Sustaining Livelihoods on Mongolia's Pastoral Commons: Insights from a Participatory Poverty Assessment

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ABSTRACT

Under the socialist regime that prevailed until the start of the 1990s, Mongolia made great progress in improving human development indicators, and poverty was virtually unknown. Political and economic transition in the 1990s ushered in a rapid rise in asset and income inequality, and at least a third of the population has been living in poverty since 1995. Many workers made redundant from uneconomic state-owned enterprises were absorbed into the extensive livestock sector in rural areas and by the growing informal economy in urban areas. The livestock sector grew dramatically, with herders accounting for over a third of the total population and half of the active labour force by the late 1990s. Three consecutive years of drought and harsh winters in 1999–2002 then drastically reduced the national herd. These trends are viewed against a backdrop of relative neglect of the livestock sector in development priorities and a concomitant decline in agricultural productivity. Pressures on common pasture have mounted, and conflict over grazing is becoming endemic. In such a context, sustainable management of Mongolia's pastoral commons should be central to the country's economic development agenda in general, and to its poverty reduction strategy in particular. This article draws on the findings of a country-wide participatory poverty assessment conducted in 2000. Blending quantitative and qualitative data, these findings help to bring into sharper relief the broad outlines of an integrated approach to building secure and sustainable livelihoods both on and off the pastoral commons.

INTRODUCTION

Pastoral livestock production has always been the mainstay of the Mongolian economy. Under recent economic transition, however, it has been

This is a substantially revised version of a paper first presented at the 8th Biennial Conference of the International Association for the Study of Common Property, Bloomington, Indiana (31 May to 4 June 2000). The paper draws on the findings of the Mongolia Participatory Living Standards Assessment 2000 (NSO and World Bank, 2001), led by the author, to which the important contributions of Enkhtor Dulamdary, Meera Kaul Shah, and staff of the Mongolian National Statistical Office (NSO), are acknowledged. The interpretations and conclusions expressed in this article are entirely those of the author, and do not necessarily represent the views of the World Bank, its Executive Directors, or the countries they represent, or of the NSO.

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growing rather than declining in importance, in spite of its relative neglect at the level of national policy and in the minds of international donors. A dramatic shake-out of labour from uneconomic state-owned enterprises in the 1990s was absorbed largely by the extensive livestock sector in rural (and urban) areas and the growing informal economy in urban areas. Net urban to rural migration led to a doubling in the number of herding households between 1990 and 1997. By the late 1990s, herders accounted for over a third of the total population and half of the active labour force. These herders tended more livestock on Mongolia's pastoral commons than ever before in recorded history, with total livestock numbers increasing by 75 per cent in the period 1993–99.

At the same time, the period of economic transition has seen a dramatic rise in the incidence and severity of poverty in Mongolia. Under the socialist regime that prevailed until the start of the 1990s, Mongolia made great progress in improving human development indicators, and officially recorded poverty was virtually unknown. Through innovative service delivery mechanisms to nomadic pastoralists (even though they accounted for less than a fifth of total population in 1990), almost universal coverage of primary health care and basic education services was achieved.[1] The post-communist political and economic transition in the 1990s ushered in a rapid rise in asset and income inequality, and a third of the population have officially been defined as living below the poverty line since 1995. The consequences of deepening poverty and widening inequality can be seen in changing livelihood profiles, such as the growing significance of self-provisioning and inter-household transfers among the income sources of poor people. They can also be detected in other realms, such as the increasing incidence of domestic violence, alcohol abuse, livestock theft, and conflict over pastures.

The central premise of this article is that these issues are not unrelated: sustainable management of the pastoral commons is central to the mainstream challenge of national economic development. The composition of economic growth, and the distribution of gains from such growth, are of profound relevance both for the prospects for eliminating poverty, and for the future of the pastoral commons themselves. An assessment of the future of Mongolia's pastoral commons therefore requires a detailed understanding of the current and likely future livelihood profiles of urban as well as rural populations, and of the changing constraints and opportunities they face.

This article presents findings from a country-wide participatory poverty assessment conducted in 2000, which aimed to describe the range of livelihood profiles prevailing in contemporary Mongolia, and to elicit people's own

1. Improvements in social development indicators had been among the most impressive achievements of the socialist period. Life expectancy at birth increased from 47 years in 1960 to 63 years in 1990. Adult literacy rose to 97 per cent. Virtually the entire population had access to basic health services; 98 per cent of pregnant women received prenatal care.

perceptions and experiences of poverty, well-being and deprivation in a rapidly changing economic environment. In this light, the changing significance of Mongolia's pastoral commons will be viewed through an analytical lens that focuses attention on the livelihood strategies of those who directly or indirectly rely on pastoral livestock production for a living. Drawing on a blend of quantitative and qualitative data, the article describes the broad outlines of an integrated approach to building secure and sustainable livelihoods both on and off the pastoral commons. Through an understanding of the real constraints and opportunities which people face as they seek to earn a living for themselves and their families, it is argued, a more contextual appreciation will be gained of the place of Mongolia's pastoral commons in the livelihoods of present and future generations of Mongolians.

The article is organized as follows. The first section provides an overview of Mongolia's economic transition, followed by a discussion of the changing significance of the pastoral livestock sector during this period. Next comes a review of existing analytical work on poverty in Mongolia, and what these sources have to say about poverty levels and trends in contemporary Mongolia. The following section describes the approach taken in the Participatory Living Standards Assessment 2000 (NSO and World Bank, 2001), and summarizes its main findings with particular emphasis on the implications for rural livelihoods. Building on this analysis, the concluding section draws out the implications for future efforts to sustain secure livelihoods both on and off Mongolia's pastoral commons.

ECONOMIC TRANSITION, 1990–2002

Mongolia entered the 1990s with free and open democratic elections for the first time in its history, following the break-up of the Soviet Union and the collapse of COMECON which included all of Mongolia's main trading partners. The then ruling Mongolian People's Revolutionary Party (MPRP) embarked on a programme of political, economic and legislative reforms with far-reaching consequences including the adoption of the 1992 Constitution. However, the sudden loss of external subsidies from the Soviet Union exerted an economic shock equal to around a third of GDP by 1993, and following three consecutive years of economic contraction, a positive rate of GDP growth was only regained in 1994.

The degree of restructuring required to reverse economic decline resulted in severe retrenchment in the public sector. Much of the labour force that was shed was absorbed into the livestock sector and, more recently, the growing informal economy, but the average rate of official unemployment still rose to 9 per cent in 1994. The collapse in state revenues led to sharply reduced provision of basic health and education services and investment in basic infrastructure. These trends resulted in a rapid rise in levels of poverty, and a marked decline in key social development indicators.

Poverty is thought to have been virtually unknown in Mongolia until 1990, and inequality was certainly very low. By 1995, however, 36 per cent of the population was estimated to fall below the poverty line, and inequality had risen significantly. The maternal mortality rate doubled between 1991 and 1993 from 13 to 26 per 10,000 births. School enrolment rates declined and drop-outs increased, in part owing to the increased demand for labour (particularly boys) in livestock production. It was in response to these problems that a National Poverty Alleviation Programme (NPAP) was formulated in 1994, that supported income generation activities through micro-lending; and labour-intensive public works including rehabilitation of basic education and rural health facilities; pre-school strengthening; and targeted assistance including support for disabled groups (Government of Mongolia, 2001a).[2]

Various newly emerging democratic political parties, most with a largely urban base dissatisfied with the pace of reforms, had gained sufficient popular support by 1996 that a Democratic Coalition government was elected in June of that year. The coalition government embarked on an ambitious economic reform programme to complete the transition to a market economy, focusing on macroeconomic stabilization, further reduction in the size of the public sector, and private sector development. Tight monetary policy continued to control inflation, which declined from over 50 per cent a year at the end of 1995 to single digits by the late 1990s. Structural reforms included extensive tax reforms and the start of a significant process of decentralization in public administration. Improvement in the macroeconomic situation helped raise average real income from US$ 334 per capita in 1994 to US$ 452 by 1998, although the overall poverty headcount remained more or less unchanged at 36 per cent by mid-1998 (NSO, 1999). Progress was made in reversing the decline in primary and secondary school enrolments (which increased from a low of 82 per cent in 1996 to 87 per cent by 1998) and the rise in maternal mortality (which declined from 24 per 10,000 births in 1994 to 16 per 10,000 births by 1998), although by the end of 1998 these had still not regained pre-transition levels.[3] Infant mortality, which had been high even prior to economic transition, fell from 62 per thousand live births in 1993 to 35 by 1998.

