help with their private herds. A sophisticated system of labour incentives had evolved by the late 1950s, relying on 'socialist competition' to reward contributions to group performance. By 1959 virtually all of Mongolia's herding households were members of **negdels**.

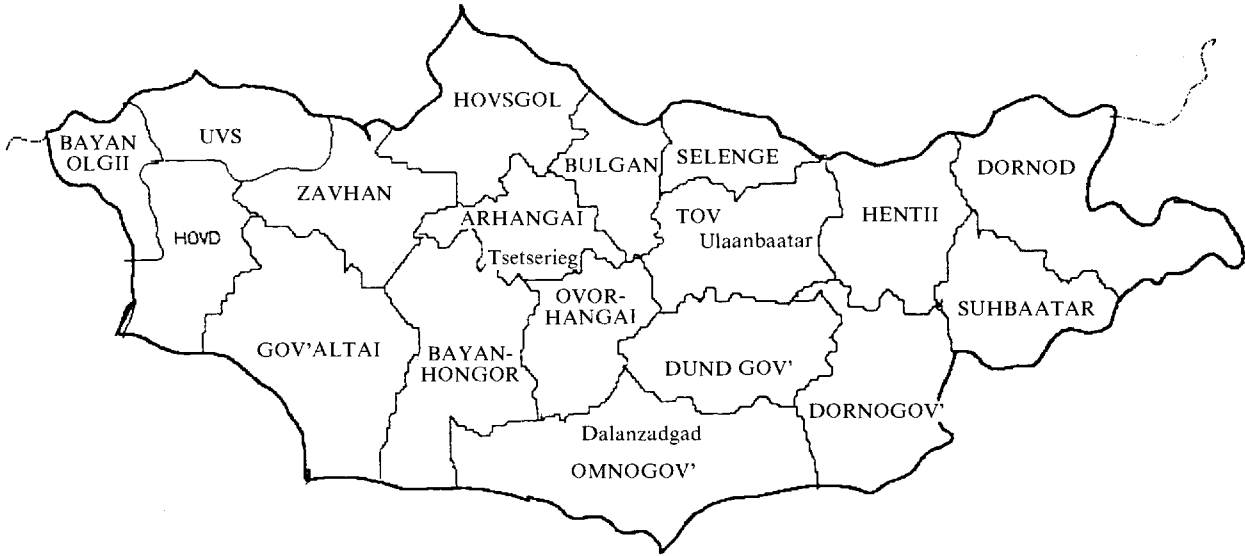
⁵ Even following the 1921 revolution, the Mongolian People's Republic was not officially proclaimed until 1924, after the death of the then monarch, the Urga Living Buddha. Urga was the centre of Buddhism in Mongolia, and the present capital Ulaanbaatar is built on the same site.

The 70 years under Soviet-influenced command socialism have led to substantial improvements in material standards of living for the great majority of Mongolians. The enthusiasm today for the market economy, and official condemnation of earlier mistakes (especially during the Left Deviation and the excesses of the 1930s Choibalsan regime) in the post-glasnost political climate [Enhsaika 1990], should not detract from the real achievements made during this period. Investments in winter shelters and hay-making machinery have greatly improved the prospect of survival for young animals during their critical first winter. The collective economy has guaranteed herding households an equitable income — even paid holidays and pensions — and easy access to goods and services. Mongolia has achieved almost 100 per cent adult literacy, and since the 1920s has doubled life expectancy from 30 to over 60 years, through unique education and health care systems. These and veterinary health care services use a combination of static and mobile facilities to provide services to a rural population the majority of whom are still pastoral nomads.

There are 18 **aimag** (provinces) under the present system (shown in Figure 1), each subdivided into **sumun** (districts). All land is owned by the state. The **negdel** collectives, sharing the same territorial boundaries as their **sumun**, are further divided into brigades, teams and **suur** (encampments). The last of these is the basic unit of production, consisting of between one and four households which cooperate in daily activities. Animals belonging to the **negdel** are allocated to brigades and **suur**, which must meet specified production targets (number of young animals, quantity of dairy products or wool). **Suur** members are paid a monthly salary, with bonuses or deductions according to whether targets are exceeded, met or underfulfilled. Individual **suur** are generally allocated only one species of animal by the collective, reflecting traditional forms of cooperative task specialisation. Attempts at a much greater degree of labour specialisation during the 1960s and 1970s have now been abandoned.

