



STUDY ON HERDERS' BEHAVIOUR TOWARDS SOCIAL AND HEALTH INSURANCE

Final report



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Acronyms

ADB	Asian Development Bank
BIF	Benefit Insurance Fund
CATI	Computer-Assisted Telephone Interviews
ESCWA	Economic and Social Commission for West Asia
FAO	Food and Agriculture Organization
GAHI	General Authority for Health Insurance
GDP	Gross Domestic Product
GoM	Government of Mongolia
GPS	Global Preferences Survey
HIF	Health Insurance Fund
HSNP	Hunger Safety Net Programme
IAODI	Industrial Accident and Occupational Disease Insurance
ILO	International Labor Organization
IRIM	Independent Research Institute of Mongolia
ISSA	International Social Security Association
KII	Key Informant Interview
KLIP	Kenya Livestock Insurance Program
LSPRI	Labor and Social Protection Research Institute
MLSP	Ministry of Labor and Social Protection
MoA	Ministry of Agriculture
NHRCM	National Human Rights Commission of Mongolia
NSO	National Statistics Office
PSNP	Productive Safety net Programme
SGK	State Great Khural
SIF	Social Insurance Fund
SIGO	Social Insurance General Office
ToR	Terms of Reference
UN	United Nations
UNDP	United Nations Development Programme
VCI	Vegetation Condition Index

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Executive summary

In 2020, nearly 27% of all households in Mongolia (242,024 households) derived their livelihoods from livestock herding; 9% of the Mongolian population being registered as herders. While 32% of pastoralists were estimated to be poor (Ganchimeg et al., 2019), inequalities among herders persist. Five percent of herder households own 22% of all livestock, and about 45% of herder households own fewer than 200 head of livestock (the generally accepted threshold for subsistence (UN & ADB, 2018)).

As Mongolian herders are getting older (and fewer younger Mongolians are opting for this occupation), having accessible and effective old-age pension, and health insurance systems, in place is of vital importance. Recent evidence on pension planning among Mongolian herders highlighted the fact that while representing one fourth of the employed population, only one in four herders was covered by social insurance (Ganchimeg et al., 2019). Providing effective and efficient social security protection to the herders in Mongolia is difficult, not the least due to Mongolia's physical and human geography. The herders' nomadic, or seminomadic lifestyle, creates challenges for the delivery and administration of social security (UN& ADB, 2018). Social protection programs have often been based on standard economic assumptions. These assumptions are challenged by work in the sub-field of behavioural economics, which provides evidence that individuals do not always exhibit economic rational behaviour. Hence, herders who would benefit from taking-up insurance and applying for old-age pension may not do so for a variety of reasons which were, among others, investigated in this research.

The research design included a nationally representative survey among herders, to better understand behaviours towards social and health insurance schemes. The target population was individuals herders, and the study included a total of 4,000 herders throughout eight of the country's 21 aimags.

Stakeholder and gap analysis were conducted to measure the effectiveness of current policies and the potential of new policies. In doing so, the research team reviewed all the relevant legal and policy documents - and interviewed key stakeholders - to identify any gaps in the system, in terms of their coordination and coherence.

Due to the COVID-19 pandemic situation in Mongolia and associated government restrictions, remote data collection methods were applied. The questionnaire and key informant interview were adjusted for the telephone and online interviews (depending on the availability of respondents).

Key findings of the assessment included the following.

With regards to the legislation and regulatory framework, the *Law on Social Insurance* allows individuals (such as the self-employed, herders and freelancers, who create employment opportunities for themselves) to be excluded from social insurance coverage. In particular, because of the traditional herding of animals in Mongolia, herders are categorized as self-employed individuals, hence they can be covered by insurance on a voluntary basis only. As a result of restricting the rights of the compulsory insured to subscription to a voluntary insurance, coverage remains low and among the few that choose to pay, the voluntarily paid contributions equal to the minimum allowed, meaning that they will receive low pension entitlements in the future, and are likely to live in poverty. Moreover, Mongolia's legal framework for retrospective insurance (1990-2000) has the negative effective of discouraging herders from contributing to the SIF.

At the institutional level, due to the shortage of financial resources and lack of technical and human capacities, local insurance officers are unable to reach out to herders and promote and expand the social insurance coverage. Moreover, there is a lack of accessible and user-friendly call center services that might otherwise enable herders to check and pay their contributions (and accessing other member services).

Herders cannot contribute to the SIF due to: insufficient income, geographical remoteness, and time constraints (for visiting the soum center and paying social insurance contributions). Young male herders do not know the importance of, and are reluctant to pay, contributions. Moreover, herders in rural areas are unable to regularly obtain information and are unfamiliar with the insurance schemes. Herders regardless of their level of education, income, location, and gender, tend to expect to be taken care of by their children and spouses; rather than saving and purchasing insurance mechanisms. Also, herders prefer meeting their priority immediate needs rather than contributing to the social security fund, because they are not sure they can really benefit from it in the future.

The *Law on Social Insurance* facilitates herders and private business owners' right to voluntary insurance. However, voluntary insurance has proven to not be reaching its coverage objectives, and can put people at risk of not being insured and being excluded from social protection. **The main design change to recommend is the shift from voluntary to compulsory insurance, ensuring the inclusion of specific tailored features for herders, such as the subsidization of the contributions and the differentiation of contributory categories.**

The shift towards a mandatory system for Mongolian herders shall be the starting point of a comprehensive strategy comprising a number of subsidiary recommendations preparing a convenient policy environment for participants and establishing enforcement mechanisms. For attaining these objectives, the following recommendations are proposed (with details in section "6.3. Recommendations").

- Recommendation 1: Suspend the clause on retroactive payment of social insurance contributions.
- Recommendation 2: Draw a legal provision concerning the regulation for herders' social insurance.
- Recommendation 3: Tailor contributions to herders' financial capacity.
- Recommendation 4: Incentivize youth membership through reduced contributions.
- Recommendation 5: Ensure and incentivize contribution collection and compliance
- Recommendation 6: Increase and train the social insurance inspectors' staff.
- Recommendation 7: Facilitate access to social insurance services.
- Recommendation 8: Improve knowledge of, and attitudes towards, social security schemes.

1. BACKGROUND

For centuries, Mongolians have been nomadic pastoralists and have acclimatized themselves to the environment and climatic features of the geographical location, making livestock products as their main source of livelihood. Therefore, not only herders but also the Government of Mongolia has been paying attention to sustainably maintaining the traditional forms of animal husbandry that are environmentally friendly and improving the livestock yield.

Due to the extreme patterns of climate change, herders with restricted information and access to services are highly vulnerable to adverse livelihoods risks, and hence further vulnerable to fall deeper into poverty. Therefore, the Government of Mongolia considered social protection as a key instrument in the provision of income security of herders. The State Policy on Herders (2009-2020) established the objective that: "Herders will be covered by health and social insurance at 100% and will receive state social welfare services".

A handful of research was conducted by local scientists on nomadic lifestyle, animal husbandry and livestock risks such as drought and dzud. In particular, upon analyzing the migration and settlement status of herders and members of cooperatives of the People's Republic of Mongolia, up to the year 1986, (Bazargur, Chinbat, & Shiirev-Adiya, 1990) proposed the concept of "ecologically-geographically appropriate pastureland". On the basis of identifying the differences in time and space associated with the concept, nomadic characteristics of herders were divided into two provinces, mountainous and steppe, as well as five sub-provinces, Khangai, Khentii, Altai, Central-Eastern and Gobi. Khavkh (Khavkh, 2000) explained the laws of pastureland, its philosophical grounds, factors influencing the pasture-herd relationship, and the traditional methods of Mongolians in terms of Buddhist philosophical approach, yin-yang and five elements. Ganbold (Ganbold, 2013) categorized the evolution of Mongolian nomads into four stages and studied traditions and reforms concerning pastoral use of Mongolian herders. These works examine herders' pasture use and nomadic lifestyles, but fail to address social security and health areas of herders.

The United Nations Joint Programme "Extending Social Protection to Herders with Enhanced Shock Responsiveness" (SP-Herders, MNG/19/01/UND) contributes to achieving those goals by developing "social security innovative solutions responding to life contingencies and social insurance needs of herders". For these reasons, there are demands for data and evidence to support decisions aimed at the extension of coverage of social insurance to the population of herders in Mongolia. Accordingly, the International Labor Organization (ILO) has commissioned a study with the intention to contribute to decision makers and social partners' improved understanding about behaviours and behavioural patterns of herders, so as to come up with better solutions to increase the health and social insurance coverage of herders.

Starting in April 2021, the Independent Research Institute of Mongolia (IRIM), in collaboration with Maastricht University has conducted a study on herders' attitudes and perceptions towards social and health insurance schemes in Mongolia. IRIM had the project lead, while Maastricht University served as lead research partner.

This report is structured as follows: the next section provides a review of the international literature on social and health insurance take up, both in theory and practice. It then introduces the study objectives

and methodology. Section four provides background on the country context. First, based on data from the National Statistics Office (NSO) and other local sources, the demographic and socio-economic characteristics of Mongolian herders are described. Secondly, the key stakeholders are introduced and current laws and regulations concerning social and health insurance provisions for herders are presented. The section concludes with analysis of the current gaps and issues in the context of social and health insurance provision for herders in Mongolia. Section five focuses on the herders themselves. It presents the analysis of the primary data collected among herders on behalf of this project. It provides insights into the attitude and perceptions of Mongolian herders with respect to social insurance. Finally, section six offers recommendations addressing the key challenges on the supply and demand side, before the report concludes.

2. INTERNATIONAL LITERATURE REVIEW

2.1 Factors influencing social and health insurance take-up

2.1.1 Theory explaining (social) insurance take-up:

Social insurance contribution can be seen as a form of savings, as it implies renouncing to a part of one's current consumption in order to benefit from it in times where income is scarce. The purpose of (social) insurance schemes is to smooth consumption over time and mitigate exogenous idiosyncratic and covariate risks such as demographic and economic crises. Social insurance schemes rely on risk pooling, and consist of payments from several contributors, which can have a solidarity and redistributive effects towards lower-income individuals.

Overall, social insurance schemes aim at ensuring the stability and predictability of the insured's incomes. The insurance market is viewed as a market on its own, in which insurance purchase depends on several factors. This is particularly true for the private insurance market, in which agents make their decisions individually. However, individualistic decisions can also imply market failures, such as adverse selection or moral hazard, which can significantly affect the insurers' economic sustainability (Bodway et al., 2006). One way to counter this risk is to regulate the public intervention in the insurance market, with the State assuming the role of provider or intermediary and use its power to make it mandatory. However, as in many other countries, social insurance is voluntary for certain groups of the Mongolian population, meaning that individuals can decide whether or not to participate, based on their preferences, external factors, and behavioural anomalies. Several economists have investigated insurance decision-making, exploring the functions of wealth, expected rate of returns, and subjective discounting (Browne and Kim, 1993; Beck & Webb, 2003; Lee, Kwon, & Chung, 2010, Outreville, 2014) but few have gone into depth regarding behavioural inconsistencies that can influence people's insurance decision (Brahmana et al., 2018). It is implicitly assumed that risk aversion affects discounting factors, and that risk aversion is positively correlated with insurance consumption in a nation (Schlesinger, 1981; Szpiro, 1985). Additionally, according to Chiappori and Salanié (2000), the positive relationship between risk and insurance demand is (in theory) quite strong and is independent from the market structure. This implies that risk averters will always pay at least an actuarially fair contribution to dispose of the entire risk. Insurance is a way of transferring risk; therefore, risk aversion plays an important role in insurance demand. Yet, considering that real-life insurance schemes charge more than the actuarial rate, and that insurance companies typically do not cover the entirety of the risk, the correlation between insurance uptake and risk aversion is not linear.