In 1998–99 there was a marked downturn in economic trends and political stability. Export earnings fell by around 15 per cent of GDP owing to the simultaneous collapse in international market prices of Mongolia's three main exports: copper, gold, and cashmere. External terms of trade deteriorated

2. NPAP was designed largely on the basis of the recommendations of a UNDP-supported team led by Keith Griffin (Griffin, 1995). An assessment of the achievements and weaknesses of NPAP lies beyond the scope of this paper (see Government of Mongolia, UNDP and World Bank, 1999).
3. Public spending on health, education, and social security accounts for two-thirds of the state budget. However, an unusually high proportion of this spending is spent on heating (around 12 per cent of the health budget and 20 per cent of the education budget), and the remaining expenditure on social sectors is less than the average for low-income economies.

still further owing to a doubling of oil prices in 1999. The budget deficit, having been more or less in balance in the period 1990–95 (except for 1991 when it stood at 7 per cent of GDP), grew to the equivalent of 11 per cent of GDP by 1998. The fall-out of the East Asian and Russian economic crises represented a further shock accounting for a 9 per cent decline in GDP over 1998–99. Meanwhile, the ruling Democratic Coalition fractured through in-fighting, and there were three changes of government in 15 months. The eventual landslide victory of the former communist party (MPRP) in the general election of July 2000 was widely predicted.

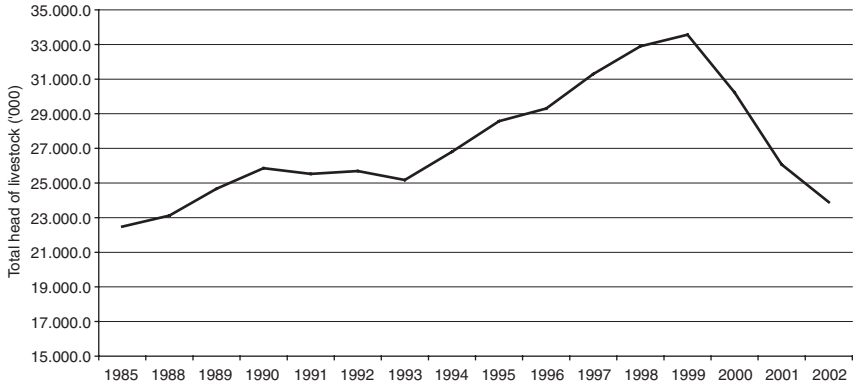
From 1999 to 2002, summer droughts and harsh winter/spring weather conditions (known as *dzud*) decimated the livestock population and accounted for a sharp decline in agricultural output. Although the industrial sector achieved a 20 per cent growth in 2000, this was insufficient to compensate for the shocks in the livestock sector. Overall economic growth slowed to a mere 1.0 per cent in 2001, recovering somewhat to 3.9 per cent for 2002.[4] It has been estimated that in the absence of *dzud* impacts over 1999–2002, economic growth would have been in the order of 8 per cent (Government of Mongolia, 2003).

KEY TRENDS IN THE LIVESTOCK SECTOR

Throughout this period of economic transition, the pastoral livestock sector in Mongolia shifted in significance, both in terms of the role it played as a source of livelihoods for a growing share of the population and as an economy-wide safety-net; and in terms of the factors that influenced its own sustainability. Figures 1 to 5 summarize some of the basic trends. First, total livestock holdings rose steadily from 1993, and by the end of 1999 numbered 33 million head, a level never before seen in recorded history (Figures 1 and 2). The national herd has since fallen sharply, amounting to around 24 million head by the end of 2002, owing to high rates of livestock mortality in the three consecutive summer droughts and winter/spring *dzud* of 1999–2002. When expressed in terms of Mongolian large stock units or *bod*,[5] however, the aggregate increase over 1993–99 appears less dramatic, having been disproportionately represented by a rise in the goat population in response to relatively higher cashmere prices (Figure 2).[6]

4. Preliminary estimate (Government of Mongolia, 2003).
5. One *bod* (horse or cow/yak) is held to be equivalent to 7 sheep, 10 goats, or 0.67 camel (1 camel = 1.5 *bod*). Mongolian livestock specialists use slightly different and more complex equivalence scales when planning for feed supplements, breeding, or other purposes (see Swift and Mearns, 1993).
6. By 2001, the national herd expressed in *bod* units stood at 7,482,600, a level significantly lower than the total of 8,933,400 *bod* in 1950, prior to the start of collectivization, and roughly similar to the level of 7,540,200 in 1985, towards the end of the collective era (World Bank, 2003: 5).

Figure 1. Total Livestock in Mongolia, 1985–2002



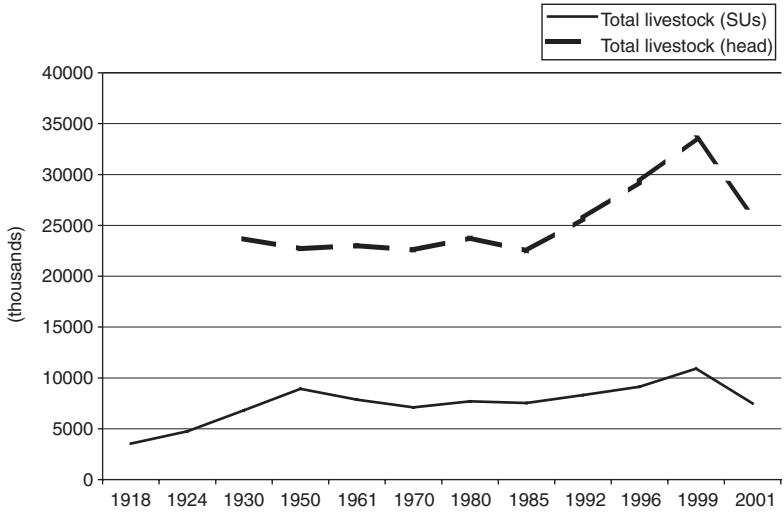
Source: NSO (2001); pers. comm.

The second striking trend throughout the 1990s has been the growing share of the total population relying on livestock production as their primary source of livelihood. Herder households (defined as those deriving the most significant share of their livelihood from livestock) rose steadily as a proportion of total households from 17 per cent in 1990 to 35 per cent by 1998 (Figure 3).[7] Many of the newcomers to herding were previously salaried employees of state-owned enterprises, and although some had herder backgrounds, many were unskilled and inexperienced as herders. Having obtained animals in the privatization programme, many failed to build a viable herd against the background of rapid inflation in the early and mid-1990s, and joined the growing ranks of small herders whom the government classified as among several 'vulnerable groups' within the population (Harper, 1994). This group found themselves particularly susceptible to the devastating effects of drought and *dzud* over 1999–2002.

Third, the 1990s were characterized by two distinct trends of internal population migration that have profoundly influenced the possibilities for sustainable management of the pastoral commons.[8] Broadly speaking, the period 1990–95 saw a steady net flow of urban-to-rural migrants, swelling the populations of most rural districts, particularly in central and western Mongolia. This trend may be attributed chiefly to

7. The total number of households also increased more rapidly over 1990–92 than the natural rate of population increase would suggest. A major cause was household splitting as families sought to increase their entitlements to shares in state and collective assets under the national privatization programme.
8. These trends are illustrated elsewhere in the form of two maps showing population change using district-level data for the periods 1990–95 and 1996–2000 respectively (World Bank, 2003: 18–19).