In addition to the animals they are allocated by the **negdel**, households are allowed to own private animals. Until early 1990 a ceiling applied to private herds (75 animals in most of the country, 100 in the Gobi). Households look after their own animals at the same time as the **negdel** herds they are responsible for, and are allowed to dispose of the products as they wish. They can consume them, or sell them to the collective, to state enterprises, or to other households. Production targets are set nationally in 5-year plans, and translated into annual targets at **aimag** and **negdel** (or state farm) levels. Individual **suur** which fail to meet their targets are required to make up the shortfall from their private herds or by buying from other households. Similarly, a **negdel** that underfulfills its

Figure 1



plan target must buy from its members' private herds or from another **negdel**.

It is important to distinguish Mongolian pastoral collectives from 'true' cooperatives. Although they initially developed out of local forms of cooperation between herding families, they have in fact grown into large organisations — each usually with several thousand members — on a territorial scale similar to British counties. In terms of labour organisation and ownership relations, the **negdels** have always been quite distinct from the state farms, at least in principle. **Negdel** members are not paid a salary for fulfilling their allocated duties, in the way state farm employees or workers in state enterprises are, but are paid for meeting production targets, plus bonuses or less

deductions for over- or under-fulfillment. **Negdel** members did not until very recently enjoy the same benefits or standards of living as state farm employees. In practice however, responsibility for performance lay not with the **negdel** but at a higher level; they were effectively under state control.

Towards perestroika

In December 1989 demonstrations took place in Ulaanbaatar, led by the Mongolian Democratic Union and influenced by events in Eastern Europe, calling for a major shift to a multi-party political system and to embrace the market economy. By May

1990 the communist Mongolian People's Revolutionary Party (MPRP) appeared to seize the political initiative by adopting major internal reforms itself. The 'leading role' of the MPRP was formally abolished, and the constitution revised to allow multi-party elections, to adopt a presidential system, and to create a new Small Hural as a legislative and supervisory parliament.

Mongolia's first free elections took place on 25 July 1990 with a popular turnout of 92 per cent. The MPRP, with 60 per cent of the vote, captured 86 per cent of the seats in the Great People's Hural, while the opposition gained only 14 per cent of the seats with 40 per cent of the vote [Heaton 1991]. At the swearing-in ceremony on 4 September of the newly elected President Ochirbat, the Secretary-General of the MPRP, no mention was made of communism, Marx or Lenin.

The new period of glasnost (*il tod*) also led to a revival of Mongolian culture. The historical figure of Chinggis Khan, long seen as reactionary, was rehabilitated, although not unequivocally. The traditional script, abolished in the 1940s, is to be reintroduced and taught in schools and used in all official correspondence by 1995. Religious freedom has been granted and Buddhist monasteries have been reopened.

These political and social reforms were both made possible and prompted by increasing unrest in the Soviet Union, and growing disquiet with the domestic economic situation. A third of Mongolia's GDP is spent on imports from the USSR, including all petroleum products, over 90 per cent of imported machinery and capital goods, and 70 per cent of consumer goods. The national debt to the USSR is estimated at 9 billion roubles (US\$16 billion), from accumulated long term credits that fund over two-thirds of total investment in the economy. There is deep resentment of this brake on economic reconstruction within Mongolia, and disagreement as to how the value of the debt should be calculated. The

Soviets have agreed to reschedule debt repayments but not to reduce the capital sum [Sanders 1991]. The high level of direct Soviet involvement in the Mongolian domestic economy is now being challenged. Workers at the joint Soviet-Mongolian Erdenet copper mining complex, for example, threatened strike action in spring 1991 if it is not handed over to overall Mongolian control.

The broad aims of perestroika are to replace economic management by administrative fiat with a 'state-regulated market economy'. Major steps towards economic reconstruction have now been taken, although there is still a long way to go before this is achieved. Table 2 summarises some of the main legislative changes.

Great emphasis is placed on the need to increase export earnings, and especially to export more finished goods by processing domestically more of Mongolia's raw materials from livestock breeding and mineral extraction. A Japanese-built cashmere and camel-wool garment factory in the South Gobi, which exports 98 per cent of its production for hard currency, is taken to be a model for future economic cooperation.

Efforts are also being made to diversify Mongolia's trading structure to include new partners in the West. The Soviet Union and other CMEA countries still account for the vast majority (over 95 per cent) of Mongolia's exports. Since summer 1990 however, there have been major trade delegations from the United States, Britain and France, and particular priority is placed on building links within the Asia-Pacific Region, including Japan and South Korea. Mongolia has already joined the World Bank, the Asian Development Bank, and the IMF. Diplomatic relations have been established with the European Community. It was granted observer status in the Non-Aligned Movement in 1988, with a view to full membership in 1992 when the last Soviet troops are due to be withdrawn.

