

Mobile Livestock-Keeping in Mongolia: Present Problems, Spatial Organization, Interactions between Mobile and Sedentary Population Groups and Perspectives for Pastoral Development

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INTRODUCTION

The present situation and state of development in the pastoral economy and society of Mongolia can only be understood if one takes a look back to the country's recent history. The adoption of democracy and market economy has brought about far-reaching changes in all parts of Mongolian society and economy. The new Mongolian constitution of 1992 (PM 1992) guaranteed the people the right of free choice of their place of residence, being the legal basis for new patterns of spatial mobility in the rural areas and a strong internal rural-urban migration process resulting in uncontrolled sedentarization in the large towns of the country, the national capital of Ulaanbaatar in particular.

Some major reasons responsible for the socioeconomic change in the rural/pastoral areas shall be mentioned here.

As a consequence of the breakdown of most of the state-owned farms and companies and the privatization of the *negdel* (livestock production cooperatives) the majority of the rural population lost their jobs. During the privatization of the former collectively-kept livestock, most of the rural families got relatively small numbers of animals resulting approximately in a doubling of mobile livestock-keeping households in comparison with the socialist era. The majority of those "new nomads", who did not sell their animals, started to live a (semi-) nomadic life often concentrating with their animals in the close vicinity of rural settlements. As they move less frequently because of transportation costs to different seasonal pastures they cause considerable ecological damage to vegetation and soils. During the 1990s the formerly (export-) market oriented pastoral economy has been reduced to a simple and mainly subsistence-oriented system consisting of a much larger number of small production units than in the socialist period. The rural areas and mobile livestock-keeping were largely at the mercy of the free play of forces of free-market economics, and the State did not sufficiently meet its obligations to maintain order and to ensure that the basic needs of the rural population were satisfied. Consequently, living and production conditions became worse, resulting in a higher

vulnerability of man and beast in case of natural hazards.

The present situation in Mongolia is the result of a primarily Ulaanbaatar- as well as Darkhan- and Erdenet-oriented development. These large cities are all located in the central northern part of the country. The major reason for the severe development problems in rural Mongolia is its neglect by the previous Governments. During the transformation process of the 1990s, the Mongolian Governments did not succeed in working out a nationwide homogeneous development program. On the contrary, the services provided by the facilities of the social and technical infrastructure in rural Mongolia became worse because the State stopped most of the subsidies. The population of district- (*sum*-) centers and the mobile livestock keepers in particular suffered shortages in the supply of consumer goods, and had to pay higher prices. Insufficient marketing facilities, fluctuating prices for animal products and a strong dependence on migrant traders, who dictate the selling prices, represent other problems for the herders.

Thus the regional disparities between rural centres and their peripheries, as well as between urban and rural settlements, have widened considerably. As a result of these aggravated living and production conditions, since the mid-nineties an increasing number of rural households, among them a high percentage of livestock keepers with their herds, left for the larger towns and their surroundings such as province- (*aimag*-) centres, industrial towns like Darkhan and Erdenet, and the national capital of Ulaanbaatar in particular.

This article tries to answer the following questions: What is the structure and what are the specific problems of Mongolian pastoral economy and society at present; what are the characteristics of the spatial organisation of pasture use and the reasons for rural-urban migration; what kind of new interactions have developed between mobile and sedentary population groups; and what kind of development activities could/should be undertaken for the improvement of living and production conditions in the rural areas in order to reduce the existing socioeconomic as well as ecological problems and slow down the rural-urban migration process?

As the empirical field research has been focused on western Mongolia, special attention shall be given to this part of the country. An insight into the current problems of the Mongolian pastoral economy, the spatial organization of mobile livestock keeping and the consequences of natural hazards will be given at the beginning of this article. The next part tackles different types of interactions between mobile livestock keepers and the sedentary population in permanent rural, as well as urban, settlements, followed by an overview of the internal migration process to the large towns and its consequences for rural and urban development. Finally, measures for rural development which could help to improve the livelihood of pastoral households and pasture management and reduce rural-urban migration will be discussed.

CONTEMPORARY PROBLEMS OF MONGOLIAN PASTORAL ECONOMY AT A GLANCE

Mobile livestock-keeping in Mongolia takes place under the extreme conditions of a harsh continental climate and corresponding natural pasture conditions. Natural hazards such as droughts (mong.: *gan*) and heavy snowfall accompanied by very low temperatures (mong.: *dzud*) often occur in large parts of the country. In the three successive years between 1999 and 2002, *dzud* followed *gan* resulting in enormous livestock losses amongst the pastoral population of central and western Mongolia in particular (Figure 1, 2 and 3). But nature alone can not be held responsible for the death of millions of animals; it is also to a large extent the new socio-economic and legal framework of the transformation period under which pastoral production actually takes place.

The current major problems of the pastoral economy of Mongolia can be summarized as follows:

1. The rapid increase in livestock numbers (goats for cashmere production in particular) until 1999 (Figure 2) and an ecologically inappropriate use of the natural pasture by mobile livestock-keepers causing considerable overgrazing in nearly all parts of the country. Due to natural hazards, livestock numbers have considerably decreased in some *aimag* of western and central Mongolia since 2000 (Figure 1 and 3). Among the main contributory factors are:
 - lack of at least one seasonal pasture (mainly spring and/or autumn pasture) in many *sum*- territories (districts)
 - administrative borders of the socialist era (*aimag*- and *sum*-boundaries) hindering long term pastoral migration
 - concentration of pastoralists at sites favourable for grazing and marketing for a prolonged period (along long-distance traffic routes and rivers, around lakes, at the edges and environs of settlements) causing high overstocking
 - inadequate or no water supply facilities
 - poor or no marketing opportunities (except migrant traders)
 - general insecurity due to livestock theft in the *sums* along the Tuva-Russian border, resulting in a strong out-migration of pastoralists
 - the widening gap between rich and poor herder households, due to large animal losses in recent years
 - insufficient level of self-organization of many of the existing herders' communities, often due to mutual mistrust between neighbouring herder households
 - lack of training opportunities for self-help formation and capacity building in the pastoral economy and society
2. The lack of non-pastoral employment opportunities (apart from trading activities and jobs in the public administration and education) in the rural settlements as a consequence of the absence of small- and medium-size enterprises for the