Moreover, diverging from the assumption that agents make rational decisions, several theories help understanding why people who would benefit from social insurance fail to enrol in insurance schemes. First of all, it has been demonstrated that risk attitudes are not always consistent. Typically, individuals tend to be risk seekers when the stakes are low, and risk averse with high-magnitude payoffs. This is referred to as the "peanuts" effect (Prelec & Loewenstein, 1991; Weber & Chapman, 2005). Therefore, individuals might not purchase insurance if they perceive the stakes as low, as they will behave as risk seekers. Next, individuals often lack the intention to reduce their current consumption in favour of future income (Thaler & Shefrin, 1981). This means that, even though people might derive a higher expected utility from smoothing consumption over time, their preference for avoiding an immediate loss keeps them from contributing to social insurance. This is referred to as present-bias or economic myopia.

Moreover, it appears that people can have low level of self-control as well as a tendency to procrastinate when it comes to pension planning (Thaler & Benartzi, 2004). This means that when facing a decision in the distant future, individuals will be more patient and choose the option with long-term benefits, in this case enrollment in the pension or insurance scheme, but as the decision moment gets closer, agents will tend to switch to the option with immediate rewards, which in this case means postponing their contribution. Additionally, pension saving behaviours are positively related to age (Madrian and Shea, 2001), which communicates the intuitive assumption that older people are more concerned by their pension as they are closer to benefiting from it. Furthermore, pension planning for young people is likely to be hindered by self-control problems and present biases. In contrast, Engström and Westerberg (2003) highlight the forward-looking attitude of married people and parents, who may be more likely to get rid of their present-bias and better plan for the future, therefore demanding insurance.

Next, according to Al-Tamimi and Bin Kalli (2009), education and income level are expected to increase financial literacy levels, and financial literate individuals are expected to be more likely to demand insurance, as they are able to make optimal investment decisions. Income is also assumed to have a positive effect on the likelihood of making active pension decisions (Engström and Westberg, 2003).

2.1.2 Empirical evidence on factors and determinants of social insurance take-up in LMICs:

Several researchers have studied the factors influencing the demand or the willingness-to-pay for (social) insurance among rural populations, farmers, and independents workers in Mongolia, and other low- and middle-income countries. The main determinants identified are described below. Ganchimeg et al. (2019) have investigated the financial literacy and pension planning behaviours of Mongolian herders. Their research highlighted that, though 32 percent of herder households are in poverty, only 24 percent of herders participated in the social insurance program (as of 2017). Among the individuals surveyed, they found out that age had a positive relationship with pension take-up. Additionally, they also observed that herders who have received opportunities to recompensate their social insurance payments in the past are also more likely to further contribute to the pension insurance. The study further highlights that herders who have more debts and loans are less likely to contribute to the pension. The authors also investigated the role of 'bag meetings' - which are reunions organised in subdistricts to explore information and awareness for the fellow herders - but did not find any significant relation with pension contribution. Moreover, households' total income, households' total contributions, and savings were found to be insignificant in their analysis. Finally, education was found to have a positive relationship with pension participation among Mongolian herders (Ganchimeg et al., 2019).

Globally, there is clear evidence that education has a positive effect on insurance take-up. Indeed, education levels are positively correlated with commercial pension insurance participation among farmers from the Heilongjiang Province in China (Zhang & Zhang, 2018), and also seems to have a positive relation with the willingness-to-pay for health insurance. For example, in Malaysia, in a study aimed at assessing the ability and willingness of the farming community to contribute to national healthcare financing scheme, it has been found that farmers with higher education levels in Selangor (Malaysia) exhibit a higher willingness to potentially contribute to the national healthcare financing scheme instead of the current tax funded scheme (Aizuddin et al., 2011). Moreover, the level of education of the head of household in India has a positive relationship with rural populations' willingness to pay for micro health insurance in India (Dror et al., 2007) while education has a positive correlation with contributing to public health insurance in Iran (Asgary et al., 2004). Conversely, the lack

of knowledge and awareness about health insurance schemes, enrollment options for informal workers and enrollment proceedings, as well as low financial literacy are associated with a lower demand for pension and health insurance (Ganchimeg et al., 2019, Mathauer et al., 2008). Other reasons for the reluctance to buy insurance can be low understanding of the insurance system or a perceived lack of transparency (Castellani & Viganò, 2017; Haibin et al., 2020).

Socio-economic status is related to the willingness to contribute to social insurance schemes. Rural households are more likely to be willing to pay for social insurance when they have higher income (Dror et al., 2007, Aizuddin et al., 2011), or when they face a heavier family burden, e.g., higher out-of-pocket health and education expenditure (Zhang & Zhang, 2018). However, this is not the case everywhere, as wealth, income, job occupation and family size were found to be insignificant in Iran when analysing the willingness-to-pay for health insurance (Asgary et al., 2004). Yet, in Kenya, inability to pay is one of the main obstacles impeding informal workers to contribute to health insurance plans. Other household characteristics also have a positive correlation with people's decisions to subscribe to social insurance, such as being married and being a farmer living alone rather than in a community-dwelling setting (Zhang & Zhang, 2018), having already subscribed to another type of insurance, being a male, having been exposed to medical expenditure recently or living in a larger household size (Dror et al., 2007). Furthermore, instead of purchasing formal insurances, households in rural areas may rely on inter-household assistance to sustain livelihoods (Beyene, 2014). This is seen as a type of informal insurance and implies mutuality, meaning that initial contribution generates an expectation on future reciprocation.

In terms of behavioural anomalies, Brahmana et al. (2018) have studied the psychological drivers of the intention to purchase health insurance in Indonesia. According to the theory of planned behaviour, they found that the demand for health insurance depends on attitudes towards purchasing, subjective norms and the perceived behavioural control. Moreover, individuals perceiving the usefulness of health insurance, which is typically associated with higher financial literacy, are likely to have higher intention to purchase insurance. Furthermore, individuals' perceived risk is positively related to health insurance take-up, as it renders individuals aware of the uncertainty in the future. Lastly, the higher individuals value their health, the higher their likelihood to pay for health insurance.

Finally, external factors also play a role in the decision-making process, since a scarce availability of quality healthcare and larger distance to hospital are associated with lower willingness to pay for health insurance (Mathauer et al., 2008; Dror et al., 2007; Asgary et al., 2004), whereas poorer land quality is associated with higher take-up of commercial pension among farmers in China (Zhang & Zhang, 2018). In Iran, the distance of the village to the first nearest city as well as low population density of villages also reduce households' willingness to pay for health insurance (Asgary et al., 2004).

2.2 International practice in social and health protection for nomad and rural populations

2.2.1 Social protection practices for pastoralist and nomad populations

The international community, as well as national governments across the globe, increasingly recognise the viability of pastoralism as a sustainable livelihood and resource management strategy, appreciate its contribution to domestic GDP and acknowledge its unique characteristics, culture, and vulnerabilities (Schelling, Weibel, & Bonfoh, 2008). (Semi-) Nomadic livestock herding remains widespread particularly in the arid and semi-arid lands of the Sahel Region (e.g., Mauritania, Nigeria, Mali & Chad), the Horn of Africa (e.g., Somalia, Kenya & Ethiopia), and the Middle East & Central Asia (e.g., Iran, Afghanistan & Mongolia). Yet, as opposed to, on the one hand holistic pastoralist public and regional livelihood interventions, above all promoting commercialisation and resilience¹, and on the other hand narrow livestock services, e.g., pertaining to animal health, feed and rangeland management or re/destocking, national social protection systems design commonly fail to address the characteristic needs of pastoralists (Gebremeskel, Desta, & Kassa, 2019; WB, 2020).

Thus, while large and expanding safety nets in Kenya (HSNP), Ethiopia (PSNP), and Uganda (SAGE) are ambitious to improve livelihood and food security outcomes in pastoral areas, it is noteworthy to point out their distinction from social protection tailored specifically to pastoralists. As a result of programs formulated for the implementation in a diverse livelihood or agrarian context, pastoralists often remain underserved (Lind & Birch, 2014). For instance, Ethiopia's Productive Safety net Programme (PSNP) failed to realise its full impact potential in the predominantly pastoral Afar region relative to other parts of the nation. The PSNP reportedly lacked a transfer infrastructure and public works component reflecting the local environmental conditions, mobility patterns and production systems of the community. (SPIDA, et al., 2017). Additionally, Sabates-Wheeler, Lind & Hoddinott (2011) find the transformative notion of productive household asset building (essential for graduation), as well as transfer sizes in the PSNP diluted by intense reciprocal resource sharing networks among poor pastoralist households in Afar and Somali. Despite being the second largest safety net on the continent and incorporating one-stop-shops, community targeting and some consultation on transfer modality (in-kind favoured by many pastoralists) in pastoral areas, impacts on food security and asset protection and accumulation remain inconsistent (MoA, 2014; Kassa, 2018).

Remarkable, in the case of the Hunger Safety Net Programme (HSNP II) in Kenya, is the integration and simultaneous development of livestock insurance and social protection (unconditional assistance) introduced for enhanced disaster response in 2015. Consequently, while 100,000 poor households receive regular cash transfers, contingency funds allow for scalability of benefits and the shock-responsive expansion of benefit coverage to an additional pre-registered 40,000 vulnerable households based on a trigger defined in the Vegetation Condition Index (VCI), similar to Index-based Livestock Insurance (IBIL) models (SPaN, 2018). Pastoralist households, with increasing distance to the vulnerability threshold, take advantage of diminishing contribution subsidies on the regionally piloted

¹ Such as the World Bank funded Regional Sahel Pastoralism Support Project, or Ethiopia's AfDB financed Drought Resilience & Sustainable livelihoods program.

national Kenya Livestock Insurance Program (KLIP) among other providers (Janzen, Jensen, & Mude, 2016). In the wake of the large-scale and costly registration and targeting exercise across four counties, the HSNP has significantly contributed to the opening of bank accounts, issuing of ID cards (both pre-conditions) and establishment of a comprehensive database in the beneficiary regions, public capacity building payment systems and further pioneered an agent banking model (Gardner et. al., 2017).

On taking stock of successful social service provision, particularly in health and education, across pastoralist regions (i.e. Sahel, Central Asia), Schelling, Weibel & Bonfoh (2008) stress the importance of (1) meaningful participation of pastoralists in all stages of project design, (2) adoption of innovative community-driven (e.g., community health workers) solutions, combining mobile and static services (e.g. seasonal delivery) and fostering cooperation between sectors pursuing sustainable livestock production (e.g. leveraging commodity producer networks), (3) ensuring cultural and gender sensitivity. Ultimately, as many African governments pursue universal social protection coverage in their often most impoverished and vulnerable dry-land regions, they almost exclusively rely on non-contributory programmes, owing to the additional challenges of integrating semi-nomadic pastoralists into contributory schemes. Thus, more specific best practice and data remains scarce on the topic.

2.2.2 Expanding coverage to rural areas, agricultural and independent workers

Typically classified as rural agricultural workers under national insurance systems, pastoralists and agro-pastoralists arguably experience similar seasonality and high levels of informality and hence face comparable barriers to access social insurance (Sato, 2021). The main reasons recognised to be associated with exclusion or low voluntary social insurance affiliation are: (1) legal exclusion, (2) high financial burden of contributions on fluctuating incomes, (3) offered benefits and administrative processes do not meet the needs of prospective insured, (4) unawareness of the functioning of social insurance, and (5) distrust in the social insurance administration (Van Ginneken, 1999, 2010). International experience has shown that practices related to these four aspects led to positive results in increasing social insurance coverage.

Extending legal coverage and reducing the financial burden for informal workers

Sato (2021) identifies legal frameworks and insurance design (e.g., thresholds on working hours), non-inclusive to the casual, temporary or self-employed, as primary reasons for exclusion. Some countries, however, have put in place specific legal provisions for rural, self-employed and agrarian livelihoods. In many countries, it is common practice that self-employed and voluntary insured persons support the burden of both employers and employees' contributions (double contribution charge). While logical in actuarial terms, this practice contributes to making social insurance extremely expensive for these workers, already frequently subjected to volatile and low earnings and undermines the principle of collective financing (ISSA, 2012). Therefore, contribution rates should be adapted to the financial reality of workers in the informal economy.