Table 2

Major legislative changes in Mongolia since 1989

January 1989	Law on the State Enterprise	Financial autonomy granted to individual enterprises.
January 1990	Law on Cooperatives	Negdels became 'true' cooperatives.
March 1990	Law on Foreign Investment	Investment encouraged in any branch of national economy. Priority given to export industries, manufactures, infrastructure and tourism.
December 1990	Property Law	Legislature voted in favour of private ownership, including land, by citizens and foreigners.

Potentials for change in the herding economy

Of most concern here are the proposed reforms on property and land tenure. Under the new property law a Commission on Privatisation has been established, with the Prime Minister as head and representation from various ministries including finance, labour and agriculture. The Commission is charged with working out the detail of policy reforms, and the draft law is scheduled to be ratified by the Small Hural in autumn 1991.

A major concern, voiced by many Mongolian livestock specialists, is that the herding economy should be restructured in ways that retain and build on the best aspects of collective resource management through the *negdels*, as well as on traditional forms of cooperation such as family contracts [Enhsaikan 1990]. One important reason for this is found in the logic of regulating access to valued key resources in the herding landscape, a notion which finds strong support in the literature on 'patch ecology' and dryland management [Scoones 1991].

No single herder or *suur* group requires access to key resources all of the time. It is at particular times that they are of most value in a management sense. For example, research on upland sheep grazing ecology under similar ecological conditions in Scotland has shown that lambing productivity can be increased significantly if ewes are allowed onto patches of improved pasture for just a month or two in the year, during lactation and in the pre-mating and mating period [HFRO 1979]. In a single bad year or in a series of them, the significance of key resources is heightened.

The key resources of strategic importance vary according to ecological characteristics in different parts of the country. In the dry Gobi and desert region for example, the distribution of water points, moist depressions (affecting the incidence and quality of grazing and browse), wells, and salt licks (*khojar*) largely determine the location of suitable *suur* sites. The location of borehole wells is important everywhere during the winter. At higher altitudes and in other areas susceptible to snow, herders are known to value particular patches of grazing land on the windward sides of hills, where snow is blown away sufficiently for animals to graze the grass beneath. Apart from regional variations, the strategic importance of particular key resources is also likely to vary over time, both seasonally (and in 'unusually' harsh winters, or *zud* years), and during periods of drought of several years duration.

Access to such key resources by different *suur* groups needs to be regulated over time with a reasonably equitable outcome. This has an ecological as well as a social basis: it is quite simply the most efficient and

sustainable way to utilise dryland environments. Extensive livestock herding systems rest on this principle of flexibility, using a variety of collective tenure arrangements to ensure that key resources are not controlled by only a few herders to the detriment of the system as a whole.

There is a danger that, if contemporary land tenure reforms in Mongolia proceed in an uncontrolled manner, the key resources will be the first to be privatised. Such selective privatisation would carry high costs both privately and socially. Privately, because income disparities could be expected to grow, as recent experience of decollectivisation in Inner Mongolia has shown [Sneath 1991]. Socially, for two reasons. First, it could lead to lower productivity in the livestock sector as a whole, thereby placing the process of perestroika at risk. Second, it would result in less efficient utilisation of ecological resources, thus increasing the risk of land degradation. Even if customary resource allocation practices were not entirely equitable in practice, as is likely, they were at least flexible. Conversely, a process of selective land privatisation would tend to constrain management options severely at the local level.

While there are sound arguments in favour of certain collective property arrangements in the herding economy, the current tendency of policy reforms more generally is firmly in the direction of privatisation. In relation to industrial enterprises, the minister of trade and industry since September 1990, Sed-Ochiryn Bayarbaatar, is reported to have stated that 'talk about cooperatives, leasing, etc. is useless now' [Sanders 1991:23]. But mechanisms of precisely these kinds are likely to prove most appropriate in efforts to reform pastoral land tenure policy. Proposals currently being considered include the leasing of areas of pasture, with rent to be paid by state farms or *negdels* rather than individuals.

It is widely perceived that good herders were effectively penalised under collectivisation, despite the bonus schemes. The same voting rights accrued to a herder joining a *negdel* and contributing 400 animals as to one contributing only 40 animals. Under the 1990 Law on Cooperatives, *negdels* are envisaged as being much more independent organisations, operating without interference — or help — from the state, and within which it is expected that profits will be shared according to individual *suur* performance.⁶ This brings *negdels* much closer to being 'true' cooperatives than they have been up to now. Given the present size of the collectives and problems of accountability, it may be more appropriate to establish the brigades — rather than the larger existing *negdels* — as the primary level of 'cooperative' organisation.