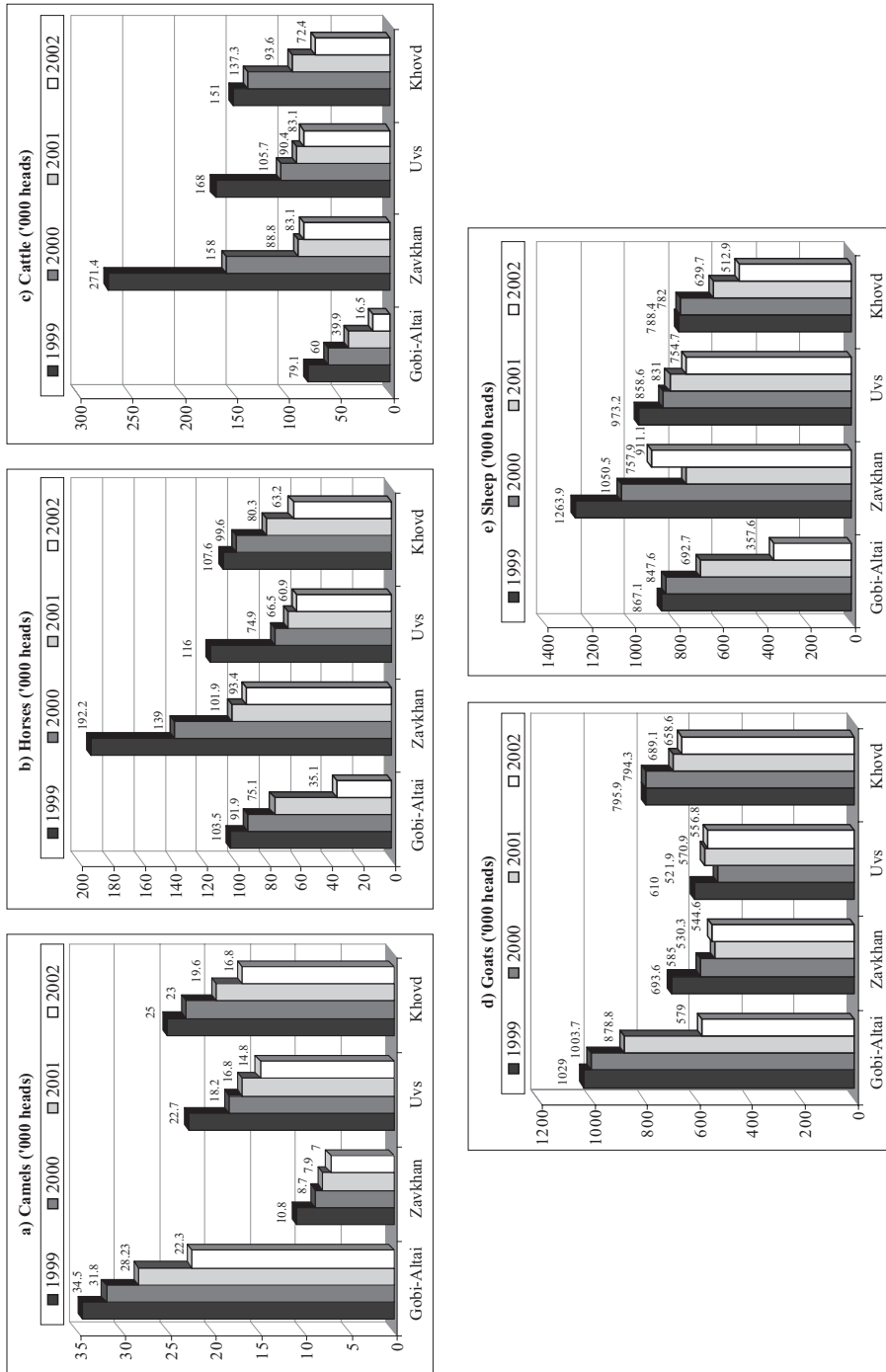


Figure 1 Livestock population by species in Gobi-Altai-, Zavkhan-, Uvs- and Khovd-Aimag (1999–2002)
 Source: NSOM 2003: Mongolian Statistical Yearbook 2002

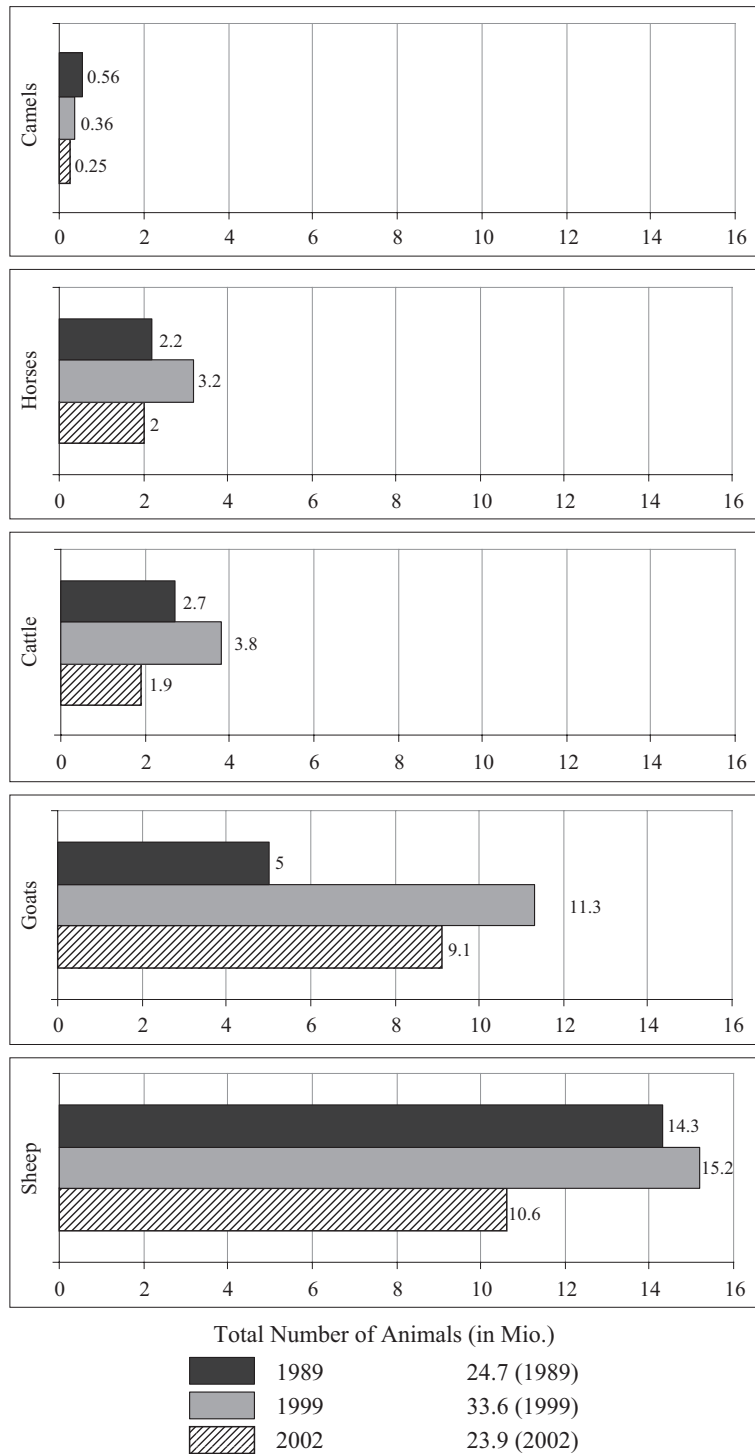


Figure 2 Mongolia: Livestock numbers in 1989, 1999 and 2002 (in Mio)
 Source: NSOM 2000 and 2003