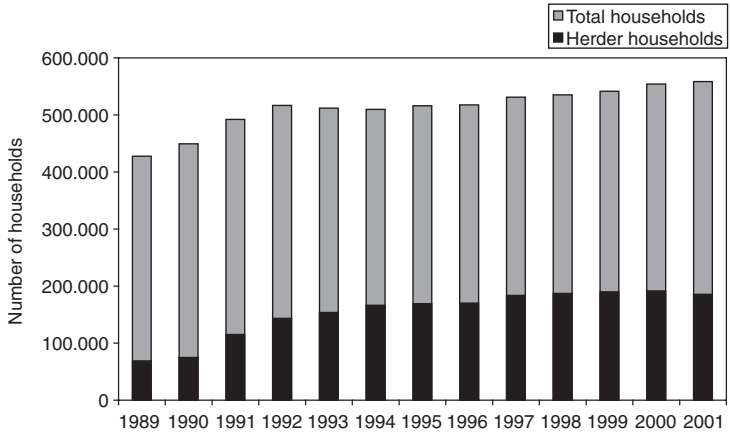
Figure 2. Total Livestock, 1918–2001 (Head and Stock Units)



Source: NSO (2001); SSO (1991).

the influx of new herders following the privatization of livestock. By the second half of the 1990s this pattern had more or less reversed. Herders, and other rural inhabitants, began to migrate towards more central areas with better access to markets so as to reduce transaction costs and improve their household terms of trade. This centripetal process of

Figure 3. Herder Households as Share of Total, 1989–2001



Source: NSO (2001).

population concentration took place at virtually all levels: within districts (from outlying areas to those closer to district centres), within provinces (closer to provincial centres and major transport axes), and on a national scale (from more remote provinces, particularly in western Mongolia, towards those in central Mongolia closer to Ulaanbaatar). Most rural districts in the 1996–2000 period saw a net outflow of people, particularly in more remote western provinces such as Uvs, Zavkhan, and Gov'altai. The latter change in population distribution is of sufficient concern to the government that a law was passed in May 2003 to promote a more balanced pattern of regional development.

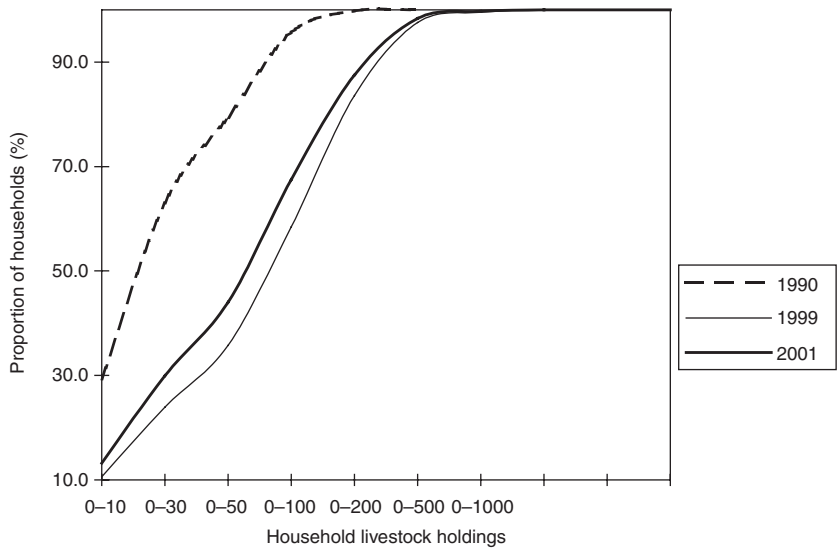
A fourth trend to note is the marked rise in inequality among livestock owners, or a widening gap between rich and poor herders (Figure 4). Some 70 per cent of livestock-owning households[9] had holdings of thirty animals or less in 1990, while fewer than 10 per cent of livestock-owning households had more than fifty animals, and virtually no one owned more than 200 private animals.[10] By 1999, when aggregate livestock numbers reached their peak, 30 per cent of livestock-owning households still owned fewer than fifty animals, and 80 per cent fewer than 200 animals, while 2 per cent owned more than 500 head of livestock, and thirty-three households owned more than 2000 animals each. The adverse impacts of three consecutive *dzud* years are more readily discernible among poorer than wealthier herders. The share of all livestock-owning households with less than fifty head of livestock rose to 40 per cent in 2001, while as many as 90 per cent of all households with livestock held fewer than 200 head by the same date. By the late 1990s a holding of around 200 animals was regarded as approximating the 'minimum viable herd' for a fairly typical herding family, assuming a normal, diverse species composition (Agriteam-Canada, 1997).

The fifth and in some ways most disturbing trend has been a steady decline in productivity in the agricultural sector, from which livestock production accounts for 83 per cent of output (NSO, 2002). There are few good data to demonstrate this. Kusago (2003), drawing on NSO statistical data, illustrates the basic trends in employment, output, and labour productivity in agriculture between 1995 and 2000, taking 1995 as the index year (Figure 5). The choice of these two reference years happens to reveal a stagnant trend output; total livestock numbers, as the main source of output, happened to be roughly the same in those two years, in spite of the

9. Note that the National Statistical Office reports two sets of data on livestock holdings: 'livestock owning households' are all those households with some domestic livestock, even though livestock may not be their primary income source. 'Herder households' are those whose primary source of livelihood is derived from animal husbandry. The data cited in this paragraph refer to all livestock-owning households, some of whom live in urban areas, rather than full-time herding households alone.

10. It is important to note that ceilings were imposed on private livestock holdings in the collective era (until 1990) at around 100 in the Gobi region and around 75 head elsewhere (Swift and Mearns, 1993).

Figure 4. Cumulative Frequency Distribution of Household Livestock Holdings, 1990–2001

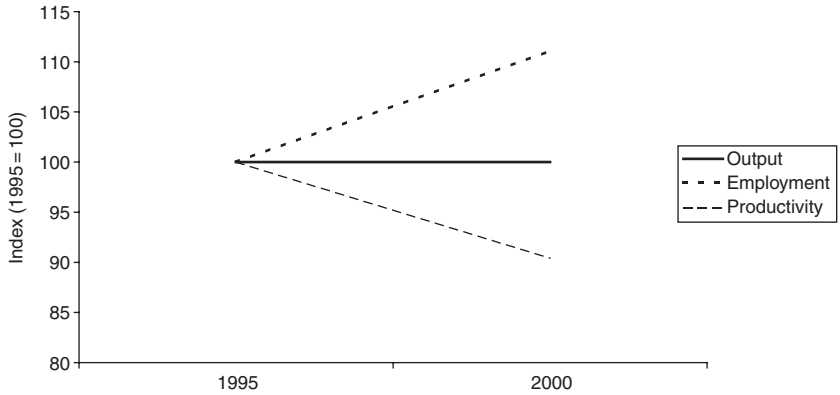


Source: NSO (2001); SSO (1997).

'boom and bust' years in between. Employment in agriculture increased by 11 per cent over the same period, resulting in a decline in labour productivity of around the same amount. Another indicator of declining agricultural productivity is the number of animals per herding household. Again drawing on NSO data, the average herd size per herding household declined by over 50 per cent from 346 in 1990 to 158 in 2000 (Griffin, 2003: 62).

The relative neglect of the livestock sector in public investment since the start of the 1990s is believed to have played a significant role in this collapse in productivity, resulting in a marked deterioration in the extent and quality of services such as livestock breeding, agricultural research and extension, water supply and irrigation maintenance, supplementary feed provision, measures to better manage drought and *dzud* risk, and marketing (Government of Mongolia, 2002). While the shape of a rural development strategy that meets the most essential of these needs without undue public subsidy is still emerging, their severe retrenchment in the 1990s has arguably undermined the essential public goods foundation for a productive agricultural sector. With the substantial rise in employment in agriculture over the same period, the unfortunate result is that 'agriculture became a sink for poverty, and growth exhibited the symptoms of agricultural involution. That is, the movement into herding should be seen as part of a household survival strategy, not as part of a national development strategy' (Griffin, 2003: 61).

Figure 5. Falling Labour Productivity in Agriculture, 1995–2000



Source: Kusago (2003: 79), based on NSO (2001).