⁶ Much of the detail in this section is based on personal communication with Danzangin Radnaaragchaa, Minister of Agriculture, 13 February 1991.

Little is actually known about the precise mechanisms of pasture and other key resource allocation at the local level, at least in a form which can usefully be fed into the policy process. Policy research of this kind should aim to gain an understanding of both the formal criteria and the informal bargaining processes that determine who gets access to what resources and at what times. Recent anthropological research in Inner Mongolia (China) has shown that cadres in local party cells are often able to use their positions to manipulate such decisions to their own advantage or to the benefit of their kin or valued contacts. These formal power structures at the local level frequently parallel social hierarchies along other lines such as 'wealth' (broadly defined) or status [Sneath 1991].

In the Mongolian People's Republic there have also been substantial overlaps of effective power between the three parallel structures of the state. These structures were the party (MPRP) that decided policy, the government administration (e.g. *sumun* or *aimag* authorities) that presided over its implementation, and the institutions of economic production (*negdels*, state farms, state enterprises) that actually executed it. Although these structures were separate on paper, the same individuals tended to hold powerful positions in more than one of the three 'pillars of the state'. The chairman of the *sum* and the *negdel* for example, was necessarily the same person. This has changed under reforms as of 1990 in which state and party functions and personnel have been formally separated [Faber 1990]. But many questions remain unanswered, for example how far these power structures ever affected resource allocations at the local level, and to what extent they still do; how disputes are arbitrated in practice; and to what extent customary, informal bargaining procedures were, and perhaps still are, important.

Environmental considerations are already reflected in proposals for land reform, in recognition of the danger that uncontrolled privatisation could lead to land degradation. To encourage careful husbandry, the evaluation of arable land quality is already being carried out by the Ministry of Agriculture, with the intention of extending to the more extensive pastoral land resources at a later stage. If land is subsequently damaged following its allocation to a particular cooperative group, those families will be liable to pay compensation. It is unclear as yet at what level primary responsibility will be taken for sustainable management, to whom compensation would be payable, or what will be the precise mechanisms of land allocation. For state farms, privatisation can be expected to advance quite rapidly; smaller businesses such as individual dairy farms could well become separate accounting units within state farms.

Also being considered are proposals to supplement existing income tax with a property tax. Since the

property law of 1990, the ceiling on private animal ownership has been lifted, which has been reported to have led to a slight increase in total livestock numbers [Sanders 1991]. Animals are also being transferred from *negdels* back to private herds, and in due course it is expected that there will once again be herders outside the *negdel* system altogether. The government will continue to fix prices for the major livestock products and other principal commodities, but they will apply only to state farm or collective herds. Prices for private animals and their products will be liberalised.

Under another recent proposal, Mongolians will each be entitled to buy shares up to a certain limit in various state assets, including state enterprises and factories.⁷ A parallel 'share offer' has even been suggested as an alternative to 'privatising' the collective herds, in which *negdel* members would be able to hold shares in the herds rather than owning a number of individual animals outright. This is unlikely to gain much support however; the reproductive character of live animals sets them apart from other 'capital assets'.

Conclusion

In deciding the precise character and timing of land tenure and other policy reforms in Mongolia's rural sector, productivity considerations are clearly of the utmost importance. Growing economic hardship during 1991 — food and energy shortages, rising unemployment, an increasing budget deficit — may yet threaten the relative political stability that has so far been achieved, and jeopardise Mongolia's prospects of successfully managing the difficult transition to a more open, market economy.

But in the herding economy, reforms that make sense in terms of economic efficiency can also make sense on environmental grounds. This argument has already been validated in the industrial sphere in Mongolia, where a national gold mining enterprise has recently been set up at Dazaamar that will operate with ecologically clean technology [Sanders 1991]. Evidence from recent African drylands research suggests that the strategic importance of particular resources in the herding landscape is likely to be matched by more or less formal rules to decide who gets access to what resources and when. It is of course important to analyse the local political economy of such decision rules or bargaining processes, to see if particular groups of people stand consistently either to gain or to lose.

The precise nature of these forms of tenure in the Mongolian context is a subject for field research, in order to inform the ongoing policy process. Limited empirical support is already available in the small literature in English on Mongolian history. In keeping with the Mongolian inclination to build on the best

⁷ *The Guardian* 8 June, 1991.

aspects of traditional management, such institutional forms may continue to be viable (and politically feasible) alongside newer forms of ownership including individual title. If this is so, and if they do prove to support careful resource husbandry at the local level, then using such tenure arrangements as a basis for policy reforms is also a strategy for promoting environmentally sustainable development in the Mongolian herding economy.

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