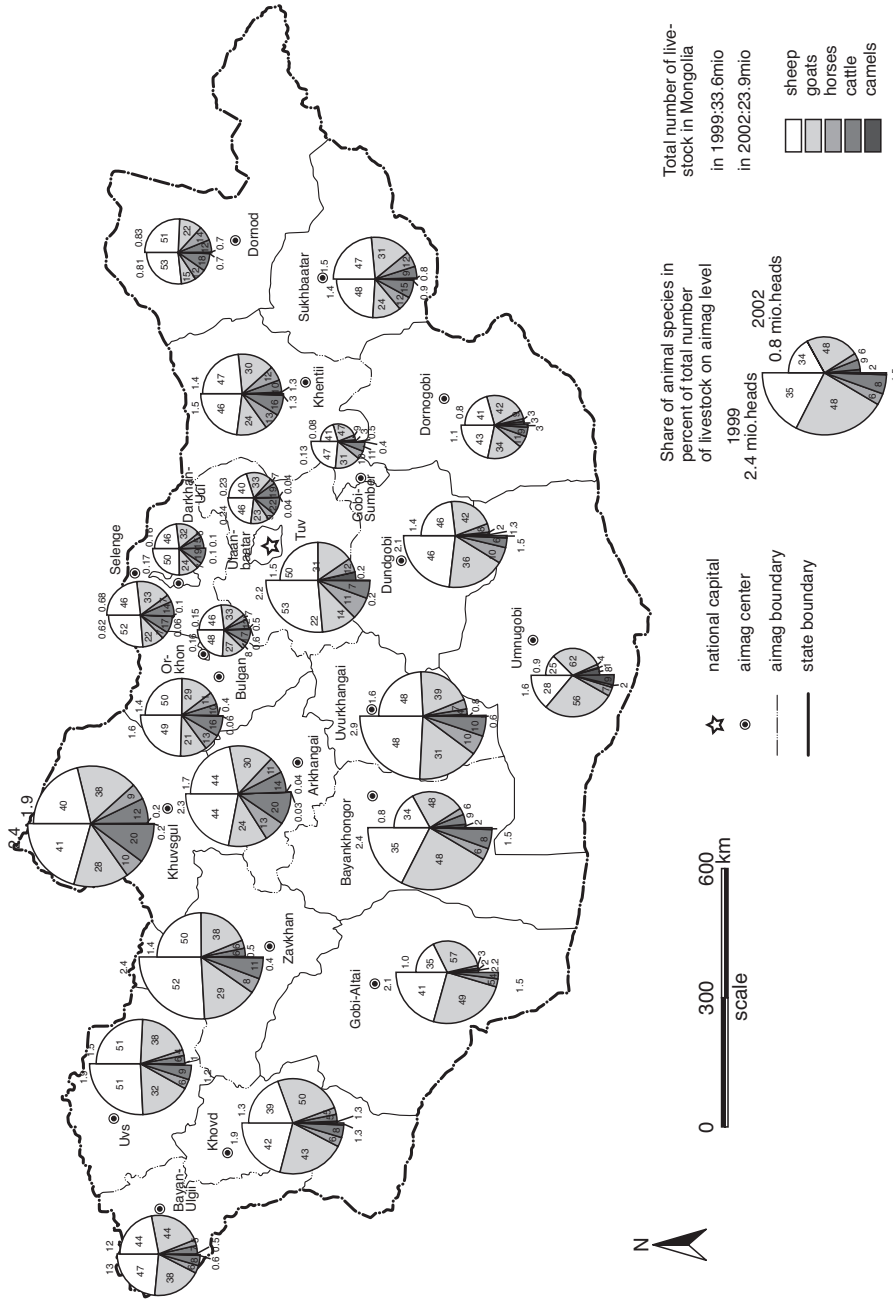


Figure 3 Mongolia: Number of livestock on aimag level in 1999 and 2002
 Source: NSOM 2003

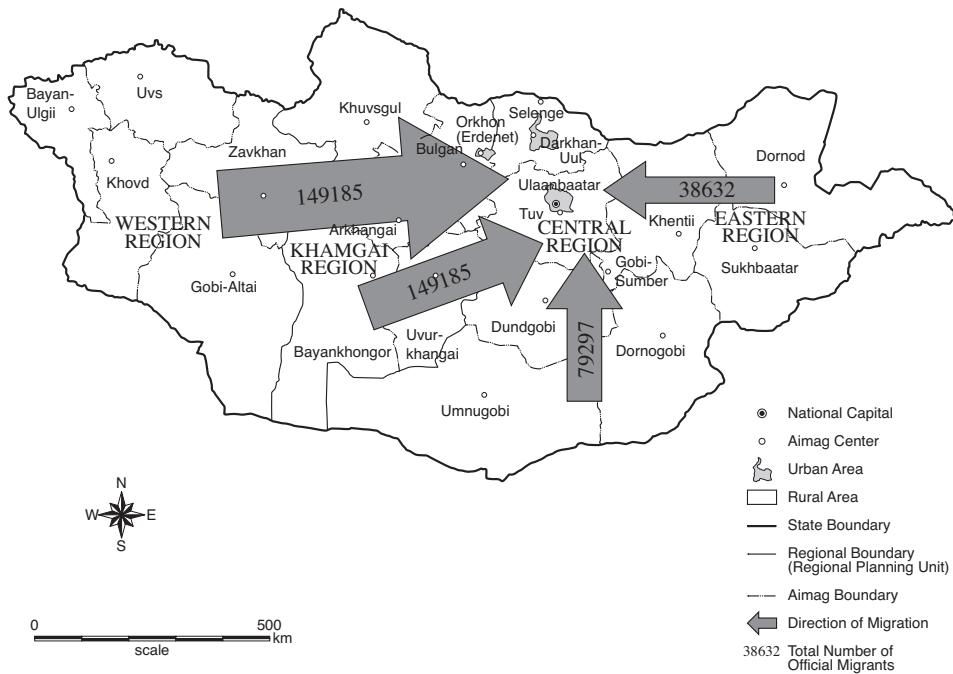


Figure 4 Mongolia: Out-migration from rural areas until 2000

Source: NSOM 2002

processing of raw animal materials and the lack of nomadic household based rural tourism activities.

3. The frequently poor state of the technical (electricity, water supply, and traffic system) and social infrastructure (schools, health, and cultural facilities) with frequently poor provision of services.
4. The continuing increase, due to these deficits, in large-scale migration of significant parts of the population and their livestock from the periphery (especially the western and central *aimags*) into the big cities and their immediate surroundings, especially Ulaanbaatar and its environs (Figure 4).

SPATIAL ORGANIZATION AND PATTERNS OF MOBILITY

The pastoral population of a *sum*-territory is bound to this space as far as pasture use is concerned. The *sum*-territory is administratively subdivided into a number of *bag* (sub-districts). Mostly a *sum* consists of three to four, or sometimes five pastoral *bag*, and often one so-called *sum-bag* including the *sum*-centre and a small area around it. In the Socialist period the *sum*-territory represented the pasture land of the livestock production cooperative (*negdel*) and has been subdivided into *brigade*-areas which consisted of working groups (*hisik*) (Figure 5). Nowadays the pasture use is mostly organized on *bag*-level in close cooperation between the *bag*-governor, the *bag*-