Taken together, these trends have contributed to a significant decline in livestock and herder mobility, leading to significant pressures on pastures in particular localities (WRI, 2000). An influx of newcomers in some rural communities, combined with rising inequality in asset holdings, have led to a greater degree of heterogeneity among herders within the same communities. This in turn has contributed to a weakening in the observance of customary norms surrounding pasture use (Mearns, 1996 and forthcoming). Competition for and conflict over grazing land has reached endemic proportions in some of the more accessible and higher-potential central steppes, and herders are reluctant to leave their winter–spring camps where they are able to guard those most valued of seasonal pastures (Erdenebaatar and Batjargal, 2000). This is particularly the case for elite herding families that are better able to capture pastures by maintaining camps in several locations at once through family-splitting. Such a strategy is not normally open to asset- and labour-poor households, who instead tend to attach themselves to the camps of better-off herding households as labourers, in return for benefits such as access to pasture and the use of some livestock products. The implications of these trends for appropriate approaches to pasture land tenure and management are discussed elsewhere (Fernandez-Gimenez, 2002).

POVERTY MEASUREMENT AND ANALYSIS

The most reliable household survey data on poverty trends in Mongolia to date are derived from the Living Standards Measurement Survey (LSMS), first conducted by the National Statistical Office (NSO) in 1995 with World

Table 1. Poverty Incidence, 1995 and 1998

Location	Poverty incidence (%)	Total population (000)	Percentage of population	Number of poor people (000)	Percentage of poor people
1995					
All urban	38.5	1,222.2	54.0	471.0	57.0
Ulaanbaatar	35.1	609.2	27.0	214.0	27.0
All rural	33.1	1,057.8	46.0	350.0	43.0
All Mongolia	36.3	2,280.0	100.0	828.0	100.0
1998					
All urban	39.4	1,252.3	52.5	493.4	57.2
Ulaanbaatar	34.1	649.8	27.2	221.6	25.7
All rural	32.6	1,134.7	47.5	369.9	42.8
All Mongolia	35.6	2,387.0	100.0	849.8	100.0

Source: Brenner (2003), based on NSO (1999) and World Bank (1996).

Bank support (World Bank, 1996) and repeated (with some differences in methodology) in 1998 with UNDP support (NSO, 1999).[11] Over this period, the poverty incidence (headcount) remained more or less unchanged at around 36 per cent, with rural poverty incidence slightly lower than the national average (33 per cent), and urban poverty slighter higher (39 per cent). Table 1 summarizes the available data by location. The geographical distribution of poverty incidence over 1995–98 saw a slight decline in Ulaanbaatar, a very slight decline in rural areas, and a slight increase in *aimag* (provincial) centres, although these changes were in the order of 1 per cent or less. Changes in the depth and severity of poverty were relatively more significant,[12] suggesting a widening of income differentials between the poor and the poorest. Overall income inequality increased slightly between 1995 and 1998 as measured by the change in the Gini coefficient from 0.31 to 0.35 (although this remains relatively low by international standards).

There has been some debate as to whether or not the data from these two household surveys are directly comparable, owing to some slight methodological differences between them. Of greater significance, however, are certain characteristics that both surveys share in common, and which cast doubt over the degree to which they accurately reflect Mongolia's poverty profile. Several limitations stand out.

11. Other important sources of poverty-relevant information and analysis for Mongolia include: Anderson (1998); Government of Mongolia (2003); Government of Mongolia/UNDP/World Bank (1999); Griffin (1995, 2003); Harper (1994); NSO (1999, 2001); and UNDP (1997, 2000).
12. The depth of poverty (measured by the poverty gap index) indicates the degree to which the welfare levels of poor households fall below the poverty line; while the severity of poverty (measured by the Foster-Greer-Thorbecke index) places higher weights on the welfare levels of the very poor as opposed to those living very near to the poverty line.

The first concerns the manner in which the minimum consumption basket is calculated. LSMS surveys construct a measure of poverty or minimum living standard that is based on both food and non-food expenditures. In this case, the minimum required dietary intake is based on the actual average consumption patterns of the bottom 40 per cent in the income distribution of households surveyed.[13] However, in a departure from international practice in LSMS surveys, the Mongolian surveys estimated non-food expenditures by analysing those households whose total expenditure (rather than food expenditure) is equal to the amount needed to purchase the minimum required food basket. The result has therefore been described as an 'austere' poverty line (Lanjouw, n.d., cited in Brenner, 2003), since it assumes that individuals below the income poverty line will remain under-nourished in order to obtain necessary non-food items. Correcting for this, in order to permit a more valid comparison between the Mongolian data and international poverty data, Brenner (2003) estimates that the overall rate of poverty incidence in both 1995 and 1998 would be approximately 51 per cent. The estimate of 36 per cent of the population living below the poverty line in 1995 and 1998 is therefore more appropriately thought of as a measure of extreme poverty.

A second important limitation with the LSMS methodology concerns the methods for valuing household consumption items that are not purchased, including self-provisioned consumption (notably livestock products) and subsidized consumption such as energy or water supply. The method for valuing self-provisioned livestock products such as meat and dairy products is particularly problematic. Imputed prices of livestock products are based on those prevailing in the closest urban markets for which price data are reported (Hunt, 2000). These are usually considerably higher than those which herders in remote locations would actually pay (and the prices of non-food items considerably lower), since they reflect the high transport and other transaction costs incurred in bringing products to market in rural Mongolia. The net result is most likely to overstate significantly the value of food items consumed by herding and other households, and therefore to understate the share of rural households said to fall below the poverty line. This casts in some doubt the inference suggested by the LSMS results that urban poverty is more prevalent in Mongolia than rural poverty.

Third, in an attempt more accurately to measure deprivation, the Mongolian surveys introduced adult equivalence scales to try to correct for the different nutritional intake levels of individuals as a result of gender and age differences (Hunt, 2000; Brenner, 2003). A problem arises in the particular way this was applied in Mongolia, which was to construct a weighted poverty line for each region by applying the weights from the equivalence

13. This represented a substantial methodological improvement over the annual Household Income and Expenditure Surveys used to measure poverty in Mongolia prior to the 1995 LSMS, which used a normative definition of the minimum nutritionally adequate diet.

scale to the local cost of purchasing the minimum necessary food basket, resulting in a minimum food expenditure estimate for each age and gender group. The overall regional minimum food basket was then calculated as a weighted average of these. In regions with a high proportion of infants and small children in the overall population, the poverty line is therefore considerably lower than it would be on a simple per capita basis (Brenner, 2003). Since no adjustment was made to correct for actual household size and composition by region, the result significantly understates poverty incidence in those regions in which families do tend on average to be larger and to have higher dependency ratios, including rural areas with high herding populations in particular.[14]

This does not exhaust the list of limitations with the existing Mongolian LSMS survey data.[15] It does suggest, however, that there are sufficient grounds to be cautious about drawing conclusions from the existing poverty data to guide future public policy aimed at reducing poverty. This is particularly true with respect to the relative emphasis on rural versus urban poverty. On closer inspection, rural and urban poverty dynamics are closely intertwined, as will become clear during the discussion below of the PLSA findings. Anecdotal evidence in recent years also suggests that both rural and urban poverty rates in Mongolia may have increased significantly as a result of *dzud* impacts.

Hunt (2000) suggests several improvements in the way that Mongolia's existing LSMS data might be analysed and presented to correct for some of the limitations identified here. For example, asset indices could be created to permit a comparison of the rank ordering of the bottom two population quintiles that emerge from consumption expenditure data and those that emerge from the asset indices sensitivity analysis. Second, sensitivity analysis could be conducted to test the robustness of the poverty measures (for example, headcount index, poverty gap index, severity index) to the assumptions made in the analysis. This could be done for the valuation of self-provisioned livestock products, the valuation of subsidized public goods such as energy and water supply, and the factors applied (or not applied) for adult equivalence scales and household economies of scale.[16]

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14. This problem has also been observed elsewhere. White and Masset (2003) demonstrate that in the case of Vietnam, if adjustments for household size and composition are not made, rural poverty is significantly understated.
15. For a fuller treatment, see Brenner (2003) and Hunt (2000).
16. In 2002 the World Bank and UNDP jointly supported NSO in revamping its Household Income and Expenditure Survey (HIES), including adding some LSMS-type modules. Given NSO's limited capacity to undertake major household surveys, a decision was taken not to continue the stand-alone LSMS surveys, but to try to combine advantages of an LSMS approach with those of a regular, annual HIES. At the time of writing, the analysis of the resulting data from the revamped HIES was still in progress. It remains to be seen to what extent the 2002 HIES will correct for the limitations identified here, but it should at least capture the static effects on Mongolia's poverty profile of the recent *dzud* episodes over 1999–2002.