Governments have addressed this issue by subsidising these contributions and making them affordable and more attractive to the prospective voluntary contributors. Other practices, while they ought to be approached with caution not to create inferior regimes exhibiting lower protection levels, consist of adapting benefits package to lower contributions, or subsidising benefits.

Among others, Tunisia, Cabo Verde, Brazil and Algeria have established a range of separate schemes with benefit packages and contributions adapted to the needs and contributory capacities of specific target groups (e.g. agricultural employees, self-employed, workers on low revenues) (ESCWA, 2019; OECD & ILO, 2019). Ecuador also provides a strongly subsidised social security scheme for rural workers (ILO, 2013). Proven attractive for independent small-farmers (>50% of participants), Tunisia's social insurance scheme for workers on low incomes provides old-age pensions, disabilities and survivors' benefits at fixed contribution rates relative to two-thirds of the minimum wage (ESCWA, 2019).² Additionally, as a result of a policy of cross-subsidisation (contributors from other sectors subsidising benefits), benefit levels and affordability for small-scale fishers in Tunisia could be maintained (FAO, 2019).

Iran, explicitly recognizes its nomadic herders in the subsidised and voluntary 'Rural and Nomad Social Insurance Fund', which provides old-age, survivor, disability and work injury disability pensions, as well as health care services to approximately 1.35 million people as of 2015 (Financial Tribune, 2015; Riazi & Mahdavi, 2007; Sato, 2021). However, in spite of subsidising participation, contributions remain reportedly concentrated in relatively more developed and industrial provinces (ibid.). Similarly, Vietnam and Oman subsidize up to 30% and 68% of contributions for self-employed workers respectively, contingent on reported income brackets (ESCWA, 2019).

Few countries, such as the Republic of Korea and Tunisia, have successfully extended social security coverage, mainly through mandatory contributory schemes (Behrendt & Nguyen, 2018). South Korea achieved universal health insurance coverage between 1977 and 1989, with the active support of the State and through social dialogue and consensus-building (Van Ginneken, 2008). Tunisia raised the health insurance coverage from 60 to 84 per cent in the 1990s (Van Ginneken, 2008). Both countries faced the challenge of extending coverage to urban and rural self-employed workers, and decided to intervene by subsidizing the employers' share of the contributions to avoid the "double contribution" challenge (Barca & Alfars, 2021). For doing so, and to determine the payment requirements, systems that assess the income position of the self-employed were put in place (Van Ginneken, 2008).

Overall, extending coverage through mandatory schemes has proven to be more effective, in terms of broad coverage and adequacy, than voluntary mechanisms (ILO, 2021). The latter rarely showed successful outcomes and tend to be affected by adverse selection issues. On the contrary, mandatory schemes demonstrate more promising results, as long as they have specific features tailored to those with lower contributory capacities, such as the subsidization of the contributions and the differentiation of contributory categories (Behrendt & Nguyen, 2018; ILO, 2021).

Streamlining administrative processes and accounting for fluctuating income

Compliance with administrative requirements can represent an excessive burden for some categories of workers. There is a high cost for workers in the informal economy in dedicating time to administrative procedures. Specifically, herders cannot afford to leave the herd unwatched for long periods, making travelling to social insurance administration offices costly. Therefore, the physical presence in

² Low-income workers pay 7.5% of two-thirds of the minimum wage.

administration offices should be reduced to the minimum possible. Similarly, the requirement of a multitude of documents or difficult access for these populations should be avoided. The experience of some countries like Vietnam showed that only the extension of legal coverage and subsidy is rarely enough to extend coverage. Simplification of administrative procedures might play a fundamental role.

Registration and delivery mechanisms

Brazil pioneered programmes that brought the administration close to its indigenous populations through the use of mobile offices or one-stop-shops. Also, flexible opening hours and days of weeks may help difficult-to-reach categories. Through the introduction of flexible payment schedules or simplified contribution payment methods, countries as Uruguay, Peru, Argentina, Indonesia, and Vietnam improved social insurance coverage and contribution collection (Nguyen & Cunha, 2019). Remarkably, the implementation of simplified taxation (Monotax) for independent workers in Brazil, Argentina, Spain and Uruguay represented an effective advance in contribution collection. Brazil also introduced an incentive package for microentrepreneurs with a simplified tax system, including a reduced social insurance contribution (Durán-Valverde et al., 2013). Morocco and Egypt automatically deduct income-related contributions as a percentage of the catch from small-scale fishers at the point of catch sale (deposit in cooperative funds), eliminating practical payment barriers and monthly, often biased, income estimates (FAO, 2019).

In many countries such as Turkey, Uganda, Uruguay, e-payments have been an effective measure to include the difficult-to-reach population in social protection programmes (ILO, 2021). International experience showed that basic infrastructure and communication systems allowed implementing alternative ways to pay contributions and benefits (Waller, 2017). Mauritania's health insurance reimbursement programme only requires a mobile phone network to operate. The use of ICT has also contributed to further social insurance in Cambodia, Indonesia, Malaysia and the Philippines (ILO, 2021). In Tanzania, a system allowing for the payment of contributions directly through a standard mobile telephone has been implemented (Waller, 2017). In Kenya, the introduction of the "Haba Haba" system allowed insured members to register, contribute, and check member account status through telephone. This system successfully increased membership without imposing the need to travel to the social insurance institution (ISSA, 2020).

Reference Income

Small fisheries in Tunisia are subject to simplified fixed fee contributions based on minimum wage and receive reduced, but flexible, benefit packages depending on the percentage of declared income they choose to contribute in excess (FAO, 2019). Contributions for Tunisia's self-employed are defined by a fixed standard wage associated with their profession (ESCWA, 2019). Registering for a lower category requires special justification. Rwanda developed a mandatory decentralised community-based health insurance, maintaining low contributions. The system almost doubled coverage within few years, and members are deemed to pay a yearly contribution according to household income categories constructed based on a community-integrated process (UNDP & ILO, 2011).

Offer incentives to increase insurance coverage

Take-up incentives for contribution collection and compliance

Financially vulnerable populations have fewer mechanisms to smooth their consumption, and as a consequence, they tend to prioritise immediate needs over long-term advantages, like a pension. Therefore, the benefits of being voluntarily insured should include immediate advantages that meet the needs of this specific group, or they might not see value in the investment (Ginneken, 2003). The inclusion of health services, maternity and child benefits in social insurance packages can make affiliation more attractive than schemes that include only long-term benefits. Accordingly, Morocco and Tunisia 'bundled' their social and health insurance systems. Though, contributions are collected concurrently, and enrollment is mandatory, self-employed with very low revenues can opt out of the social insurance component (ESCWA, 2019). This element is fundamental for social security coverage extension. Subsidised contributions and administrative processes simplification are not enough if the prospective members do not see real value in being insured.

In the case of specific sub-groups, the provision of licences or access to certain services may be made contingent on social security enrollment to provide additional take-up incentives and outsource monitoring. Organisations such as Industrial Chambers or professional associations in Morocco are obliged to request proof of enrollment and contributions' payment in social and health schemes before authorizing trades, as well as to report misconduct of independent workers (ibid.). This approach has proved to be successful in Morocco, where it is estimated that 95 percent of small-scale fishers are licensed. Likewise, for Egyptian and Tunisian small-scale fishers, registering with the national social security is a prerequisite for obtaining their fishery license. While this mandatory requirement resulted in impressive coverage achievements in Egypt, the same results were not obtained in Tunisia. The value of benefits and services offered by the system caused the difference in outcomes between the Egyptian and the Tunisian cases. In the latter, the unique reason for registering was the need for the fishing license, while Egyptian small-scale fishers recognised the added value of being registered (FAO, 2019). Enrollment expansion among self-employed workers in Oman has been incentivized by making it mandatory for the provision of loans and benefits from other institutions (ESCWA, 2019).

Value chain certificates to foster labour rights and decent work

An emerging option, especially in the farming sector, is the adherence of producers to international sustainability certification systems (e.g., Fairtrade, UTZ). The main objective of these labels is to promote sustainable behaviours by certifying products, signalling its added value to consumers. While these labels cover several aspects of sustainability (with a marginal focus on social protection), there are contradictory reports about their actual contribution to the welfare of wage workers (van der Wal, 2018). Some voluntary systems have failed to make sufficient impact, and have come under criticism for

governance failures and labour rights violations. For example, “Bonsucro” certificate label³ was found to have violated seven key labour rights several times in Brazil (Jesus, Genevieve, & Richardson, 2016).

In Mongolia, in 2021, the Textile Technical Committee of the Mongolian Agency for Standardization and Metrology, approved the National MNS 6926:2021 - Standard for Sustainable Textile Production. The objective of this certification is to transition the textile sector towards environmental and social ethics and responsibility, by applying standards over a wide range of issues.⁴ Among others, this production standard includes specific standards to labour rights such as the respect of formal agreements and social contributions. However, it is understood that MNS 6926:2021 applies at the manufacturer level, therefore excluding enforcement and control of labour standards over sourcing herders.

While not including specific clauses on social insurance, an interesting pilot program called “Green Pasture Project - Responsible Nomads”, implemented in Chandmana soum of Hovd aimag, aims to promote traceable responsible herding practices (maintain sustainable rangeland and livestock management) through financial incentives. Once registered in the Livestock Raw Material Traceability system operated by the Mongolian National Federation of Pasture User Groups, monitoring and compliance operations for the Green Pasture Project are conducted through this system. Eventually, a portal presenting key indicators is also accessible by end-consumers via a QR code.

Enhancing awareness and strengthening organisation of independent workers

Clear communication and enhanced awareness about social security functioning and immediate and long-term benefits are determinant to enhance voluntary affiliation. Since contributing to social insurance represents a high investment for financially vulnerable families, the willingness to contribute will depend on the understanding that social insurance is valuable and that social insurance institutions are trustworthy. Hence, different categories of workers should have tailored communication strategies. In that sense, social insurance administrations must ensure that their employees are well trained and prepared to deal with workers with multiple backgrounds to prevent a perception of discrimination which could further deepen the distance between the potential member and the institution.

In China, it was observed that unclear communication and inadequate awareness implicated in lower levels of social insurance affiliation (ILO, 2020). Campaigns to enhance awareness and provide information are adopted in many countries and with different strategies: traditional media, public events, mobile theatre (Tajikistan), partnerships with trade unions (Tunisia), workshops (Cabo Verde)(ILO, 2021). Cameroon developed a system involving the accreditation of “social secretariats”, to disseminate information and educate individuals interested in voluntarily joining the social insurance scheme. The secretariats also receive a small fee for each new member (ISSA, 2017). A similar practice was implemented in Indonesia within the Kader JKN programme. In this programme, agents from the targeted communities are recruited and trained to facilitate the collection of contributions, enrol new

³ Established to certify the production of sugar and ethanol in accordance with minimum social and environmental standards.

⁴ The use of natural resources, energy consumption, use of chemicals, regulation of industrial waste, social responsibility, labour protection, and animal rights.

members and improve communication (Nguyen & Cunha, 2019). In Uruguay, education regarding the importance of social insurance was included in the national basic education curriculum. The programme intends to enhance awareness about social security and its importance already at early ages and create a culture of social protection (ILO, 2016). In Mauritania commodity and market networks by Tivski dairy plant have been leveraged to provide financial and social services to nomadic pastoralists (Schelling, Weibel, & Bonfoh, 2008).