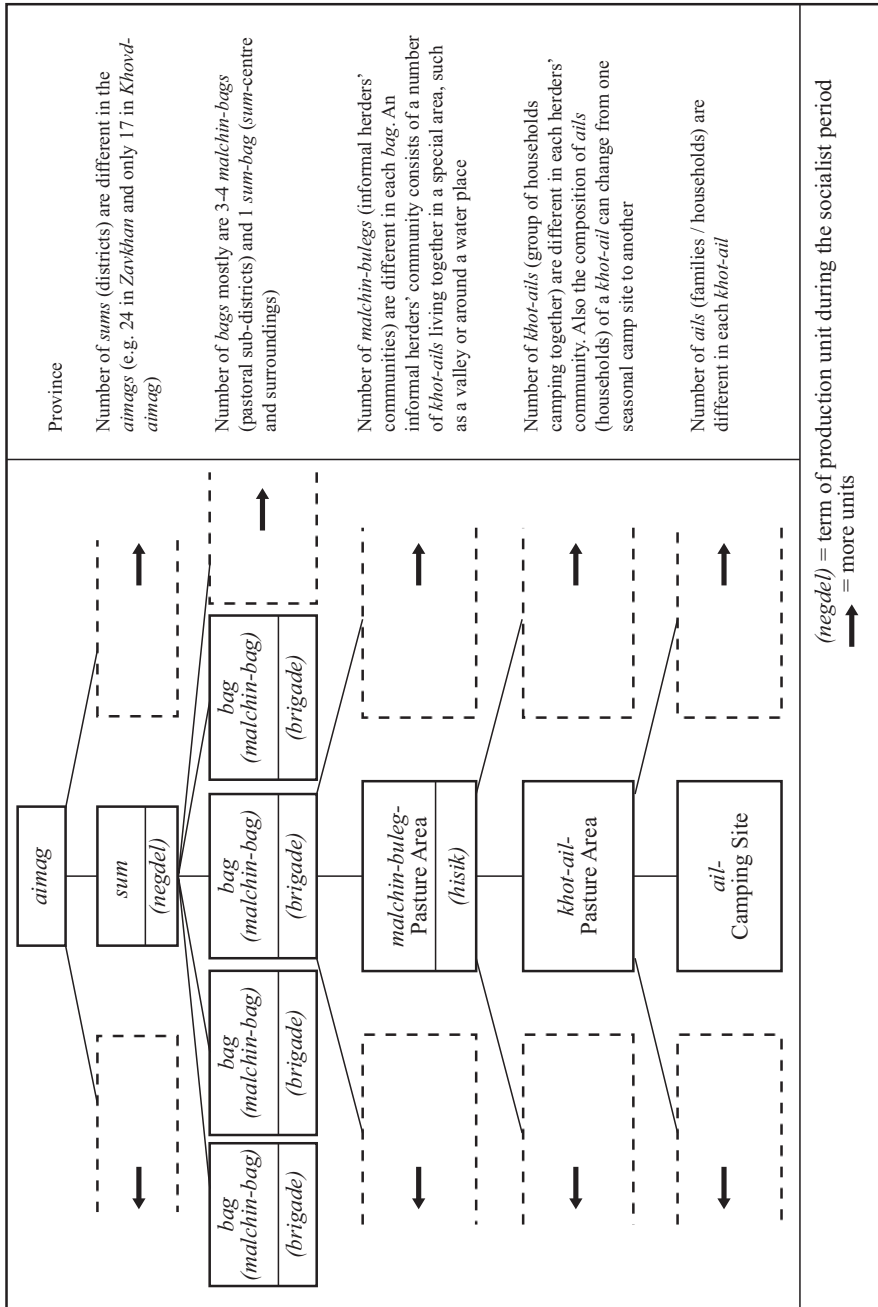


Figure 5 Present administrative / Spatial division of a rural *aimag*
 Source: Janzen 2002

parliament (*bag-khural*) as well as the herders' communities (*malchin-buleg*) including the seasonal camping groups (*khot-ail*) and the single herders' households (*ail*). The planning of pasture use has to be approved by the *sum*-administration. Migrations crossing the *bag*-boundaries have to be discussed with the *sum*-governor and the people in charge in the *sum*-administration. Pastoral movements across the *sum*-boundaries to neighbouring *sums* or *aimags* should be fixed by written or oral contracts between the *sum*-governors and/or *aimag*-governors.

The seasonal pastoral movements are normally undertaken by informal herders' communities (*malchin-buleg*), whose member households live together in a special area, which can be a valley or an area around a water place. In the socialist period these groupings were called *hisik*, and were part of the *brigade* which nowadays comprises the inhabitants of a *bag*. A *malchin-buleg* is an informal grouping and can differ in size from approximately ten households (*ail*), up to more than twenty. The total number of households of a *malchin-buleg* are divided in sub-groups which are called *khot-ail* and whose households form a camping group. Depending on the season and according to the natural environment and the availability of pasture and water, a *khot-ail* consists of a varying number of households (*ail*). The *ail* lives in the traditional Mongolian dwelling, the yurt, which is called a ger. Often only two or three *ail* live together, sometimes one can even find groups of six to eight, or even more. The members of a *khot-ail* are mostly blood relatives or good friends. They work closely together, mainly helping each other in the daily herding activities. In recent years the number of poor households (who have lost a large part of their livestock as a consequence of *gan* and *dzud*) has increased considerably in those areas which have been struck by natural hazards. These poor households often economically depend on those households being wealthier in livestock numbers and carry out services for them, such as herding and watering of animals.

The informal leaders of a *malchin-buleg* normally organise larger activities such as the seasonal migrations, hay making, well digging, felt production and construction of livestock shelters. Sometimes their members also jointly carry out the marketing of animal products and the purchase of consumer goods by using their own transportation facilities or hiring a truck.

The spatial organisation of pasture use in a *sum* territory can be seen in Figure 6. The model shows the ideal situation of a *sum*-territory consisting of four major grazing areas: for winter, spring, summer and autumn. The four seasonal pasture areas are subdivided into smaller grazing areas of the different herders' communities. In the winter pasture area (and sometimes also in the spring pasture area) the herder households normally have a winter shelter for their animals. Poor households often do not have a shelter of their own. In this case they share it with another household and pay for it, or do services for the host family. These shelters which are built of wood and stones are the families' property (for which a certificate is issued by the *sum*-Government) and can be sold. The land around the shelters is used as winter and sometimes also as spring pasture. In the other seasonal pastures, the herders' communities also use specially defined pasture areas.