While there remains room for improvement in Mongolia's poverty data, the 1995 and 1998 LSMS surveys have played a major role in enhancing local capacity in the measurement, monitoring, and analysis of income- or consumption-based poverty in Mongolia, particularly within the NSO. Nonetheless, there has been a pressing need for a broadening of public discourse on poverty in Mongolia. Public debate on poverty turns largely on distinctions between deserving and undeserving poor. Anti-poverty strategies are still more widely construed as social assistance and safety-nets — an approach that was identified as a major weakness of the NPAP (1994–2000) (Government of Mongolia/UNDP/World Bank, 1999) — rather than focusing on enhancing the capabilities of poor and vulnerable groups to sustain their own livelihoods. Until recently, there has been little understanding at the central level of the multiple dimensions, causes and consequences of impoverishment and vulnerability; of differentiation among the poor, and the implication that very different forms of public action are required to reach different groups of poor people; of poverty dynamics and distinctions between chronic and transitory poverty; or of how the poor themselves perceive the distinctions between poverty/deprivation and well-being. It is in this context that a participatory poverty assessment was conceived in 2000 to complement existing household survey data.

PARTICIPATORY LIVING STANDARDS ASSESSMENT

The Participatory Living Standards Assessment (PLSA) was conducted over spring–summer 2000 by the NSO with World Bank support (NSO and World Bank, 2001). It had five broad objectives: (1) to deepen understanding of the multiple dimensions, causes, dynamics, and perceptions of poverty in Mongolia; (2) to integrate such understanding with existing household survey data and poverty analysis (NSO, 1999; World Bank, 1996); (3) to strengthen local capacity to conduct such integrated analyses in the future; (4) to broaden public debate on poverty in Mongolia; and (5) to bring this deeper understanding of poverty to bear on national policy formulation in general, and the Poverty Reduction Strategy Paper in particular (Government of Mongolia, 2003).

Political Context

The issue of poverty was highly politicized at the time the PLSA was carried out. It took place during the run-up to the summer 2000 general election, in which the former communist party (MPRP) won a landslide victory. The incumbent Democratic Coalition government sought to downplay the problem of poverty in its re-election campaign, while the MPRP made poverty reduction the centrepiece of its manifesto and subsequent Action

Programme once they took office. This was one reason for using 'living standards' rather than 'poverty' in the title of the PLSA, even though the PLSA conforms to common international practice in the intent, design, and conduct of participatory poverty assessments (Robb, 2002). A second reason was to reinforce the intended complementarity with existing household survey data gathered through the 1995 and 1998 LSMS surveys, although difficulties in obtaining access to the raw LSMS data prevented this from advancing as planned (Hunt, 2000).

At the time the PLSA was conducted, there was widespread hostility among many policy-makers in Mongolia to the use of the term and concept of 'poverty' as an entry point for public action. A frequently held view was that the poor are poor as a result of their own inability or unwillingness to work, and that public support for the poor therefore reinforces an attitude of dependency on the state carried over from the socialist system. There was also a widespread perception that a focus on 'poverty' was donor-driven, and that aid-supported, government programmes designed to improve living standards ended up rewarding the poor simply for being poor, rather than rewarding those who strive to improve their own means of living. While the more extreme versions of these views may have ignored the structural factors underlying the incidence of poverty, it was clear that public debate about poverty in Mongolia urgently needed to be recast. Opportunities were being missed to foster sustainable livelihoods through priority public actions to 'crowd in' a private sector-led strategy to build self-reliance among 'poor' and 'non-poor' people alike.

Methodology

The conceptual framework underpinning the PLSA was based on a 'sustainable livelihoods' approach (Carney, 1998; Ellis, 2000; Scoones, 1998), although the terminology associated with such approaches was applied lightly, owing to difficulties with the translation of key terms and concepts into Mongolian language. This approach emphasizes the wide range of capital assets (natural, human and social, as well as physical and financial) that people (particularly poor people) draw upon in pursuing diverse livelihood strategies and in order to realize their individual capabilities. These strategies in turn are pursued in a policy and environmental setting that influences the extent to which people are vulnerable to shocks and stresses. Livelihood security and sustainability refer to resilience in dealing with and recovering from such shocks and stresses, by means of coping (short-term, reversible responses) or adaptation (a longer-term change in livelihood strategy), and also the ability of the livelihood system and natural resources on which it depends to maintain or enhance productivity over time. Such an analytical approach marked a significant departure from the income-based view of poverty that then predominated in Mongolia.

Field data collection under the PLSA made use of a wide range of what have come to be known as participatory learning and action methods (Chambers, 1997). Such methods included matrix ranking and scoring, including wealth or well-being ranking, and selected diagramming techniques, combined in carefully designed sequences with semi-structured interviewing of individual informants and focus groups. Individual and household-level case histories were an important means of introducing a longitudinal perspective on poverty dynamics. Systematic analysis of a sample of around 180 such case studies, stratified by well-being category, allowed insights into vulnerability and insecurity that are normally only possible using identical 'panels' of the same households within repeated rounds of household surveys.

While a degree of flexibility was important to allow field research teams to investigate contextual issues that might otherwise have been missed through a highly structured survey instrument, it was essential to ensure coverage of a minimum or core set of issues using common research methods, so as to maximize comparability across the findings of research teams working in parallel and between communities engaged in sequence. This semi-structured yet systematic approach to data collection was essential in facilitating the integration of data arising from the PLSA with those from existing and future household surveys (cf. Carvalho and White, 1997).

Sample Selection

The nested selection of provinces (*aimags*), districts (*sum*), and sub-district-level communities that participated in the PLSA was guided by three principles: (1) the need to ensure complementarity and comparability with existing quantitative data; (2) the need to capture as much as possible of the diversity in living conditions among rural and urban communities; and (3) the need to balance sample size (number of participating communities) with depth of analysis. The sample frame was based substantially on that used for the 1998 LSMS, and covered all of the main ecological zones, which were thought to be characterized by distinct patterns of herder mobility.

Following these principles, the PLSA was conducted in the capital city, Ulaanbaatar, and the following seven *aimags*, representing the Government of Mongolia's regional classification based on fuel prices: Gov'altai and Khovd (western region); Arkhangai and Khövsgöl ('middle' region); Dornod (eastern region); Ömnögov' (southern region); and Töv (central region). Within each *aimag*, four communities were covered: one at the *aimag* centre, one in a district (*sum*) centre, and two in rural sub-districts (*bags*). The unit of analysis in most cases was the *bag*, although in some more densely populated rural areas, the appropriate unit of analysis was a herding community below *bag* level that customarily shares the same set of seasonal pastures and water sources. In the case of Ulaanbaatar, four urban sub-districts (*khoroo*) were selected. This gave a total of thirty-two

community-level studies. In total, over 2,000 people participated in the PLSA as individual informants or as members of focus groups. This is of the same order of magnitude as the sample for the 1998 LSMS survey.

Sampling of households and individual informants within communities was guided by participatory well-being ranking. This technique permitted the stratification of the community according to locally elicited parameters of difference in levels of wealth or well-being among households. Using the resulting stratification as a sampling frame, individual households (and individuals within them) were then randomly selected within each stratum to generate a purposive-random sample. This method combined the advantages of purposive sampling to ensure that the full range of diversity in living standards is represented, with some measure of random sampling.

Timing and Approach

The PLSA began with training of the research teams over a two-week period in early March 2000. The training included four days of classroom sessions and brainstorming, and fieldwork pilots in two communities in or close to Ulaanbaatar. Fieldwork itself took place over mid-March to mid-May 2000. Four teams of four persons each conducted fieldwork in parallel. Teams, with equal numbers of men and women, were made up chiefly of NSO staff, with one local consultant in each team who had prior experience in the application of participatory learning and action methods. Each team spent one full week in each community, allowing for four (very long) days of fieldwork and two days of writing time per community. Each team therefore completed four community studies in a single *aimag* each month. A total of thirty-four communities was therefore covered overall, including the two fieldwork pilots.