3. METHODOLOGY AND SCOPE OF THE STUDY

3.1. Objectives for the study

The objective of this study is to better understand herders' behaviours towards social and health insurance schemes in Mongolia. For the purpose of this study, the following objectives are set:

- Study herders' perception of and behaviour towards social and health insurance schemes.
- Study herders' current accessibility, needs, barriers and obstacles in social and health insurance schemes.
- Study reasons that prevent herders from enrolling or being enrolled in social protection schemes.
- Review comparative international and national good practices in social insurance scheme design for nomad populations and in social insurance and financial sector service delivery and payment systems for mobile, nomad populations.
- Conduct stakeholders' and gap analysis on legislation, regulatory framework and service delivery.
- Assess existing capacity in Mongolia to implement improved service delivery.
- Identify bottlenecks in the legal environment and service delivery of the Government in the area of social and health insurances that delimit the effective coverage of herders.
- Review organizational and technological delivery systems to facilitate herders' access to social and health insurance.
- Provide recommendations on improvement of design and operations of social and health insurance schemes for herders.

3.2 Study design

The study applied a mixed-methods design and consisted of a quantitative and a qualitative component as illustrated below. Next to the collection of primary data, the research design included stakeholder and gap analyses to assess the effectiveness of current policies and the potential for new policies. In doing so, relevant legal and policy documents were reviewed and interviews with key stakeholders were held, to identify any gap in the system in terms of coordination and coherence.

Figure 1. Components of the study



3.2.1. Quantitative Component

The main data collection instrument is the survey questionnaire. In order to better understand the herders' perception of and behaviours towards social and health insurance schemes, primary data from herders were collected through a sample survey. By combining socio-economic modules with an experimental module based on framing effects over gain-loss symmetry, the survey aimed at finding explanations for social and health insurance non-take-up among different groups of herders. The questionnaire had a total of 84 questions. The survey data was collected by CATI (Computer Assisted Telephone Interviewing). IRIM's Call Center has a CATI survey software with professional equipment. The IRIM team tracked the target respondents to recruit the respondents.

3.2.2. Qualitative Component

Key Informant Interviews (KII)

The study held individual interviews to explore herders' behaviours and their effects in terms of social insurance coverage. The main purpose of the key informant interview was to identify the main reasons why herders are not paying social insurance contributions. A total of 52 key informants were conducted to identify gaps in the social and health insurance systems in terms of coordination and consistency of the legal documents.

The selected stakeholders were interviewed for their representability on three levels, policymaking (macro), implementation (meso) and execution (micro). The interviews were semi-structured based on a set of questions that were shared with the interviewees before the meeting and lasted between 60 and 80 minutes. Prior to the interviews, the interviewees were informed about recording and confidentiality of the interview along with the objectives of the study.

Document Review

In addition to the key informant interviews, the research design included a thorough review of relevant laws and other legal and policy documents.

3.3. Survey and experiment design

The first part of the questionnaire (provided in a separate document) collects data on the demographic composition of herder households (including gender, age, civil status, family composition), their

educational background, income class and assets. This information allows the analysis of differences in responses between different herder profiles and characteristics.

The second part focuses on the occurrence of idiosyncratic lifecycle risks for the respondents, including health problems and their consequences on work activity and household economic wellbeing. After that, the survey focuses on coping mechanisms that households use in the event of a shock. In the third part, participants are asked a number of questions on social and health insurance. The main objective is to document herders' understanding of social insurance in general and knowledge of social security institutions, what the insurance offers and the rights and obligations involved. Second, herders are asked for the reasons for affiliation and non-affiliation in existing social and health insurance schemes using multiple-choice questions to differentiate about economic, geographical, institutional, organisational, sociocultural, or individual reasons for non-affiliation. This section includes questions about the perceived level of quality of responsible institutions and the amount of trust towards them.

In the experimental setting of the data collection survey respondents' willingness to pay for social insurance is tested through a *framing experiment*. Following the suggestion of Atzmüller & Steiner (2010) and Chemin (2008), all respondents are presented with a common hypothetical risk scenario, and subsequently, they are randomly presented with different alternatives. There were four groups: two treatment groups, one active control and one control group. The first treatment (eliciting risk seeking behaviour) investigate how limited information on the benefits to receive may influence take-up. In particular, the first treatment frames the immediate payment needs without explaining the benefits that enrolling may provide. The second treatment elicits risk-averse behaviour, facing respondents with details over the benefits in place, but not disclosing the contributions requirements. The third group provides the entire set of information to respondents. The aim of this third group is to control respondents' behaviour eliciting the WTP for the most realistic and disclosed scenario. Finally, a fourth of herders are assigned to a placebo group which does not convey any additional information.

Table 1. Scenarios for the framing experiment

Group	Type	Description
ALL	Setting	Imagine a scenario set in 2021 in which you have been working as a herder for the last [35 if Male / 30 if Female] years of your life. You are now [50 if Male / 45 years if Female], and you have repaid the debts you had with the Bank or local shop, but you have little savings.
Treatment 1	Limited info on received benefit. Eliciting risk-seeking behaviour.	[...] During the latest Bag meeting, a Social Insurance inspector stepped in for talking about the social insurance scheme. Contributions may be paid in instalments and the way you prefer (for example, via mobile banking). Enrollment is voluntary. Starting this year and until the retirement age, you will have to pay a minimum monthly amount of 60,900 MNT as social insurance contributions.
Treatment 2	Limited info on payments. Eliciting Risk-averse behaviour.	[...] During the latest Bag meeting, a Social Insurance inspector stepped in for talking about the social insurance scheme. The social insurance organisation is prepared to subsidise the contributions for all your past working years until 2021. Once a member of the scheme, you will be covered for the risk of disability and occupational accidents, on top of having granted an old-age pension. When you will be [55 for men / 50 for women] years old, you will be receiving a monthly pension of at least [210,000] MNT. In case of disability or occupational accidents, the social security organisation will grant you a benefit replacing your income.

Active Control	Full information	[...] During the latest Bag meeting, a Social Insurance inspector stepped in for talking about the social insurance scheme. Once a member of the scheme, you will be covered for the risk of disability and occupational accidents. On top of that, when you will be [55 for men / 50 for women] years old, you will be receiving a monthly pension of at least [210,000]. In case of disability or occupational accidents, the social security organisation will grant you a benefit replacing your income. The social insurance organisation is prepared to subsidise the contributions for all your past working years until 2021. However, starting this year and until the retirement age, you will have to pay a minimum monthly amount of 60,900 MNT as social insurance contributions. Contributions may be paid in instalments and the way you prefer (for example, via mobile banking).
Placebo Control	No information	[NO ADDITIONAL INFORMATION]

Source: own elaboration

After having heard their scenario, respondents are asked if they would be willing to contribute to the social insurance scheme, and if not, why.

3.3.1 Sampling design

The sampling population are the regular herders, whose main source of income are livestock originated products. According to the NSO statistics, as of 2020, there were 298,798 herders, who accounted for 8.7 percent of the total population of Mongolia. As suggested by the ToR, a total of 4000 respondents were sampled among the eight aimags covering the four regions of Mongolia. Table 2 shows the number of herders in each region and their proportion to the total number of herders.

Table 2. Sampling size

Region	Herders (n)	Target proportion of herders in the sample population	Aimag/districts (n)	Sampling size (n)	Target aimags (n)
Western	73,659	0.25	5	1000	2
Khangai	124,350	0.42	6	1691	3
Central	60,689	0.20	7	822	2
Eastern	36,310	0.12	3	487	1
Ulaanbaatar	3,781	0.01	9	N/A	-
Total	298,789	1.0		4000	8

Source: National Statistics Office. (2020). http://1212.mn/tables.aspx?TBL_ID=DT_NSO_1001_022V1

Sampling stages

For this study, the target population was composed of individuals or herders, so the main unit of the study were the individual herders. Multi-stage sampling method was used, and the following table illustrates the sampling range and sampling units for each sampling phase of the study. Aimags were selected for their representability of the region. The differences and similarities of the geographical locations were taken into account. Also, the aimags with the highest number of livestock in the regions were selected to increase the response rate. The number of the herders were proportionally selected to the number of the herders in the regions. Kazakhs are the largest ethnic minority in Mongolia. The Kazakhs' lifestyle and traditional way of life could be different from other ethnic groups. Thus, Bayan-Ulgii aimag, where most of the Kazakhs are clustered, was purposefully selected.

Table 3. Sampling stages

Sampling stages	Sampling unit	Sampling frame	Sampling method	Sampling criteria	Result
Stage 1	Aimags	21 aimags of four regions	Purposive sampling	Region Herders' population Ethnicity	Bayan-Ulgii and Uvs aimags (West Reg) Uvurkhangai, Khuvsgul and Bayankhongor aimags (Khan Reg) Tuv and Umnugobi aimags (Cent Reg) Sukhbaatar aimag (East Reg)
Stage 2	Herder (respondent)	List of herders aged 15-54 ⁵	Stratified sampling	Age Sex	4000 herders

Source: own elaboration

Sampling and sampling allocation

The most widely used sampling methods for strata sampling include proportional allocation, disproportionate equal allocation, and optimal or Neyman's allocation. Proportional allocation is the simplest method of allocation used in practice, and is most often used when strata are significantly different from each other. The sample size n_h from the region h is chosen with the following probability for proportional allocation.

$$\pi_{hk} = \frac{n_h}{N_h} = \frac{n \cdot \frac{N_h}{N}}{N_h} = \frac{n}{N}$$

In this case, the sample weight is constant $w_{hk} = w = N/n$. The proportional allocation method was employed. The demographic profile data of the survey participants were based on the NSO ratios for herders. The research team regularly monitored and checked the data quality during the data collection process to ensure that the key indicators are consistent with the following age and gender statistics for each aimag:

Table 4. Age and gender statistics, %

Age group	Percentage	Female	Male
15-24	8.8	9.7	6.2
25-34	24.0	24.4	23.1
35-44	31.2	30.4	32.6
45-54	23.7	23.3	24.7
55-64	12.5	12.2	13.4
Total	100	100	100

However, depending on the demographic profile of the regions, migration to the urban areas, and other risks expected during the data collection, $\pm 5\%$ fluctuations in the distribution was foreseen.

⁵ Female herders aged between 18-49 Male herders aged between 18-54

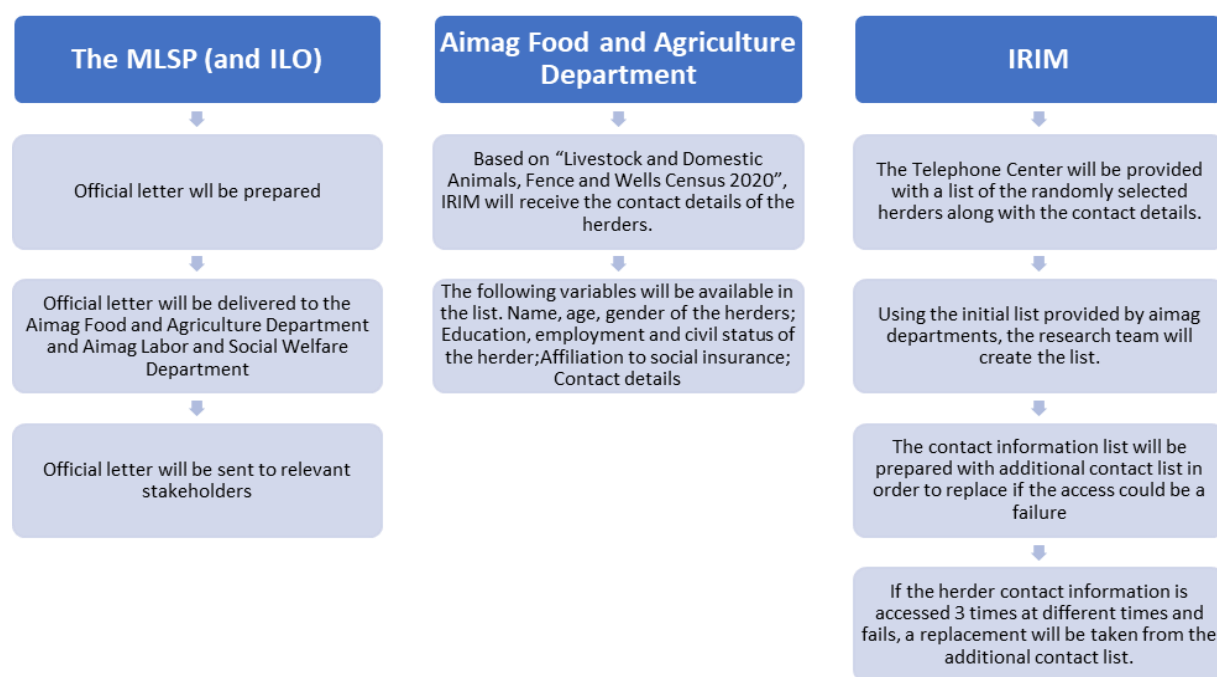
Sampling representativeness

The IRIM team compiled a list of every herder's location, age, and gender. The IRIM team stratified along these three characteristics: location, with 8 aimags (Bayan-Ulgii, Zavkhan, Uvurkhangai, Khuvsgul, Bayankhongor, Tuv, Umnugobi, Sukhbaatar); gender, with two strata (female and male); age, with four strata (15-24, 25-34, 35-44, 45-49(Female)/(54-Male)). Combining these characteristics, we have 8 groups in each aimag. Each herder must be assigned to exactly one group.