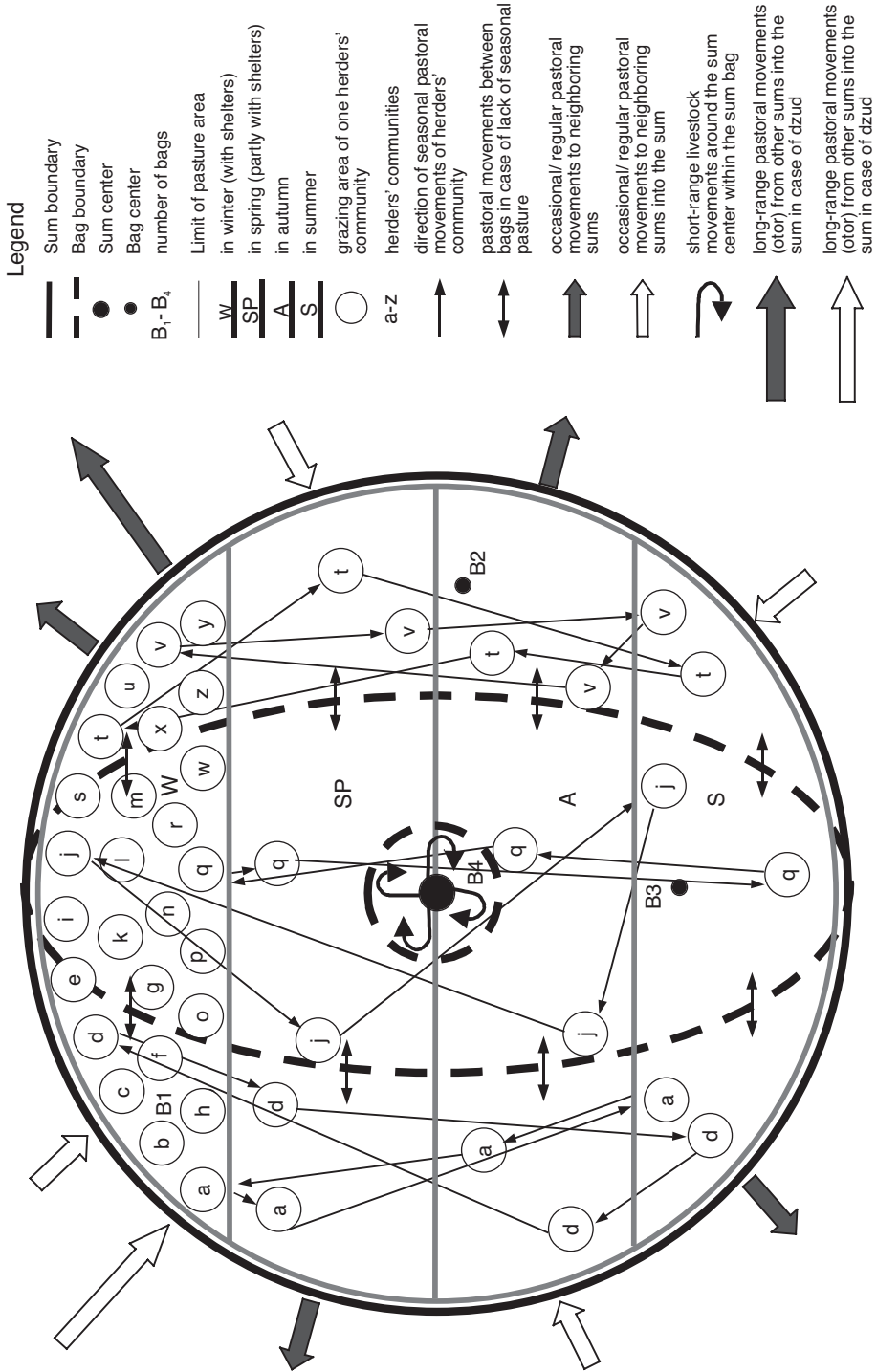


Figure 6 Model of seasonal pattern of pasture use on Sum level (Present Situation)

The pastoral movements from one seasonal camping area to another take place according to a special schedule which is prepared every year by the *bag*-governor, in cooperation with the leaders of the *malchin-buleg* and/or heads of households. The time table has to be approved by the *sum*-administration. According to the four pastoral seasons, the leaders of the *malchin-buleg* and/or herdes representatives should normally meet four times per year with their *bag*-Governor and the members of their *bag*-Parliament (*khural*) to discuss pastoral issues of common interest. The migration groups must strictly follow the timetable fixed by the *bag-khural*. If they do not do so, conflicts may occur when wandering through the grazing areas of other groups. In case of conflict, it is primarily the informal leaders of the herders' communities and the *bag*-governor who will have to settle the dispute.

In accordance with the ecological zones, the distances of the pastoral migrations can be up to 100 km and even more in the desert like *Gobi*- regions, to only a few kilometres in the mountain steppe regions of the *Khangai*-zone. The daily radius of pastoral movements of small ruminants and cattle around the *ger* (yurt) does not exceed a few kilometres. Only camels and also horses graze mostly alone at larger distances from the camp site.

In comparison with the Socialist era, the main directions of pastoral migrations within the *sum*-territory are similar nowadays, but the frequency of changing campsites has decreased considerably, and the time spent at favourable locations such as water places and near settlements and roads has strongly increased. Households with small numbers of livestock tend to stay near settlements or along roads. Here they have the opportunity to generate an additional income by offering food and accommodation to travellers. Such small quasi-permanent settlements can be found in many places along major roads.

In contrast to the *negdel*-time, when the animals were kept in mono-structured herds by the herder households in special *brigades*, after privatization each pastoral household now keeps different species of animals in order to better satisfy the needs of subsistence. If no trucks or tractors with trailers are available, burden camels (in the steppes) or yaks (in the mountains) are kept for transportation. A revival of the use of traditional wooden carts for transport can be stated as well.

As herding activities are very labour-intensive, it sometimes occurs that children are not sent to school because they are needed for looking after the animals. The number of school drop-outs from pastoral households has been high during the 1990s, but has fortunately decreased in recent years.

In case grass becomes scarce in a seasonal pasture area or in case of natural hazards, long-range *otor*-migrations, mainly with the male and the non-lactating female animals, are carried out. These migrations are often organized on the *khot ail*- or even the *malchin-buleg*-level, and also cross *sum* and *aimag*-borders. These movements are mostly carried out by the younger male household members. During the move, a small *otor*-tent or *otor-ger* is used.

The migration pattern strongly depends on the availability of water resources. As nowadays the large majority of the former wells of the *negdel*-time are destroyed,

especially in summer but also in spring, after the snow has melted, the pastoralists tend to concentrate around the few remaining wells. They also remain in close vicinity of natural springs, lakes and rivers. In winter and early spring when sufficient snowfall occurs, the migrations do not depend so much on other water resources.

NATURAL HAZARDS AND THEIR CONSEQUENCES

A major problem for many herder households, especially of western, central and also northern Mongolia, has been the high losses of livestock as a consequence of *dzud* (high snow cover and extremely low temperatures). The situation is even more difficult for the pastoralists and their animals when *dzud* occurs in combination with *gan* (drought) in the preceding summer, and a bad state of the pasture land as a consequence of overgrazing. That has been the case in large parts of the western, northern and central parts of Mongolia during the years 1999 to 2002.

The *dzud*-losses were extremely high because of the low preparedness of many herder households. In contrast to the Socialist period, when enough additional fodder had always been provided to the herders by the *negdel*, under market economy conditions the governments had not prepared enough supplementary hay for cases of emergency. In particular, the “new nomads”, with small numbers of livestock, were heavily affected because they often did not care and lacked the experience of the older herders. Consequently many people lost large numbers of animals.

Only a few statistics may underline the severe consequences of *dzud* and *gan* in Mongolia. In 2000 a total of 3,491,200 animals have been lost, which represented 10.4% of the total livestock population of Mongolia. The situation in the following year (2001) was even worse: 4,758,900 heads of livestock lost their lives, equal to 15.7% of the Mongolian livestock population. In 2002 the losses decreased to 2,917,700 dead animals, which was 11.2% of the national livestock number. In some western *aimags* the situation has been very dramatic. In Gobi-Altai-*aimag* for example, losses reached 34.7% of goats, 40% of sheep, 51.4% of horses and 59.3% of cattle during the last *dzud* of 2001/2002. 2,766 households lost more than 50% of their animals and 613 even lost all their livestock (*Aimag* Statistical Offices 2002).

During the *dzud*-catastrophes the Mongolian Government, as well as national and international aid organizations, provided material assistance. But the support has been too little and often reached the affected pastoralists too late. In addition, restocking programs have been launched in some areas in order to help pastoralists to build up a new herd.

Although the consequences of *dzud* have been severe for the affected families, these natural hazards have also had positive effects. First, the number of livestock has been reduced considerably, thus being positive for the often highly-overgrazed pasture land. Second, this bad experience has brought many pastoralists to reflect more carefully upon their present situation. They have become aware of the fact that they can not continue livestock rearing as in the past. Many of them agree that more sustainable forms of pasture and water management must urgently be introduced, and extra-pastoral

income sources have to be generated. Furthermore, a closer cooperation among the herder households is an important precondition for a better future.

NEW INTERACTIONS BETWEEN MOBILE AND SEDENTARY POPULATION GROUPS

The new legal, economical, social, cultural and ecological circumstances of the transformation period have led to a new quality of interrelationships among the herder families themselves, as well as between the pastoralists on one side, and the sedentary population groups on the other. Whereas during the *negdel* period, all production activities as well as large parts of social and cultural life have been arranged by the collective, nowadays life and production have largely to be organized by the mobile livestock keepers themselves.

As a result of missing government support, kinship relations have been strengthened and new marketing and supply systems have developed. The pastoral families living in remote areas became highly dependent on migrant traders and their price dictates. As a consequence of a lack of cashflow in the rural economy, barter has become widespread. In particular, insufficient supplementary hay production led to high livestock losses as a consequence of natural hazards in the winter and spring of 2000 to 2002. Mainly poorer families with few animals and little knowledge in livestock-rearing were affected. Poorer families often can not survive with the small number of animals they possess, and consequently carry out services for the wealthier pastoralists. As a result, new forms of dependencies are appearing. Since the mid-1990s a strong exodus of the rural population, especially from the western *aimags* of Mongolia, has been observed. This out-migration from the rural areas is mainly directed towards the large towns and the capital of Ulaanbaatar in particular. The livestock of the out-migrating families are either sold or driven on the hoof to the surrounding areas of the large towns, or left with relatives and friends in the countryside, resulting in new forms of livestock keeping and social organisation.