Summary of Key Findings

The PLSA began with participants' own understandings of the differences between well-being and ill-being, differentiated by gender, age, and location (rural/urban, and regions more or less remote from markets). These perspectives were elicited using participatory wealth ranking. Ability to meet basic household needs determined well-being for all participants, but what this meant in practice varied according to the livelihood profiles prevailing in each community. Rural community members emphasized herd size and access to pasture and water sources, while urban community members stressed access to formal jobs, trading opportunities, and physical security. The broader dimensions of well-being besides income and asset holdings included freedom from dependence on others, self-respect, and family attributes such as having children that can care for their parents in old age. Important dimensions of ill-being included loss of self-respect through

unemployment, and associated problems of domestic violence and alcohol abuse, particularly in urban centres.

Discussion of well-being and ill-being led to analysis of difference among households within a community. Using participants' own criteria, households were categorized into groups according to their levels of well-being. Most groups tended to divide their communities into four categories: the wealthy, those 'with means', the poor, and the very poor. A composite summary of the salient characteristics of each of these categories, distinguished by location, is shown in the Appendix. Changes in perceived levels of well-being were then analysed for the reference period 1992–2000. New categories of both rich and poor were found to have emerged in the early 1990s as a consequence of unequal access to the opportunities offered during the initial process of privatizing many state-owned assets including livestock and urban housing. The gap between rich and poor was perceived to have widened even more markedly from 1995 to 2000. While some groups were able to take advantage of new economic opportunities and become quite wealthy, including those with access to information and having 'connections' with local officials, many were not. The share of poor and very poor households was judged to have increased over this period at the expense of medium households, as more people fell into poverty than escaped from it.

Stratified according to the categories that emerged from the well-being ranking, a more detailed analysis of livelihood sources and strategies could then be conducted, again differentiated by gender, age, and location. Tables 2 and 3 summarize the range of livelihood sources identified for rural and urban communities respectively, by *aimag* (for rural communities) and by size of urban centres. Tables 4 to 7 then present quantitative data on the relative prevalence of different livelihood sources by well-being category, for rural communities, district centres, provincial centres, and the capital city respectively.

Several limitations in these data should be noted, however. First, insufficient data could be gathered for very poor households to include this category in our analysis with any degree of confidence. Second, inter-household transfers and kinship support — while a very important livelihood source, particularly for poor and very poor households — is also absent from this analysis, because most informants were unable to quantify them. Even at the time of the 1995 LSMS survey, it was estimated that the poverty headcount would have been 10 per cent higher (that is, 46 per cent) in the absence of such transfers, which were found to be far more significant than transfers from the state through direct programmes to reduce poverty (World Bank, 1996).

Livelihoods were found to have become more complex and diverse over the 1990s, often combining opportunities in rural areas (for example, herding, crop production and vegetable growing, and seasonal activities such as mining, hunting, and gathering of wild foods) with those in urban centres

Table 2. Livelihood Sources — Rural Communities
(Two rural sites were covered in each *aimag*. The number of '+' indicates whether a particular livelihood source was mentioned at one or both the rural sites)

Livelihood sources	**Aimag**						
	Arkhangai	**Dornod**	**Gov' Altai**	**Khovd**	**Khovsgol**	**Omnogov'**	**Tov**
Herding	++	+	++	+	+	++	++
Vegetables and crops		+		+	+		++
Hunting	+	+		+			++
Collecting wild food	+		+		+		
Selling firewood	++	+			+	+	++
Logging and timber	+	+			+		+
Salt making						++	
Gold mining							+
Fishing	+						
Tourism	++				++	++	
Pension and allowances	++	++	++	++	++	++	++
Remittance and support from relatives	++	++	++	++	++	++	++
Selling scrap		+					

Source: NSO and World Bank (2001).

(such as petty trading, home-based micro-enterprises). Significant changes also took place within livelihood strategies. For example, an informal labour market in livestock production began to emerge, in which poorer

Table 3. Livelihood Sources — Urban Communities

***Sum* centres**	***Aimag* centres**	**Ulaanbaatar**
• Public sector employment • Private sector employment • Home-based micro-enterprise • Herding/livestock • Pensions and allowances • Small cafes • Trade • Petty vending • Collecting and selling dung and fuelwood • Sending children to work for wealthier neighbours and relatives	• Public sector employment • Private sector employment • Home-based micro-enterprise • Herding/livestock • Pensions and allowances • Small cafes, hotels, bars and restaurants • Trade • Petty vending • Collecting and selling dung and fuelwood • Theft • Begging	• Wages and salaries • Pension and allowances • Kiosk, stalls and petty vending • Retail trade • Wholesale trade • Collecting bottles, bones, scrap from garbage • Looking for food in the garbage • Letting out accommodation • Selling assets, including accommodation • Livestock and poultry • Crops • Begging • Theft • Prostitution

Source: NSO and World Bank (2001).

Table 4. Sources of Livelihood by Well-being Category: Rural Communities
(Based on a sample of 62 households, not including the very poor.)
Numbers indicate percentage of household livelihood needs met from a particular source.

Well-being category	Livelihood sources (% of total)											
	Pension & allowance	**Cashmere**	**Wool**	**Hides and skin**	**Dairy**	**Meat (*idesh*)**	**Livestock sales**	**Agriculture**	**Trade**	**Tourism**	**Micro enterprise**	**Salary**
Wealthy	8	56	11	5	4	4	3	10				
With means	11	47	4	3	2	11	3	11		1	1	6
Poor	49	20	2	2	1	3	3	5			1	14

Source: NSO and World Bank (2001).

Table 5. Sources of Livelihood by Well-being Category: Rural District (Sum) Centres
(Based on a sample of 28 households, not including the very poor.)
Numbers indicate percentage of household livelihood needs met from a particular source.

Well-being category	Livelihood sources (% of total)											
	Pension & allowance	**Cashmere**	**Wool**	**Hides and skin**	**Dairy**	**Meat (*idesh*)**	**Livestock sales**	**Agriculture**	**Trade**	**Tourism**	**Micro enterprise**	**Salary**
Wealthy	14	1				4	3		39		39	
With means	16	5	1		4	3	1	18	17		15	21
Poor	50	10	1			5		1			21	12

Source: NSO and World Bank (2001).

Table 6. Sources of Livelihood by Well-being Category: Provincial (Aimag) Centres
(Based on a sample of 26 households, not including the very poor.)
Numbers indicate percentage of household livelihood needs met from a particular source.

Well-being category	**Livelihood sources (% of total)**											
	Pension & allowance	**Cashmere**	**Wool**	**Hides and skin**	**Dairy**	**Meat (*idesh*)**	**Livestock sales**	**Agriculture**	**Trade**	**Tourism**	**Micro enterprise**	**Salary**
Wealthy	8						4	2	60		18	8
With means	24	5					4	19			26	22
Poor	46							6			32	16

Source: NSO and World Bank (2001).

Table 7. Sources of Livelihood by Well-being Category: Capital City (Ulaanbaatar)
(Based on a sample of 15 households, not including the very poor.)
Numbers indicate percentage of household livelihood needs met from a particular source.

Well-being category	**Livelihood sources (% of total)**											
	Pension & allowance	**Cashmere**	**Wool**	**Hides and skin**	**Dairy**	**Meat (*idesh*)**	**Livestock sales**	**Agriculture**	**Trade**	**Tourism**	**Micro enterprise**	**Salary**
Wealthy											100	
With means	39					2	2	42			2	13
Poor	56					1					43	

Source: NSO and World Bank (2001).

herders or newcomers to herding following privatization in the early 1990s attached themselves to the households of wealthier herders, assisting with herding and cleaning shelters in return for a share in animal products and for access to grazing for their own few animals. Many other forms of inter-household transfer, together with pensions and state allowances, also emerged as crucial to the survival of poorer families in urban centres.