In order to draw a representative sample of herders, it was critical to have access to administrative data, such as population registries at the aimag (or soum) level and contact details of the herders.⁶ Based on IRIM's previous experience implementing nationwide surveys, the IRIM team contacted local administrative units to request the herders' contact details with official letters from Ministry of Labour and Social Protection (MLSP) and ILO.

The IRIM team employed the following approaches to obtain contact details of herders in target areas.

Figure 2. Approach to obtaining comprehensive contact details of herders in target areas



3.3.2 Caveats

Due to the pandemic, it was not possible to collect the data in the field. Hence, the survey was implemented over the phone and using CATI. In order to prevent lower response and completion rates because of practical reasons such as low signals and phone battery levels on the respondents' side, a series of actions were taken to reduce these risks including prenotification SMSs and providing incentives. The use of CATI also affected some respondents' comprehension of the survey. For this study, the questions had to be crafted keeping in mind the cognitive burden of the entire interview process.

⁶ Livestock and domestic animals, fences, wells census are conducted yearly

But, due the length of the questionnaire, some respondents dropped out before completing the questionnaire. In such cases, interviewers continued the survey once respondents become available by calling them back. Accordingly, the data collection was delayed until November.

Second, the data collection team was dependent on the contact list of herders to be provided by local social insurance authorities. However, contact details in some target areas were very limited and the number of herders in the lists was below the total number of herders in their areas. Therefore, the selection of herders was completely kept within the lists of herders provided by local authorities.

4. MONGOLIA: HERDERS AND SOCIAL INSURANCE SYSTEM

This chapter starts by describing the main demographic, social, and economic characteristics of Mongolian herders and their current health and social insurance coverage level. It follows the identification of the main legal provisions outlining the current legal environment for herders' social and health insurance. The results from the legal review are analyzed in combination with the findings from the stakeholder analysis and interviews and presented in order to identify gaps and issues on the normative and implementation sides.

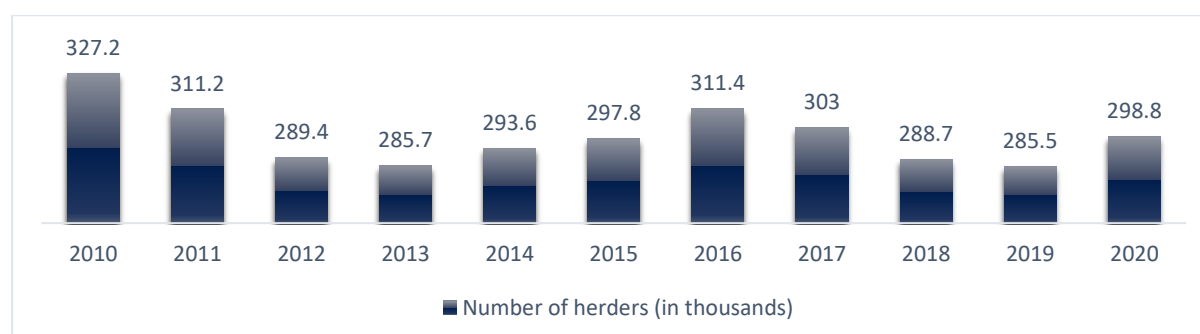
4.1. Mongolian herders

For centuries, Mongolians have been nomadic pastoralists and have acclimatized themselves to the environmental and climatic features of the geographical location, making livestock products as their main source of livelihood. Therefore, not only herders but also the Government of Mongolia has been paying attention to sustainably maintaining the traditional forms of animal husbandry that are environmentally friendly and improving the livestock yield. Mongolians have a long-standing tradition of gifting livestock to each other and raising the gifted animals, and it is common for people to own a certain number of animals despite residing in urban areas and not engaged in animal husbandry. Furthermore, in recent years, there has been an increase in the number of entities and individuals engaged in livestock breeding for business purposes (National Statistics Office, 2019). Given the need to develop and implement government policies for herders, concepts such as "a person with a livestock" and "herder" were distinguished. A herder is a person who earns a living by herding livestock throughout the year. This study will also employ this definition to examine the lifestyles of herders, the risks they may face, and their behaviour towards these risks.

4.1.1. Demographic characteristics

According to the NSO, the number of herders has been decreasing over time. Between 2010 and 2020, the number of herders decreased by 28.9 thousand or 8.8%. As of 2020, Mongolia registered 298,789 herders, of which 58.3% were men. Overall, 19.9% of the Mongolian population lives in a herder household and 24.1% of the total workforce is employed in the livestock sector (National Statistics Office, 2020).

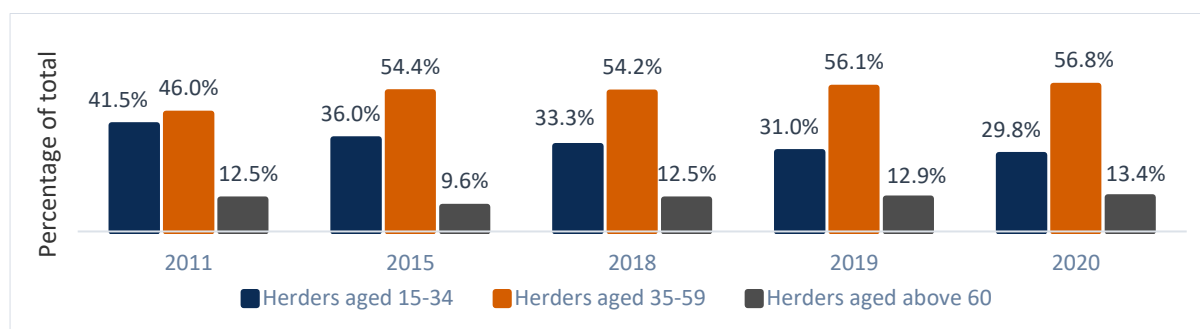
Figure 3. Herders' population trend, 2010-2020



Source: Mongolian Statistical Information Service: http://1212.mn/tables.aspx?TBL_ID=DT_NS0_1001_022V1

In recent years, the share of young herders aged 15-34 has been declining. In 2011, herders aged 15-34 accounted for 41.5% of the total number of herders, but in 2020 their share decreased to 29.8%, a decrease of 11.7 percentage points. Over the same period, the share of herders aged 35-59 increased by 10.8 percentage points, and the share of herders above the age of 60 increased by 0.9 percentage points. This indicates that the number of herders is not only shrinking, but also that the inflow of young herders has been declining in recent years. To put it differently, the aging process for those working in the livestock sector is intensifying (National Statistics Office, 2020).

Figure 4. Herders' age structure, 2011-2020



Source: National Statistics Office (2019)

The statistics also indicate that the gender ratio among herders is changing. While female herders account for more than half of the herders in the age group 35 and older, male herders dominate among the younger age groups. The increasing gender gap among young herders may have negative impacts such as late marriages, decline in birth rates, sexually transmitted infectious disease and increased migration among herders (Center for Health Development, 2019).

Eighty-one percent of all herders are married, and the majority has registered their marriages. About 13.1 percent of herders is not married, 4.9 percent is widowed, and the rest is either divorced or separated (National Statistics Office, 2020). A recent study among female herders indicated that women usually get married between the age of 18 and 25 (National Human Rights Commission of Mongolia, 2020). The number of widowed herders is increasing with age and mainly affects women indicating higher male mortality rates (Center for Health Development, 2019).

Table 5. Marital status of herders, 2020

	Not married	Registered marriages	Not registered marriages	Separated	Divorced	Widowed	Total (%)
15-24	68.3	24.7	6.7	0.1	0.1	0.1	100
25-34	19.1	70.4	9.4	0.3	0.4	0.4	100
35-44	6.4	86.2	4.6	0.6	0.9	1.4	100
45-54	4.5	85.0	3.9	0.9	1.1	4.6	100
55-64	4.0	78.9	3.1	0.9	1.0	12.1	100
65+	3.2	60.5	1.5	0.5	0.4	33.9	100
Total	13.1	75.4	5.3	0.6	0.7	4.9	100

Source: National Statistics Office (2020)

4.1.2. Socio-economic characteristics

Education

Following the transition into the free-market economy and privatization of the cooperatives' livestock in the 1990s, many children dropped out of school to herd livestock. As a result, a large number of herders that is now in their 30s and 40s is illiterate. Illiterate herders are less likely to receive relevant information in a timely manner, and in addition to that, due to the lack of teachers and social workers in the local areas, officers and professionals cannot reach out to herders in rural areas.

Overall, 22.2 percent of all herders have primary, 39.4% have basic, 24.1% have secondary education, 6.3 percent have technical and vocational education, 4.5 percent have higher education, and 3.5 percent have no education (National Statistics Office, 2020). It is worrying that even among young herders, almost 5% have no education. Overall, the educational level of the herders is much lower compared to the general population (National Statistics Office, 2020).

Table 6. Education level of herders, 2020

Hac	No education	Primary	Basic	Secondary	Technical and Vocation education	Bachelor	Total (%)
15-24	3.6	13.3	38.9	31.6	7.9	7.9	100.0
25-34	4.1	21.2	29.6	28.8	6.6	6.6	100.0
35-44	4.0	27.1	44.5	19.8	1.6	1.6	100.0
45-54	2.2	12.3	46.1	29.2	8.1	8.1	100.0
55-64	2.9	24.7	39.9	18.3	11.1	11.1	100.0
65+	4.5	50.5	22.6	8.9	9.1	9.1	100.0
Total	3.5	22.2	39.4	24.1	6.3	6.3	100.0

Source: National Statistics Office. (2020). Sector Publications: Agriculture.

Employment

Overall, 24.1% of the total workforce is employed in the livestock sector (National Statistics Office, 2020). According to the Herders' Welfare Survey (Labor and Social Protection Research Institute, 2018), 87% of herder household members aged 15 and above work in the livestock sector, 11.2% have paid employment, 1.2 percent in household business and 0.6 percent have unpaid work (Labor and Social Protection Research Institute, 2018).

According to a study conducted by the Green Gold project, Swiss Agency for Development and Cooperation (Voltolini et al., 2015), in Mongolia an average female herder spends 9.2 hours a day and a male 11.1 hours a day on livestock production. The average hours worked per week by herders exceeds the 40-hour work week norm by 24.4 to 37.7 hours. Herders have the shortest work weeks from September to February of the following year, while the busiest period is between June and September. During the summer, there are seasonal work such as milk and dairy processing as well as haymaking and fodder preparation. On an average day, a herder performs between 20 to 30 different types of tasks, and the allocated time varies depending on features of the livestock production activity. According to the Herders' Welfare Survey (Labor and Social Protection Research Institute, 2018, p. 42), 88.8% of herders spend more than 9 hours per day on their livestock.