Six groupings of different interactions between members of mobile livestock keeping households and persons of sedentary population groups can be identified (Figure 7).

1 Interactions with family members and friends in permanent rural settlements (*bag* and *sum* centers)

The members of herder families undertake regular private visits to family members and friends, who often live as pensioners in a compound (*khashaa*) in the permanent rural settlements (Figure 8). Often they accommodate pupils from the countryside during the school period. The herders provide meat and dairy products to their relatives and friends, especially if they do not possess animals of their own.

During harsh winters, many mobile livestock keepers are moving with their animals to the *sum* centers, where they spend the cold season together with their relatives and friends. Vice versa, many households from the *sum* centers displace with their *ger* and

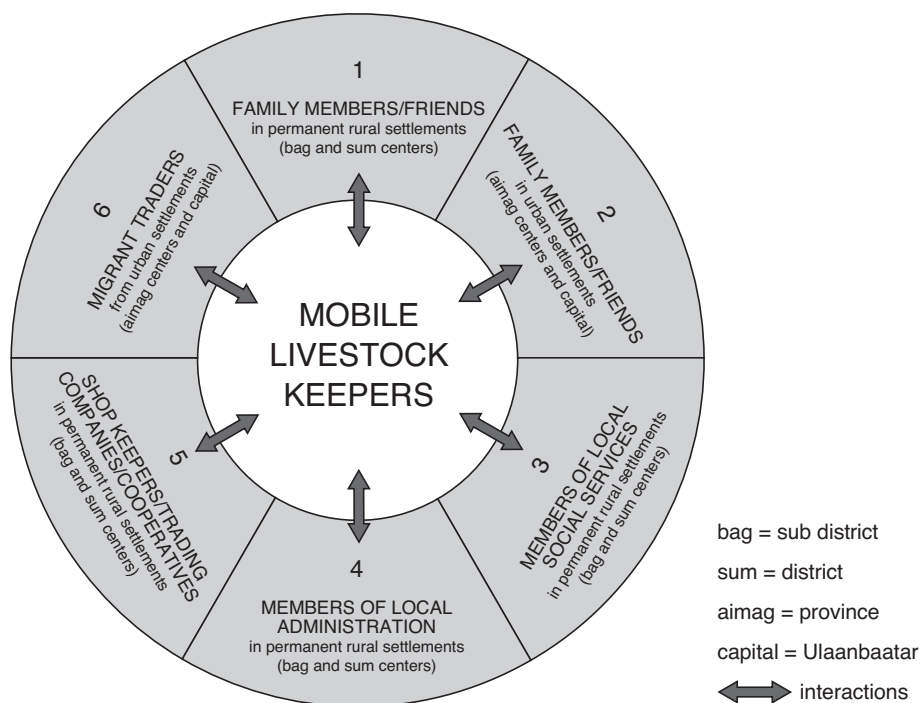


Figure 7 Interactions between mobile livestock-keepers and sedentary population groups
Source: Own investigations

their animals to the camp sites of relatives and friends in the nomadic living space during the summer time.

Frequent visits of relatives and friends from the permanent settlements to the country side during the summer holiday season are also common. Children, especially, are sent by their parents in order to live in the healthy environment of the steppe and enjoy nomadic life as well as the fresh dairy products of the summer season. At the same time, the visitors assist the herders during working peaks, e.g. sheep wool cutting, felt making, and hay production. An increasing number of dwellers from the *sum* centers tend to leave their livestock with their herder relatives and friends on a permanent basis, or only during the vegetation period.

2 Interactions with family members/friends in urban settlements (*aimag* centers and capital)

The interactions with family members/friends in urban settlements are reduced to occasional visits due to large distances and high travel costs. Visits to relatives and friends in urban centers are normally combined with different activities, such as marketing, shopping, medical treatment, cultural events and so on.

As higher education facilities are only located in urban settlements, many children

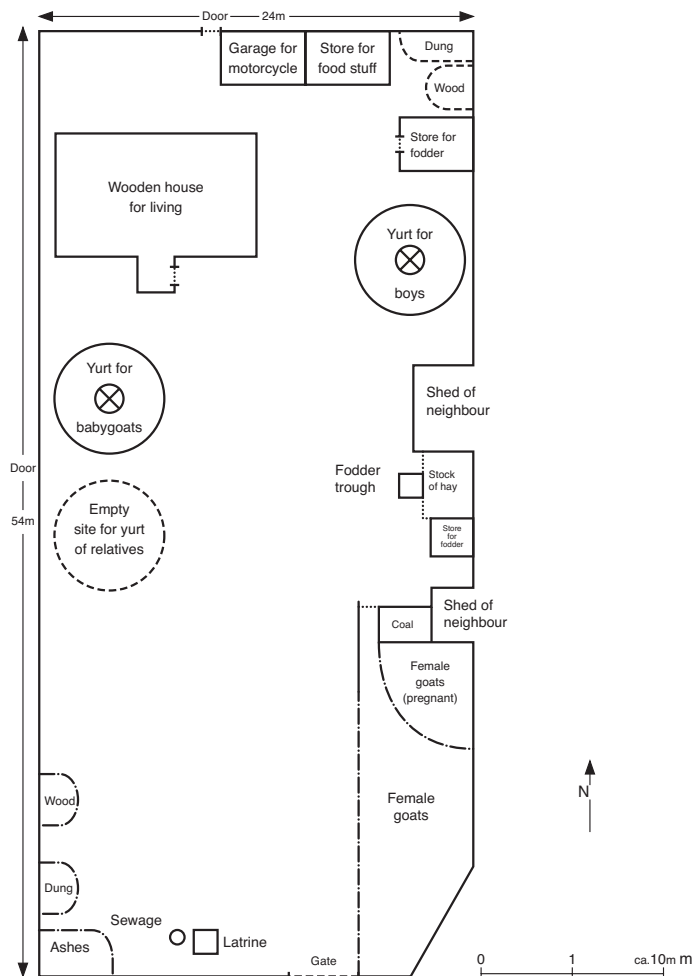


Figure 8 Khovd-Aimag / Munkhkhairkhan-Sum-center: Khashaa of Gonchig Otgon

stay, if not in the school dormitory, then with relatives and friends. Their parents supply the urban families with meat and dairy products. Urban family members and friends often help to organize the marketing of animal products and the purchase of food stuffs and other goods which are not available in rural areas. They also assist their relatives and friends to arrange special medical treatment and help to find work for rural-urban migrants. Urban children as well are sent to the countryside during summer for health reasons, and for keeping traditional nomadic values alive. Adult visitors also enjoy nomadic life and fresh animal products, and help during working peaks.

3 Interactions with members of local social services in permanent rural settlements (*bag* and *sum* centers)

Visits to members of local social services in the permanent rural settlements take place

on different occasions. One major reason is when a human doctor is needed. In particular, pregnant women go for treatment and delivery to the *sum* clinics. Occasionally mobile human doctors visit the herders' encampments. If veterinarians do not contact the herders in the countryside, they must go to the veterinarian clinics in the *sum* centers in order to arrange treatment and vaccination for their animals.

Furthermore, the provision of food to school children living in the public dormitory has to be organized by the parents. Visits to the *sum* center are undertaken when urgent telephone calls have to be made from the public post office, mail and newspapers must be picked up, or books borrowed from the (mobile) library. Special attractions are cultural events such as theatre and film performances as well as disco nights for the youth. An increasing number of herders are visiting the lamas in the newly founded temples and monasteries of the *sum* centers, and are even sending one of their sons for religious education to a lama.