One of the most significant features of Mongolia's poverty profile since the early 1990s was found to be the emergence of multiple and interlocking sources of insecurity and vulnerability. Prior to the 1990s people had become accustomed to regular income from formal employment in the public sector. With the privatization of state-owned enterprises and pastoral collectives, unemployment rose sharply, and as people turned to livelihoods based on own production and self-employment in the informal sector, often subject to wide seasonal variation, their lives became much more precarious.

The number of herding families more than doubled in the early 1990s as families acquired animals under privatization and faced few alternatives. At the same time, public investment to manage risk in livestock production declined, and herders became more vulnerable to the ever-present threats of drought and *dzud*. Conflict over pasture became endemic in more central regions and closer to urban centres, as herders migrated to take advantage of better terms of trade and access to social services, thereby increasing congestion in these areas. Illiquidity and crisis in the banking sector meant that salaries, pensions and allowances were often paid late, forcing people to dispose of assets and into a cycle of indebtedness. While support from relatives was crucial for many poorer families, the character of kin-based and other social networks began to shift towards semi-commercial forms and often excluded the most vulnerable.

These interlocking forms of insecurity shape the context within which the household could be afflicted by various unexpected shocks (including loss of employment, loss of livestock during *dzud*, death or illness of a family breadwinner) or stresses (such as rising costs of schooling and health care). Around 180 household case studies were analysed to understand in more detail the processes that could trigger a downward spiral of impoverishment over time. The findings are summarized in Tables 8 and 9, by well-being category and by location respectively. Loss of employment topped this list, particularly in urban centres, closely followed by the cost of unexpected medical treatment and, for less poor families, the costs of children's education. Losses of livestock to drought and *dzud* ranked very high in many rural communities.

A wide range of strategies for coping with and adapting to insecurity emerged in the 1990s. These are summarized in Tables 10 and 11. The liberalization of fuel prices coupled with the vast distances and low population density of rural Mongolia led to marked differentials in the prices of consumer goods and the prices paid for producer goods such as livestock products. As a result, geographical location became an important driver of

Table 8. Frequency of Shocks adversely affecting Livelihood, in Descending Rank Order by Well-being Category

Shock or stress factor	**Total n = 181**		
	Medium n = 104	**Poor n = 57**	**Very poor n = 20**
Loss of employment		1	1
Illness/cost of medical treatment	2	2	2
Cost of children's education	1	3	2
Natural hazards/loss of livestock	3		2
Fuel price increase	3		
Theft of livestock or other assets	5		
Shortage of cash		4	
Death of household member		5	

Source: NSO and World Bank (2001).

economic opportunity, and migration (both seasonal and permanent) the livelihood strategy of choice for those in a position to take advantage of opportunities in more central regions or larger urban centres. The few rural communities to observe that economic opportunities had improved in the late 1990s were those with access to border trading points with China during a period of high cashmere prices. Family-splitting to take advantage of livelihood opportunities across the rural/urban divide became commonplace. Reliance on inter-household transfers and social networks was vital for the poor, but many (often children) were also forced into degrading or illegal activities such as begging and theft.

Community groups were asked to rate the institutions and governance structures that mattered to them in terms of their relative importance, current and desired effectiveness, and accessibility in practice. Education

Table 9. Frequency of Shocks adversely affecting Livelihood, in Descending Rank Order by Location

Shock or stress factor	**Total n = 168**			
	Rural n = 86	***Sum* n = 36**	***Aimag* n = 33**	**UB n = 13**
Loss of employment	4	1	1	2
Illness/cost of medical treatment	3	3	2	1
Cost of children's education	1	2	3	
Natural hazards/loss of livestock	2			
Fuel price increase		5		
Theft of livestock or other assets	5		5	
Shortage of cash		4		
Cost of *tsagaan sar* (Lunar New Year) or other festivals			4	
Homelessness				3

Source: NSO and World Bank (2001).

Table 10. Types of Coping Strategies

Inter-household transfers and kinship networks	Vertical linkages between better-off and poor households, with little or no reciprocity (patron–client relations); collective action (horizontal linkages)
Access to credit for consumption and to meet contingencies	Formal (banks, NPAP, in-kind through restocking in some places), and informal (kiosks: leaving pension book as collateral), pawnbrokers, money lenders including cashmere traders (widely varying interest rates payable — may be interest-free if known personally or for small amount, or up to 18% per month)
Rural–urban linkages	Family-splitting, exchange of goods and services/informal economy, seasonal migration between rural *bags* and *sum* centres
Livelihood switching and diversification	Hunting, theft, begging, prostitution
Other	Reduce consumption, switch to inferior foods (e.g. internal organs, boil bones with salt), barter trade

Source: NSO and World Bank (2001).

and health services emerged as the most important among these institutions, but participants were widely dissatisfied with the extent and quality of their coverage, particularly in rural areas. Markets, shops, and kiosks were felt to be important not only as sources of consumer goods but also for informal credit and information. Information hunger was a recurring theme in rural areas, and communications services were highly valued. Public administration received poor ratings in virtually all locations owing to its perceived lack of accountability and effectiveness.

Implications for Pro-Poor Public Policy and Investment

Participants in the PLSA were asked to voice their own views on the kinds of public action they believed would significantly improve their living standards. Several conclusions emerged from these wide-ranging discussions

Table 11. Types of Adaptive Strategies

Livelihood diversification	Livestock husbandry, vegetable growing, hunting and gathering of wild foods, *otor* to find better pasture (traditional adaptive strategy), shift in herd composition in favour of goats for cashmere
Livelihood switching	Trade, livestock husbandry ('new' herders), establishment of SMEs, wage labour or patron–client relations
Migration	Seasonal/circular, family-splitting, permanent (urban to rural, and rural to urban)
Inter-household transfers and kinship networks	Horizontal linkages between those of similar wealth status, high reciprocity, collective action, remittances and support from relatives
Other	Savings, budgeting

Source: NSO and World Bank (2001).

that suggested a number of priorities for public policy and action to help foster more secure and sustainable livelihoods. These priorities included:

1. The need for policy-makers to come to terms with the more complex and differentiated profile of poverty that emerged from the PLSA. For example, broader dimensions of ill-being emerged as being important in people's daily lives than low incomes alone, including alcohol abuse, crime and domestic violence, highlighted particularly by women;
2. Approaches to poverty diagnosis and monitoring in future that combine the complementary strengths of both household surveys and more open-ended, participatory methodologies (for instance, an expanded focus on assets as well as income and expenditure in future household surveys, as suggested by PLSA findings);
3. Recognizing the interdependence of urban and rural locales, particularly in the context of current government plans to deconcentrate population and promote regional development. A clearer picture emerged of the intricate web of rural–urban linkages and social networks which bind together apparently separate communities, which challenges the notion that 'rural' and 'urban' poverty can be addressed in isolation from each other;
4. Understanding the interrelationships between formal and informal labour markets: livelihoods for poorer and more vulnerable groups emerged as being complex, diverse, and often seasonal, rather than depending on a principal 'job'. In approaches to poverty reduction, emphasis should therefore shift away from 'employment creation' towards promoting the capabilities people need to secure their own means of living;
5. Understanding the complementarities between formal and informal safety nets: while state pensions, allowances and other benefits remain essential safety nets — often for a much wider group than intended — they are complemented in practice by a variety of informal inter-household transfers;
6. Reducing vulnerability to risks of various kinds by promoting the assets and capabilities of poor people (for example through public access to information, innovative micro-finance products including livestock insurance, social networks, and life skills);
7. Investing in public and private actions to reduce risk in pastoral livestock production in particular, including ways to restore or otherwise promote pastoral mobility and community-based pasture land management, in combination with livelihood diversification to promote 'exit options' from animal husbandry for unskilled and vulnerable newcomers to herding;
8. Improving the quality and effectiveness of social services and infrastructure as a basis for thriving local economies, particularly in rural

areas and smaller urban centres, including giving communities a greater stake in their provision;

9. Giving citizens greater voice and influence over patterns of public spending more generally.

Since the PLSA was completed, its findings have indeed contributed to the thinking behind Mongolia's Poverty Reduction Strategy Paper (PRSP), as intended (Government of Mongolia, 2003), as well as to a more detailed elaboration of a rural development strategy which was itself designed to feed into the PRSP (Government of Mongolia, 2002). Important elements of this rural strategy, consistent with the priorities identified above, are also being taken up under the Government's Household Livelihoods Capacity Support Programme (HLCSP), which has been shaped in important ways by a sustainable livelihoods approach (Government of Mongolia, 2001b; World Bank, 2002).