This amount of time is significantly reduced when herders have assistants (seasonal or permanent employees), one of the emerging phenomena in the livestock sector. Some herder families or herders started hiring herders as their assistants if they are unable to herd their animals themselves. Recently, an amendment to the Labour Law includes provisions to consider assistant herders as herders. Accordingly, as prescribed in Article 71.8 of the Labor Law, assistant herders shall pay for their social insurances on a voluntary basis (Unified Legal Information System, 2022).

Health

According to the report of the National Human Rights Commission of Mongolia (2020), access to health services seem to be widespread among herders: 58.5% of the surveyed herders stated that they had access to soum health centers, 23% to aimag general hospitals, 10% to private hospitals, 3.7 % to Ulaanbaatar city hospitals, and 3.4 % to other aimag hospitals. Less than one percent did not have access and used instead mobile clinic services. According to the 'Herder Welfare Survey', almost 52.9% of them received medical services using the HIF. 35.3 % of herders covered by health care services received specialized medical care, 32.8% medical examinations and consultations, 29% preventive examinations, 12.8% antenatal care, 12.4% active medical supervision of children aged 0-1 years, and 9.9 % chronic disease control and 9.4 % received emergency medical care. Around 21 percent of herders who went to the hospital due to illness had cardiovascular and circulatory system diseases or experienced hypertension and heart rate changes; 11.7% had arthritis, 6.7 percent had gastrointestinal disease, 5.2 percent had injuries and poison, 3.8 percent had urinary incontinence or sexually transmitted disease, 0.5 percent had cancer, and 0.7 percent responded they were not sure.

4.1.3. The herder economy

One of the main factors influencing herders' access to social and health insurance is their economic capacity, namely their household income and expenditure. There have been many studies conducted in the past on the socio-economic status, income and expenditure of herder households. (Labor and Social Protection Research Institute, 2018; MMCG, 2018; People in Need and Mercy Corps, 2018).

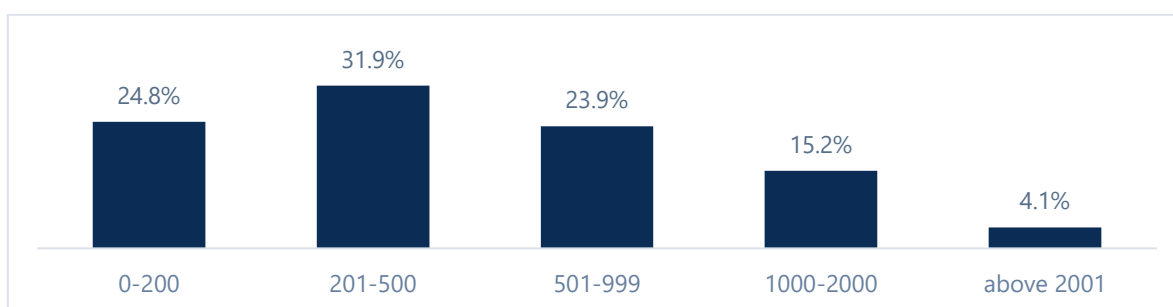
As the NSO does not conduct surveys on household economic status, income, and expenditure specifically for herder households, this study primarily used the secondary data from the study on herder households' livelihoods, employment, consumption, property, and social and health insurance coverage conducted by Labor and Social Protection Research Institute (LSPRI) of MLSP.⁷

Livestock and other assets

Livestock is the most important asset of a herder. In order to make the number of livestock comparable, all the of livestock was converted to sheep headcount (1 cow = 6 sheep, 1 horse = 7 sheep, 1 camel = 5 sheep, 1 goat = 0.9 sheep). 56.8% of all herder households have up to 500 livestock units, 23.9% have 501-999 livestock units, and 19.3% have more than 1000 livestock units or livestock converted to sheep headcount.

⁷ The study surveyed 1050 herder families from 24 soums of 8 provinces representing different regions

Figure 5. Number of livestock of herder households, converted to sheep headcount



Source: Herder's Welfare Study (LSPRI, 2018)

With respect to other assets, some herder households have apartments, comfortable houses, tractors, cars, refrigerators, and internet access, while other herder households live in poor housing conditions without electricity. Eighty-seven percent of herder households live in gers. In addition, 61% use renewable energy, 21% use small generators, but 2% have no electricity at all. For heating, 98% rely on stoves. 68% of the surveyed herder households have their own winter land and 41% have spring land. 84% of all herders have some kind of mechanical vehicle (LSPRI, 2018, p. xi).

Income source and composition

The main source of income for herder households is income from livestock and livestock products. However, herder households have other sources of income in addition to livestock income. For instance, 95% of all herder households have some income from animal husbandry, 75% of all herder households receive income from pensions and benefits, 17% receive a salary, and about 10% have income from a household business or other sources (LSPRI, 2018).

Depending on the source of information, income from animal husbandry accounts for 67 to 88.2% of the total herder household income. According to the LSPRI (2018), 67% of herder household income is from animal husbandry, 17% is pension and benefit income, 11% is salary, and the rest is from other household businesses and other income sources. Based on the MMCG (2018) study from the same year, 88.2% of the total income of herder households is from animal husbandry, 8.1% is pension and benefit income, 2.4% is salary, and the rest is household business and other income.

Table 7. Herder household income composition

Income type	Percentage
Sale of wool and cashmere	45.3%
Livestock and meat sales	39.0%
Sales of animal skins	2.5%
Sales of dairy products	1.4%
Pensions and benefits	8.1%
Salary and wages	2.4%
Other	1.2%

Source: Socio-economic Baseline Study of Herder Households (MMCG, 2018)

The share of income from animal husbandry and dependency on income from animal husbandry vary depending on the location. For example, income from animal husbandry in soum centers is 42 percent of total income, while the share is over 60 percent for herder households in the capital city and aimag

centers and 73 percent in rural areas (LSPRI, 2018). The closer a herder household is to the settlements, the higher its share of total income from other sources other than livestock.

The average monthly income of herder families was 959,000 MNT in 2017, amounting to an income of 11,508,000 MNT per year. The average monthly income varies depending on the location.

Table 8. Average monthly income of herder families, locations, in thousand MNT, 2017

Location	Salary	Pension and benefits	Income from animal husbandry	Household business	Other	Average income
Ulaanbaatar	560.4	335.0	825.1	325.0	300.0	1197.7
Aimag centers	980.6	286.8	791.7	1587.1	148.5	1210.7
Soum centers	733.5	250.8	429.0	373.6	230.8	924.8
Rural areas	447.7	189.0	666.0	781.7	167.3	874.6
Total	616.4	219.8	673.8	874.7	182.2	959.0

Source: Calculated based on the numerical data from Herder's Welfare Study (LSPRI, 2018). Income by source is the average over those households that reported that type of income. For example, the average monthly wage income of a herder household who earns wage is 616.5 thousand MNT, and the average monthly income from pension for pensioners is 219.8 thousand MNT. The average income in the last column of the table represents the average monthly income of all households.

As of 2017, 68.2% of all surveyed herders had an average monthly income of up to MNT 900,000, 24.5% had an income of MNT 900,001-2,100,000, and 7.3% had an income of more than MNT 2,100,001 (LSPRI, 2018). The majority of herder households, or about 70 percent, have an average monthly income of less than MNT 959.0 thousand and are living near the poverty line.

The income of herder households varies from month to month, with seasonal fluctuations depending on the cycle of nomadic herding activities and weather conditions. The MMCG (2017) study showed that herder household incomes are highest in spring and lowest in winter (3.3 times lower than in spring). The study also revealed that the average annual income of a female-headed herder household is 32% lower than the average herder household income of MNT 10.5 million, or about MNT 7.1 million per year.

Table 9. Seasonal fluctuations in herders' annual income

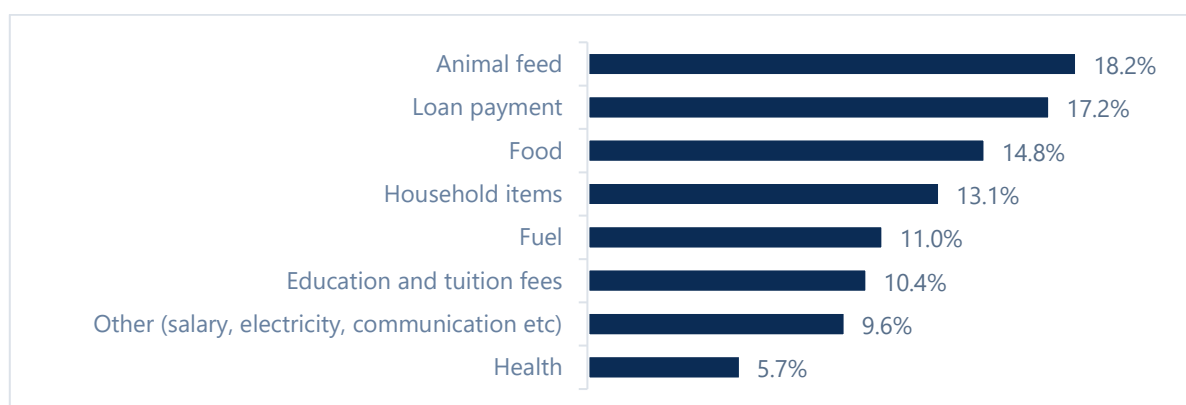
Season	Income	Percentage
Spring	5,025,920	48%
Summer	1,736,569	16%
Fall	2,246,302	21%
Winter	1,538,678	15%
Average annual income	10,547,468	100%

Source: Socio-economic Baseline Study of Herder Households (MMCG, 2018)

Expenditure

On average, herder households spend MNT 1,227,000 per month. The cost of animal fodder, which is attributed to animal husbandry, is the highest expenditure, accounting for about 20% of the total spending (LSPRI, 2018). The second largest component of herders' expenditures are loan payments. This may be due to the fact that herders buy assets such as motorcycles, cars and televisions on consumer loans.

Figure 6. Composition of expenditure



Source: Calculated based on the numerical data from Herder's Welfare Study (LSPRI, 2018).

Average monthly expenditure also varies depending on the location. It is highest among herders located in the capital city with 1,721.7 thousand MNT (+ 40%). Herders in aimag centers spend 1,473 thousand MNT (+ 20%), in soums centers 1,247 thousand MNT (+ 2%), and in rural areas 1,117.4 thousand MNT (-9%). This suggests that the farther away from the settlements, the lower the cost to herder households (LSPRI, 2018). In terms of expenditure, 52.2% of all households spend an average of MNT 900,000 per month, and 47.8% spend more than that.

4.1.4. Herders' risks and insurance

Herders, similar to workers in other sectors, are at risk of short-term or long-term disability, death or retirement due to common illnesses or domestic accidents. However, they are more likely to be exposed to these risks than others since they are engaged in nomadic pastoralism. This is because nomadic herders live and work in harsh environments and have limited immediate access to basic social services such as health, education, and finance (Ahearn, 2018).

Especially, changes in ecosystems and biodiversity caused by climate change do not only pose a major challenge to herders but also have started to affect their livelihoods and livestock production (Ministry of Environment and Green Development, 2014). In particular, as a result of increased frequency of natural disasters such as dzud, drought, dryness, rain, snow, storms and floods, the amount of damage to animal husbandry increases and herders may face accident and life-threatening risks. Table 10 lists disasters, catastrophes and accidents that affected herders in 2018-2019 (Emergency Management Office, 2019).