4 Interactions with members of the local administration in permanent rural settlements (*bag* and *sum* centers)

The mobile livestock-keepers must interact from time to time with the *bag* and *sum* authorities in regard to all questions of land use, and pasture and water management. For this purpose they also participate in meetings of the *bag* and *sum* parliaments, where the schedule for the seasonal migrations is discussed and fixed. They must also deal with the agricultural officer in case they need permission to build a winter shelter for their animals. If a herder wishes to grow vegetables or produce hay in a special area, he must discuss this matter with the officer in order to get a license. The environmental officer of the *sum* must be contacted if the herders want to cut wood for construction and fuel purposes, or if someone wishes to hunt wild animals. Other occasions of interactions between herders and government officials are when the livestock census is carried out by the end of each year and the livestock head tax is collected. In general, it can be stated that contacts between herders and *sum* officials decrease with the distance to the *sum* center.

5 Interactions with shopkeepers / trading and transport companies / marketing cooperatives in permanent rural settlements (*bag* and *sum* centers)

In order to buy the necessary supplies for their households (e.g. food stuff, clothes, household utensils, etc.) and to sell their livestock products (e.g. cashmere, wool, meat, dairy products, etc.), the mobile livestock-keepers maintain close contacts with shopkeepers, trading companies and marketing cooperatives, mainly in the *sum* centers. Cashmere is marketed in spring; sheep wool and dairy products in summer, and meat and/or live animals in autumn.

Often the trade is carried out on a barter basis because of the lack of cash. In this case, the herders give their animal raw materials in commission to the merchant. They are partly paid after delivery of the animal products and receive the rest after the successful sale of the raw animal materials by the trader in the course of the year. Consequently those herders who are not able to market their animal products by

themselves in the markets of the big towns of Mongolia depend to a high extent on the traders. As the herders normally are in a weaker position, they must accept the price offers of the merchants.

Furthermore, the herders must organize the seasonal migrations by hiring tractors with trailers or trucks from transport businesses. The high transport costs are one reason why the frequency of migration has dropped considerably.

6 Interactions with migrant traders from urban settlements (*aimag* centers and capital)

The interactions between the mobile livestock-keepers and the migrant traders from the big towns of Mongolia are similar in structure to that described above. Because of a lack of other marketing opportunities for the mobile livestock-keepers living in remote areas, the migrant merchants are important partners. The migrant traders come to the herders either on a regular basis or from time to time. Herders do not like to give their raw animal materials on a commission basis to those traders whom they do not know well. Often complaints can be heard from the mobile livestock-keepers that they are forced to suffer from the price dictates of the migrant merchants, who misuse their position and try to make a higher profit.

The above-mentioned examples of new interactions between mobile livestock-keepers and members of sedentary population groups have shown that the herders must undertake a lot of additional effort to organize their lives and production in comparison with the socialist era.

Many of the interactions are time-consuming and costly compared with the *negdel* time, thus making it more difficult to secure a living.

RURAL DEVELOPMENT DEFICITS AND INTERNAL MIGRATION

The difficult living and production conditions in rural Mongolia described above have resulted in a strong internal migration (Janzen 2002). The rapid growth of the *ger*-settlements (consisting of enclosures surrounded by wooden fences (*khashaas*) with yurts and/or houses made of wood and/or stones at the fringe of the “socialist city”) in the large towns of Mongolia and the national capital of Ulaanbaatar in particular, is primarily a consequence of this ongoing rural-urban migration process, which in quantity and quality has reached new dimensions in recent years (Janzen *et al* 2002 and 2003; Meissner *et al* 2003; Neupert 1994; PTRC/NUM 2001).

The major areas of out-migration in Mongolia are the Western and the *Khangai*-Region of the country, with Uvs-, Zavkhan-, Gobi Altai-, Khovd-, Khuvsgul- and Arkhangai-*aimags* being the main provinces of origin. Whereas from the Eastern Region the migration flow is low, from the Central Region, especially from Tuv-*aimag* as well, a large number of people have left for the urban areas of Ulaanbaatar, Darkhan and Erdenet (Figure 4). The areas of out-migration are situated far away from the capital and face all the development problems mentioned above.

The majority of the migrants from the rural areas have left their home-*sum* because of the major constraints of poor technical and social infrastructure, insufficient medical as well as educational facilities and services in particular. The main wishes of the migrants are to facilitate a good education for their children, and to find a well-paid job in the national capital. Having no additional income opportunities, many livestock-keepers have only survived in the countryside by selling their livestock. After all of their animals had been sold, these former livestock-keepers have been forced to move to the large towns to look for work (Janzen *et al* 2002; PTRC/NUM 2001).

The exodus from the countryside implies a strong skill- and brain-drain, leading to a lack of qualified workers and highly-educated specialists in the rural areas. Consequently, the lack of well-trained manpower will negatively influence the quality of production and services in the rural settlements in the future.

The decrease of livestock numbers resulting from herders moving with their animals to ecologically more favourable areas in northern and central Mongolia can be stated as a positive aspect, as de-stocking lowers the pressure on the natural pasture lands in western Mongolia. At the same time, new problems arise in the destination areas because of ecologically inappropriate and unorganized pasture use.

In the new *ger*-settlements of Ulaanbaatar, the widely uncontrolled sedentarization process causes a lot of social, economical, ecological, legal as well as infrastructural and hygiene problems. Only a few aspects of major concern shall be mentioned here:

The rate of unemployment and poverty is also very high in the national capital, leading to more alcoholism, assaults and crime. Many families settle illegally and are not officially registered. Consequently, the adults have problems finding work and the children do not have access to the schools of their district. As flat areas for settling are becoming scarce, many newcomers erect their dwellings on steep mountain slopes where the danger of landslides is high. Those families settling down in the flood plains of rivers and streams risk being washed away in the event of heavy rains, which can result in destructive floods. The extreme concentration of livestock, mainly cattle and small ruminants, in close vicinity of the new *ger*-settlements, leads to heavy overgrazing, vegetation degradation and soil erosion.

The urban administration faces great problems in providing sufficient infrastructural services, especially clean water and electricity. The disposal of waste and sewage is unsolved. The bad hygienic conditions bear a high risk for the health condition of the inhabitants. As building ground is becoming rare near the town centre, the migrants are even settling close to the major cemetery of Ulaanbaatar, an area which would normally be respected as a silent place.

Many of the problems existing in the *ger*-areas of Ulaanbaatar and the other big cities of Mongolia could be reduced by slowing down the uncontrolled out-migration from the country side. This goal can only be reached by improving the living and production conditions in the rural *aimag* and giving the rural population a better perspective for their future.

RECOMMENDATIONS FOR SUSTAINABLE PASTORAL DEVELOPMENT IN MONGOLIA

Many rural development projects have been launched in recent years by the Mongolian Government, national and international donor agencies, as well as non-governmental organizations. Despite these efforts, the major problems have not yet been solved.

Some proposals for future rural development are listed below. If taken into consideration in the planning and implementation process, it might be possible to improve the situation in mobile live = stock keeping and contribute to a slowing-down of the rural-urban migration.

NECESSITY FOR A HOLISTIC APPROACH TOWARDS RURAL DEVELOPMENT

After having evaluated the socio-economic structure and the development problems of the four western Mongolian study-*aimags*, it becomes clear that not only isolated measures, but a holistic concept of regional rural development that integrates all major economic sectors and all social groups of the rural areas can be successful in the long run. In such a concept, it is essential to ensure at an early stage of planning and decision-making a close coordination and cooperation between the base (herders and herders' communities) and the *bag* (*bag*-governor and *bag*-parliament), *sum*- (*sum*-governor, *sum*-parliament, specialists of the *sum*-government) and *aimag*-authorities on the one hand, and national and international development organizations and scientific research institutes, as well as the Mongolian Government and Parliament on the other.