Key programme areas within the HLCSP that are already beginning to be addressed include: (1) a renewed emphasis on pastoral risk management, comprising early warning, contingency planning, and response systems; support for herder self-help groups or co-operatives; fostering private-sector hay and fodder production and marketing; and community-based pasture land tenure and management, including alternative approaches to dispute resolution; (2) promoting the outreach of sustainable micro-finance services to currently under-served groups (such as herders), including an innovative, index-based approach to livestock insurance (Skees and Enkh-Amgalan, 2001); and (3) a more community-driven approach to identifying and managing investments in basic infrastructure, building on experience gained under the NPAP over 1994–2000.

CONCLUSION

The ways people make a living, and the constraints and opportunities they face in doing so, can profoundly affect the status and management of common-pool resources. In Mongolia under economic transition, pastoral livestock production with low levels of external input has provided a primary source of livelihood for a growing share of the population, in urban centres as well as in rural areas. For some, especially recent entrants to livestock production, this has been an option of last resort: there were simply no alternative livelihood sources to fall back on. But for a substantial share of Mongolia's households (perhaps closer to 20 per cent than the current 35 per cent), pastoral livestock production is likely to remain significant in their future as well as their past.

The growing demands that have been placed on the pastoral livestock sector, without concomitant investments being made, have begun to threaten

its sustainability in significant ways. The rising perception among herders of localized overgrazing, endemic conflict over pasture and water sources, the increasing incidence of livestock theft, and declining trust in neighbouring herding families and even one's own kin, may all be understood as symptoms of this incipient decline in sustainability. Yet they are also symptoms and outcomes of rising poverty and inequality.

The insights derived from Mongolia's first participatory poverty assessment have helped to shed new light on what might be an appropriate approach in public policy and investment to foster secure and sustainable livelihoods both within and outside the extensive livestock sector. This article has aimed to demonstrate that there are close interdependencies between poverty dynamics in rural and urban areas, and between livelihood sources and strategies in agriculture and those in other spheres. What is certain is that secure and sustainable livelihoods will not be achieved without a renewed emphasis in Mongolia's poverty reduction strategy on development of the livestock sector.

Four complementary types of livelihood strategy need to be encouraged through the types of priority public action identified above: (1) *livelihood intensification*, including a market-led approach to breed selection, supplementary feed provision, and veterinary services; (2) *livelihood extensification*, including bringing back into use the large, currently under-utilized, areas of high-quality pasture, in part by rehabilitating wells and involving herder groups in their operation and maintenance; (3) *livelihood diversification*, including fostering new, value-adding activities in rural areas most likely in livestock product processing; and (4) *migration* away from existing livelihood sources towards potential new ones. It is to be expected that rural-to-urban migration might continue in the longer term, but this need not be at a level seen in recent years if adequate attention is paid to *in situ* rural livelihood diversification.

APPENDIX: HOUSEHOLD CHARACTERISTICS BY WELL-BEING CATEGORY AND LOCATION

1 Characteristics of wealthy households

Rural *bags*	*Sum* centres	*Aimag* centres	Ulaanbaatar
• Life is good • Own 500 or more head of productive livestock(better yields of milk, meat, or cashmere) • Not having to make distress sales • Own means of transport, TV, and a power generator • Small family (if the family is big – there are many who are able to work in the family business) • Have cash reserves/savings • Able to pay taxes	• Over 150 head of livestock • Good accommodation/big *ger*, *hashaa*, *ambaar* • Sufficient furniture • Small enterprise • Own means of transport • Small family • Vegetable plot • Salary • Pension and allowances • Involved in cross-border trade (Omnogov') • Able to pay for children's tertiary education	• Good accommodation/big *hashaa*, *ambaar* • Sufficient furniture • Own enterprise, shop • Heads of agencies, owners of companies, both husband and wife work for a salary • Own livestock • Never lack anything • Own means of transport (including truck, container, car) • Additional apartment in Ulaanbaatar that may belong to them or their children • Able to pay for children's university education • Able to pay taxes • Able to hire labour	City centre: • Own property • Own and manage big companies • Engaged in trade • Have access to credit • Run restaurants in apartment buildings • Have regular salary/income Other districts: • Own 1–2 hectares of land for growing vegetables • Have 1–2 vehicles • Own more than 500 heads of livestock

1 Characteristics of households 'with means'

Rural *bags*	*Sum* centre	*Aimag* centres	Ulaanbaatar
• Own about 250 head of livestock • Never have to ask for anything from anyone • Have good relatives • Some own means of transport (truck or motorcycle) • Some may have recently moved to rural areas and their livestock is still increasing. They are able to sell some cashmere • Pension and allowances	• Less than 150 head of livestock • 1–2 milking cows • 10–20 sheep • Salary/pension/allowance • Small amount of cashmere • Self-employed • Small trade • Big family • Vegetable plot • May have a car or motorcycle • Make handicrafts, home-based micro-enterprise • Receive some support from relatives • Able to provide some support for children's higher education • Monthly income ranges between 0.8–1 million Tg	• Employees in government agencies –doctors, teachers • Some property/livestock/or grow vegetables • Have just enough to eat • 4–5 wall *ger* with fence and furniture • Pension and allowances • Engage in marketing, and/or home-based micro-enterprise • Earn a regular income between 16–30,000 Tg per month • Own a vehicle obtained during privatization or a motorcycle • They try to save money little by little for children's higher education, celebrating *Tsagaan Sar*, purchasing new clothes or make arrangements for providing a house for children when they get married	• Small household • Employed/have a source of income • People with higher pension • Private car • Run private business and engaged in wholesale trading • Street vendors • Employed in big companies • Have other sources of income in addition to salary • One or two members have a job

3 Characteristics of poor households

Rural *bag*	*Sum* centre	*Aimag* centre	Ulaanbaatar
• Own about 150 head of livestock • Big families • Receive pension and allowances • Could be able to sell some cashmere, but not enough to meet all expenses • Not able to pay any taxes or even health insurance premiums • Some grow potatoes on about a hectare of land and may have some pigs and chicken	• No assets • No job • One member may receive allowance or pension • Less than 10–50 sheep • One milking cow • Many children • Large families • Eat irregularly • Some addicted to alcohol • No relatives • Some are single parent households	• Small *ger* with torn covers, most without a fence • Few livestock (20–30) • Many children • Few belongings in poor condition • Household with only employed member • Would not survive without the regular support of relatives • Live in a half-starved condition and manage to eat hot meals with meat only 2–3 times a week • Some have to spend a lot on medical treatment	• Have a poor house/*ger* or no home • Irregular source of income • Whole household lives off one person's salary/allowances • Unable to work • Some female headed households • No livestock, no land • Monthly income is no more than 15,000 Tg • Poor appearance, some collect garbage • Sometimes sleep without having anything to eat

4 Characteristics of very poor households

Rural *bag*	*Sum* centre	*Aimag* centre	Ulaanbaatar
• Herd size less than 50, which is not sufficient to make ends meet • No support from relatives • Big family • Pensioners living on their own • Many small children • Some are single parent households • Always face lack of cash • Are forced to trade in their livestock in return for essential food items • Unable to pay taxes or health insurance	• Poor dwelling • No animals, no income • Unable to work • Resort to begging • Single parent households • Alcoholic husband • No education • No relatives • One member of household may receive pension/allowance	• No source of income, no property, no livestock • Large families • Some rely on allowance for the new-born • Some engaged in vending, collecting dung • Survive by begging • Face constant hunger because of lack of food • Have almost no clothes • Collect scrap and bottles from garbage to sell • Scavenge garbage for food • Some resort to stealing • Some have to send children to work for better-off households in return for some food or little cash • Unable to celebrate children's weddings	• No income at all • Homeless, wander in the street • Sleep at entrances of apartments • Scavenge • Have no relatives

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