Table 10. Frequencies of external shocks affecting livestock, 2018-2019

Indicators	2018	2019
Cases of catastrophes and accidents	4,373	4,990
Number of herders affected by the catastrophes and accidents	304	262
Percentage of herders affected catastrophes and accidents	6.95	5.25
Livestock loss	1,906,565	26,134
Amount of damage, billion MNT	467.3	35.8

Source: Comprehensive information on disasters, catastrophes and accidents in 2019: <https://nema.gov.mn/n/94381>

As a result of disasters and catastrophes, in 2018, 29 herders died, of which 12 disappeared while tracing their livestock, 15 died due to floods, two due to fire risk; in 2019 seven herders died, of which 6 disappeared while tracing their livestock, and one was struck by lightning. In 2018-2019, a total of 566

herder households lost 1,932.7 thousand head of livestock worth MNT 503.1 billion. This often has a devastating effect of the herders' living standard, leading to poverty.

In a recent survey on the wellbeing of female herders (National Human Rights Commission of Mongolia, 2019, p. 29), respondents were asked about cases of injury while herding under harsh weather conditions. 28.9% of the survey female herders stated that they had suffered an injury in some way. With respect to the nature of injuries, 32.1% reported to had been bitten, kicked, or trampled by animals, 20.7% fallen from horses or camels, 19.0% sunburnt, and 14.4% had their fingers, toes, face and ears frozen, 13.4% had injured their hands, legs, neck or head by slipping and falling and 0.3% suffered from injury when the yurt collapsed as a result of natural disasters (National Human Rights Commission of Mongolia, 2019, p. 29).

However, access to health care is continuously threatened by the administrative and quality challenges perceived by the herders: 21.4% of herders mentioned that the hospital staff had poor communication and attitude; 19.2% did not have any problems, yet there was a long queue for hospital services, 17.5% were not admitted and asked to visit the hospital another day; 17.2% experienced poor hospital conditions and inadequate access; 15.1% did not have time to visit the hospital due to a small number of family members who would tend the livestock and 9.6% did not have access to medical services as they live in remote areas (National Human Rights Commission of Mongolia, 2019, p. 70). This shows that access to health care is unsatisfactory and it can be considered as one of the factors that discourage the motivation of those who can register voluntarily to the scheme.

Moreover, according to the Herder Welfare Survey (Labor and Social Protection Research Institute, 2018), 3.9 percent of herders have a disability, of which 32.5% are congenital and 67.5% are acquired. The proportion of people with acquired disabilities above the age of 25 is quite high.

Nevertheless, ensuring access to health care requires adequate access to health insurance as well as nationwide quality, adequate health facilities and staff. For example, women still give birth at home due to the fact that they live remotely, poor infrastructure, challenging weather conditions, and herders' concern for their own health. Therefore, social and health insurance is an important instrument that could compensate for the damages that may occur in relation to occupational, health or social security risks that herders may face.

4.2. Key stakeholders in the provision of social and health insurance for herders

One of the two main objectives of the research was identifying bottlenecks in the service delivery of the Government in the area of social and health insurances that delimit the effective coverage of herders. Accordingly, the stakeholder analysis aimed at identifying key stakeholders and determining the effectiveness of current policies and the potential of new policies. The methodology adopted for the analysis included reviewing existing legal and policy documents, forming the preliminary list of stakeholders, and conducting interviews among stakeholders. These interviews were used to identify the stakeholders' roles, responsibilities, as well as identification of challenges and opportunities with regard to social insurance law and procedures, and delivery of services.

As stated in all relevant legal and policy frameworks, relevant stakeholders in the provision of social insurance for herders could be classified within four broad categories. The broad categories include stakeholders at three levels including policymaking (macro), implementation (meso), and execution (micro) level, and other relevant stakeholders. Moreover, as of 2021, there are two implementing agencies under the structure of the the Government of Mongolia (GoM) that are responsible for social and health insurance of citizens: (1) the General Authority for Health Insurance (GAHI) operates under the competence of the Minister of Health; and (2) Social Insurance General Office (SIGO) operates under the competence of the Minister of Labor and Social Protection. The following table shows main stakeholders identified based on the key stakeholder analysis and key informant interviews conducted among relevant parties and herders.

Table 11. Categories of main stakeholders

Level		Stakeholders
Decision-makers	Macro	Ministry of Labor and Social Protection: Social Protection Policy Implementation Coordination Department Ministry of Health (MoH) Ministry of Food, Agriculture, and Light Industries Social Insurance General Office General Authority for Health Insurance
	Meso	Local Social Insurance Authorities
Policy implementers	Micro	Social Insurance Officers at the soum level Bagh governors
	Other stakeholders (Micro)	Cooperatives and Partnerships of the Herder Communities Mongolian Association of Elderly People Local bank branches Herders

Stakeholders directly involved in the social insurance relationship were soum social insurance inspectors, employees, employers, policyholders, herders, and the self-employed. Stakeholders supporting the social insurance relationship were soum and bagh governors and employees of local banks and financial institutions. The third category (stakeholders regulating the social insurance relationship) are employees of relevant departments of the MLSP, representatives of SIGO, along with representatives of aimag and capital city social insurance departments.

Stakeholders regulating the social insurance relationship

In Mongolia, the Parliament, the Government, the Ministry of Labour and Social Protection, and their agencies are responsible for developing social insurance policies. Meanwhile, the Policy Implementation Department of the MLSP, and relevant departments of the SIGO, are responsible for implementing and enforcing the existing laws and regulations relating to social Insurance in Mongolia.

Stakeholders directly involved in the social insurance relationship

In rural areas, aimags, and the capital, governors and local social insurance departments are responsible for supervising and implementing social insurance activities. According to the NSO, as of 2020, Mongolia has a total of 339 soums. Out of 339 soums, 9 soums have 2-5 social insurance inspectors and the remaining 330 have only one social insurance inspector each totalling 352 inspectors.

Social insurance departments (or inspectors) at soum level are responsible for:

- organizing the implementation of social insurance legislation,
- registering local employers and the insured,
- collecting contributions,
- providing voluntary insurance for herders and the self-employed, and
- calculating and distributing pension and welfare benefits.

Local social insurance departments, in cooperation with soum and bagh governors, are working to enroll herders in social insurance and raise awareness about the benefits of social insurance. They are also making cooperation agreements with herders and providing information to them as they collect wool, cashmere, and meat. They regularly collaborate with non-governmental organizations and commercial insurance organizations, international and domestic projects, and programs.

Stakeholders supporting the social insurance relationship

Soum and bagh governors are responsible for the prompt delivery of public services to the citizens living in their respective territories. Interviews with social insurance inspectors revealed that soum governors are often accompanied by social insurance inspectors on visits to remote baghs to meet herders and learn about their livelihood.

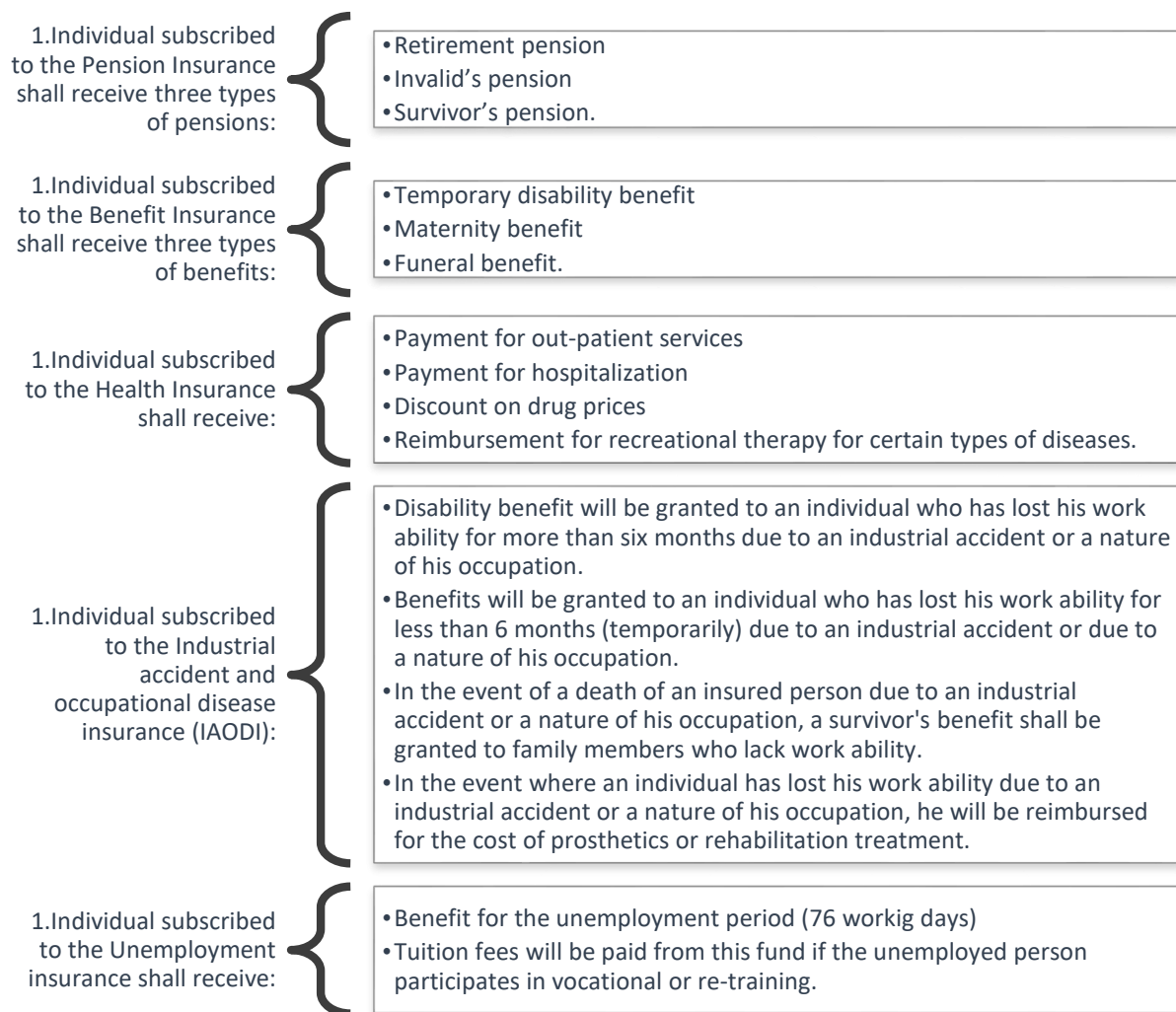
Interviewees also mentioned commercial bank employees who used to support the social insurance enrolment of herders. Formerly, the central social insurance authority had signed a cooperation agreement with commercial banks, requiring herders to have social insurance coverage when applying for loans. However, this cooperation no longer exists. Currently, other than soum and bagh governors, no partners are actively supporting the enrolment of herders into social insurance.

4.3. Main legal provisions and current coverage rates

In 1994, the Parliament of Mongolia passed a new bill regulating social insurance relations that came into force on January 1, 1995. The newly enacted set of Social Insurance Law regulated five different schemes providing several benefits. As stated in the law, the schemes are financed through mandatory or voluntary contributions by the insured, the employers (entities), and the state, depending on the insured's employment status.

The Law on Social Insurance regulates five different schemes providing several benefits. The five different schemes include Pension insurance, Benefit insurance, Health insurance, Industrial accident and occupational disease insurance (IAODI), and Unemployment insurance. Health insurance is the only mandatory scheme for all Mongolians. Citizens are included in the other four schemes on a mandatory or voluntary basis. The self-employed and herders are insured on a voluntary basis, while those who have an employment contract with a business entity or organization are compulsorily insured.

Figure 7. Social insurance benefits provided under 1994 Law on Social Insurance



Source: Social Insurance General Office (SIGO)

Article 4.2 of the Law on Social Insurance regulates the compulsory social insurance of persons under employment contracts with citizens, business entities, or organizations, while Article 4.3 stipulates that those who are not employed or self-employed can be insured on a voluntary basis. Since herders are adherent to Article 4.3 of this law, it is their choice whether to subscribe to social insurance or not. However, once a herder decided to sign up with social insurance, legal provisions kick in. Voluntary insured persons (herders) are obliged to select the entire package including Pension, Benefits, and IAODI. It is not possible to select only one or two benefits.