The following three-point programme should be taken into account, in order to ensure as high a level of sustainability as possible for future rural/pastoral development:

1. The establishment of new legal regulations based on the Land Law of 2002 for an ecologically appropriate use of pastureland. This should be based on an ecologically appropriate pasture-use concept, comprising four large seasonal pasture areas and enabling the mobile livestock-keepers to carry out long-range and frequent migrations, the restoration of the water supply, a territorial reform (amalgamation of *sums* to reduce administration costs and to create larger pasture areas more suited to ecologically appropriate use), and more effective tax regulations for the use of natural resources. To curb uncontrolled felling of trees, sustainable forest use is also urgently required. The incorporation of the spatial requirements of nature conservation into land-use planning is a further important point to consider, in order to prevent additional conflict at a later stage. The new pasture-use concept should be based not on privatization of pasture land, but on the distribution of long-term user rights (leases) for a certain area to user groups (herders' communities) and the responsibility principle, according to which herders may lose their long-term rights of use if

they exceed carrying capacity and fail to use their land in an ecologically appropriate manner.

2. The support of existing enterprises, or the creation of new ones, such as processing inland produce and the supply of tourist services to provide non-pastoral income. The aim should be to strengthen small-scale regional economic cycles. Where possible, support should be given to the creation of small manufacturing enterprises in rural settlements along developing traffic axes. Special support should be available for voluntary, self-help based organizations (such as informal associations and co-operatives) in order to improve the supply and marketing opportunities of the rural population.
3. The creation or extension of sound basic provisions in the fields of technical and social infrastructure. To create or develop the system of transportation, electricity (high priority should be given to renewable energy concepts) and water supply, and health, education and cultural services, massive support is required from the State and organizations of development cooperation. In accordance with the needs of the population and the locations of new enterprises, infrastructural facilities should be strengthened in rural settlements at traffic intersections and along traffic axes. In remote *sums* the provision of basic medical services should be ensured by regular visits from mobile doctors at the *bag* level. In addition, children's elementary education could be improved by erecting mobile tent schools at seasonal campsites.

As the pastoral economy is the key economic sector, major efforts must be made to support capacity-building in agriculture by strengthening the level of self-organisation among the herder population.

STRENGTHENING HERDERS' COMMUNITIES: A KEY TASK FOR SUSTAINABLE RURAL DEVELOPMENT

It is not the single herder household but the informal herders' community of which it is a member that has to play a key role in future pastoral development. Each herders' community consists of several *khot-ail* that can be subdivided in *ails* (families/households). The members of the different households of a *khot-ail* normally are relatives and/or close friends who camp and migrate together. Many of the members of the different households have already lived together since the early 1970s. After the dissolution of the *negdels* and the privatization of livestock, they continued to stay together and new households of the so-called "new nomads" joined these older groups.

Each herders' community has an informal leader, normally an experienced pastoralist, who possesses the confidence of the other group members. The main function of such a leader is to organize the seasonal pastoral movements and pasture management. Often he also organizes special livestock movements to far-away locations (*otor*) and other activities, such as sheep wool-cutting and felt production. Sometimes he also

organizes hay-making and marketing of animal products as well as the purchase of consumer goods. In order to achieve better prices, trading activities reach as far as Ulaanbaatar and even China (border trade).

During the discussions held with group leaders, it became obvious that they and many of the herders were aware of the great advantages resulting from a higher level of self-organization. Therefore, major attention should be given to this most important target group. Special development activities, such as supporting the creation of small cooperatives, providing advice and training courses, as well as access to credit with low interest rates should be offered.

It is still hoped that the proposed recommendations will be taken into consideration by decision-makers for the future development planning of rural Mongolia in order to attain a sustainable improvement in the living and production conditions of the pastoral population, which may result in a visible slow-down of rural urban migration.

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Photo 1 Ulaanbaatar/Capital of Mongolia (7/2004):
At the fringe of Ulaanbaatar an increasing number of people from rural areas are settling down in the so-called yurt- (*ger*-) quarters. In the background one can see the built-up area of the city consisting of houses made of concrete and bricks which have mainly been constructed during the Socialist era.



Photo 2 Telmen *sum*-center/Zavkhan *aimag* (3/2004):
Each district (*sum*) of Mongolia has such a center. The high multi-storey buildings mainly contain administration offices and facilities of the social and technical infrastructure. The inhabitants live in compounds surrounded by wooden fences (*khashaa*/left).



Photo 3 Munkhair khon *sum*/Khord *aimag* (7/2004):
 Summer camp of a pastoral household in the high mountains of the Altai range of western Mongolia. At this altitude mainly goats and sheep are kept. The damage of pasture degradation is high.



Photo 4 Chandmani *sum*/Khovd *aimag* (10/2004):
 Summer encampment (*khot-ail*) of two pastoral households consisting of two yurts. In western Mongolia still a large number of camels are kept. Wealthire families possess their own car. The possession of motor-cycles is wide-spread (background).

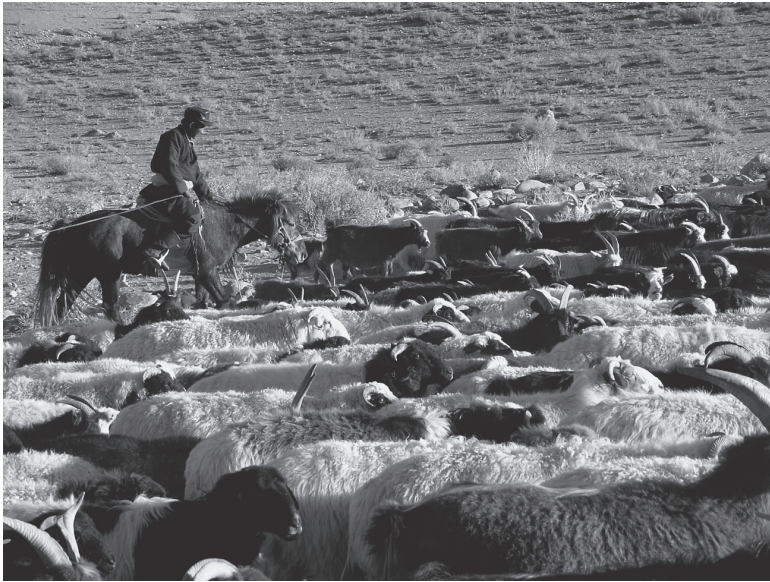


Photo 5 Khovd *sum*/Khovd *aimag* (10/2004):
The economic basis of the mobile livestock keepers are their goats and sheep. They are fatened on the summer and autumn pasture for the cold season. The herder is wearing his traditional Mongolian coat (*deel*).



Photo 6 Munkhairkhan *sum*/Khovd *aimag* (7/2004):
Summer is the time of cutting the wool of the sheep. The wool is either processed to felt by the pastoralists themselves or sold to migrant traders, who market the wool by truck to the capital Ulaanbaatar or directly to China.



Photo 7 Chandmani *sum*/Khovd *aimag* (10/2004):

A herdes family is preparing for the move from the autumn to the winter pasture. At first the roof and the wall of the yurt (*ger*) is taken down. At the end the furniture and household utensils are loaded on truck or camel.



Photo 8 Bayangol *sum*/Selenge *aimag* (3/2004):

During the harsh winters life is difficult for the herders and their animals. If the snow cover is too high it is difficult for the livestock to reach the vegetation below.