Amendments to the 'Law on Pensions and Benefits Provided by the Social Insurance Fund' in 2017 (effective in 2018) decreased the retirement age by five years. Accordingly, a male herder who has worked for a minimum of 20 years, of which at least 15 years were spent on animal husbandry will retire at the age of 55, and a female herder who has worked for a minimum of 20 years, of which at least 12 years and six months on animal husbandry will retire at the age of 50.

In 2017, the State Great Hural (Parliament) approved the 'Law on Retrospective Payment of the Pension Insurance Contributions for Herders and Self-employed'. This law came into force in 2020 and was meant to strengthen the herders affiliation to social insurance. It gives herders and self-employed workers who failed to pay their pension insurance contributions in the past the opportunity to pay the contributions after all. The contribution for the missing years is set at 10% of the minimum wage. This law allowed herders who were approaching the retirement age to make up for the missing contributions before the actual pension entitlements were calculated by the pension fund. A similar legal provision exists for the payment of health insurance contributions. Herders (and other citizens) that have not paid their health insurance contributions in previous years, are still entitled to receive health care services upon re-paying their contributions retro-actively.

4.3.2. Current coverage rates

As of 2020, 97% of the working age population was covered with either social and/or health insurance. This high rate is explained by the mandatory health insurance. Between 2010 and 2015, the number of social and health insurance contributors almost doubled from 591 thousand to 989 thousand persons. Hence, the coverage rate increased considerably from 51.5% to 79.5% of the working age population. Both compulsory and voluntary contributors increased during that timeframe. Between 2015 and 2020 the coverage rate further increased, yet, the number of voluntarily insured persons who contributed to the SIF decreased after a peak in 2016. Only in 2020 the statistics indicate a noticeable rebound in voluntary contributors, yet they account only for 17% of all insured persons (National Statistics Office, 2021a).

Table 12. Social and health insurance statistics, 1995-2020 (in thousands)

	1995	2000	2005	2010	2015	2016	2017	2018	2019	2020
Labour force*	813	848	1,001	1,147	1,244	1,276	1,357	1,359	1,274	1,180
Insured	409	423	368	591	989	1,028	1,036	1,122	1,157	1,147
Compulsory	395	423	339	527	800	800	837	952	825	953
Voluntary	14	18	29	64	189	229	199	170	162	193
Coverage rate (%)	50.3	50.0	36.8	51.5	79.5	80.6	76.3	82.6	90.8	97.1

Note: *Eligible for social insurance are people of working age (labour force). Source: National Statistics Office (2021a)

According to the NSO, there were 298,789 herders in Mongolia at the end of 2020 (8.9% of the total population) of which 233,147 are of working age and, hence, eligible for social insurance. 74,984 herders (25.1%) were covered by health insurance, but only 49,049 (16.4% of eligible/potential herders) were enrolled in social insurance. Half (50.5%) of the voluntarily insured herders were women. Coverage seems to increase with age as predicted by the literature. Among the 45 to 49 year old herders, 24.5% are voluntarily insured, while only 15.3% of the 35 to 39 year old herders are insured (21.7% of aged 40 to 44 years; 16.0% of aged 50 to 54 years). The closer herders get to retirement age, the more interested they seem to be in eventually receiving a pension.

Table 13. Herder's health and social insurance coverage, 2020

Indicators	Total	Share
Total number of herders	298,789	100.0%
Female herders up to 50, male herders up to 55	233,147	78.0%
Herders with social insurance	49,049	16.4%
Herders (working age) with health insurance	74,984	25.1%
Herders and the self-employed benefitted from the 'Law on Retrospective Payment of the Pension Insurance herders Contributions for Herders and Self-employed'.	17,506	5.9%
Retirees who have been granted a herder's pension on preferential terms	17,216	5.8%

Source: Database of Information Technology Center, SIGO.

This is also confirmed by the interest in the retrospective payment of pension contributions as enabled by the 'Law on Retrospective Payment of the Pension Insurance herders Contributions for Herders and Self-employed'. According to SIGO, as of October 2021, 18,600 herders paid a total of MNT 38.4 billion as redemption for pension insurance contributions during 1995-2021. Slightly more than half of the herders that used the opportunity given by the law were women (55.6%), and most of them (95.5%) were over 40 years of age (or approaching retirement age and wishing to retire).

4.3.3. Contributions and funding

Between January 2019 and March 2021 an average of 3.02 million people were covered by health insurance, which is close to 93% of the Mongolian population. During this period, 70.6% of health insurance contributions were subsidized by the state, 23.6% paid by employers and 5.8% by the insured. Of those that paid the health insurance contributions themselves, 64.3% (117,850) were self-employed and 26.2% (48,020) were herders (National Statistics Office, 2021b). However, considering the revenue structure of the HIF, on average, 75.6% of the fund's total revenue was contributed by employers and insured persons, while 20.1% by the state budget, and 4.4% by contributions of the voluntarily insured.

Article 8.1 of the Law on Health Insurance stipulates that on the basis of the proposal of the National Health Insurance Council, the Government shall annually re-determine the rate of the health insurance contributions. As prescribed in Article 4.2 of the Law on Health Insurance of Mongolia, the state pays for the health insurance of children aged 0-18, citizens with no regular income other than pensions, a citizen in need of social welfare support, mothers and fathers taking care of their children aged up to 3 years, and persons on a regular military service and convicts. According to the Government Resolution No. 252 of 2020, citizens' monthly contributions payable by the state for the health insurance were MNT 8,400. Also, herders and the self-employed workers are required to pay a monthly health insurance contributions of MNT 4,200 (1% of the national minimum wage). But, monthly contributions payable by

both employees (2% of their wage) and their employers and/or enterprises (2% of their employees' wage) for the health insurance were 4% in total. For example, according to the official data released by the NSO, the average salary in Mongolia in the year 2021 was MNT 1200.0 thousand, and the compulsory insured pay an average of MNT (1200.0 * 2% = 24.0) thousand per month for the health insurance contributions. Also, employers who provide jobs for these insured also pay a similar amount of contributions; in other words, the compulsory insured with a salary of MNT 1200.0 thousand contributes MNT (24.0*2 = 48.0) thousand per month. While the Government has increased the contributions paid by the state in 2020, herders' payable contributions are still low. On the contrary, monthly contributions payable by both employees and their employers and/or enterprises are higher than others.

The following table shows the HIF revenue breakdown between 2019 and 2021.

Table 14. Total revenue of the health insurance fund, 2019-2021, MNT million

Revenue	2019	2020	2021 ⁸
All revenue of the HIF	469,617.4	487,806.8	503,744.2
Contributions by the enterprises	123,447.5	323,509.7	388,198.1
Contributions by the employees	150,369.6		
Contributions by the budgetary organizations	54,500.8		
Citizens' contributions paid by the state	83,804.1	84,016.1	83,101.9
Conscripts			302.0
Convicts serving sentences of imprisonment			552.3
Contributions by the other insured	14,759.0	14,676.4	17,042.5
Other revenue (other interest revenue)	42,736.4	65,604.6	14,547.3

Source: Database of Information Technology Center, SIGO.

In terms of expenditure, 86.8% of the total expenditure was disbursed on medical care, 3.5% on sanatorium care and 9.7% on drug discounts.

Regarding social insurance, under the framework of the current legislation, the contribution rates are set at 17.0% for Pension Insurance (8.5% by the employers and 8.5% by the employees), 1.8% for the Benefit Insurance (1% by the employers and 0.8% by the employees), IAODI (entirely paid by the employers) contribution ranging from 0.8% to 2.8%, and 0.4% for the unemployment insurance (0.2% by the employers and 0.2% by the employees), and 4.0% for Health Insurance (2.0% by the employers and 2.0% by the employees). For a total of 11.5% of the declared income paid by the employees, capped at 483,000 Mongolian tugrik (MNT) per month.⁹ Regarding the voluntary social insurance scheme, the contribution rates are set at 11.5% for Pension Insurance, 1% for the Benefit Insurance, and 1% for the IAODI. For a total of 13.5% of the reference salary.

Article 15.2 of the Law on Social Insurance prescribes that the reference salary on which social insurance contributions are paid shall not be less than the minimum wage determined by the Government and effective at the time, while the maximum amount of income subject to the contribution is set at ten times the minimum wage. Herders can determine their income within these boundaries and pay a

⁸ Preliminary performance

⁹ The Law on Social Insurance. Source: <https://legalinfo.mn/mn/detail/390>

contribution rate of 10% accordingly. In other words, the monthly minimum contribution is MNT 60.9 thousand (MNT 730.8 thousand annually), which is equivalent to the income from selling 15-20 sheep a year to receive the pension when they reach the retirement-age and be covered in the event of other social insurance contingencies. Social insurance contributions to the voluntary fund are entirely paid by the insured.

As of 2020, the SIF collected MNT 1,872.2 billion worth of revenues, of which 63.8% accounted for the pension fund, 7.6% for the IAODI insurance fund, 5.9% for the benefit insurance fund (BIF) and 1.4% for the unemployment insurance fund.

The following table shows the revenue and expenditure of the SIF.

Table 15. Revenue and expenditure of the Social Insurance Fund (SIF), by type of fund, MNT million

Indicators		2019	2020	2021, Preliminary forecast
Pension Insurance Fund	Revenue	1,469,476.9	1,198,381.0	1,842,185.1
	Expenditure	1,839,194.9	2,174,916.9	2,300,641.3
Benefit Insurance Fund	Revenue	157,542.1	111,300.4	140,479.6
	Expenditure	126,220.8	147,740.8	172,751.9
IAOD Insurance Fund	Revenue	210,956.8	142,068.0	125,623.4
	Expenditure	52,854.1	34,227.2	34,415.8
Unemployment Insurance Fund	Revenue	41,537.1	25,920.3	28,799.9
	Expenditure	44,000.2	94,911.0	57,754.0
State budget subsidy		605,492.8	399,417.6	593,852.5
HIF fund	Revenue	469,617.4	487,806.8	1,000,209.4
	Expenditure		1,100.0	1,100.0
All	Revenue	2,485,005.7	1,878,187.3	2,732,040.5
	Expenditure	2,062,270.0	2,451,795.9	2,565,563.0

Source: Database of Information Technology Center, SIGO.

With respect to the SIF expenditures of MNT 2,062.3 billion in 2019, 88.7% was disbursed on the PIF, 6.0% on the BIF, 1.4% on the IAODI insurance fund and 3.9% on the unemployment insurance fund. In the context of the retrospective pension insurance payment policy, MNT 15.8 billion has been spent on the pensions of 8,348 herders.¹⁰ The decrease of the retirement age of herders (effective since 2018), as of April 2021, a total of 18,543 thousand herders received old age pensions and MNT 20.9 billion was allocated for their pensions. The average pension of a herder was MNT 354 thousand per month.¹¹

Amendments introduced into the Law on Pensions and Benefits from the Social Insurance Fund stipulate that the Social Insurance Fund pays 50% of the insurance contributions for mothers (herder and self-employed) for the duration of caring for children of up to three years of age.¹²

¹⁰ Source- Social Insurance General Office

¹¹ Source-Social Insurance General Office

¹² Articles 3.3.1, 3.6.1, 3.6.2 of the Law on Pensions and Benefits provided by the Social Insurance Fund

Due to the global outbreak of COVID pandemic, the Government of Mongolia has provided financial support to the those who are voluntarily subscribed to social insurance by offering a contributions discount or an exemption. Specifically, between April and September 2020, the insurance contributions payable in consideration of the minimum wage was exempted; while between October and December 2020, the payable contributions were set at 5.0% and from January to June 2021 it was payable at 8.5% or exempted from the remaining 6.0%¹³. As of March 2021, a total of 169.2 thousand voluntary insured have received MNT 72.5 billion worth of contributions discounts and exemptions.¹⁴

4.3.4. Social insurance reform policies

Given the low enrolment of herders in the voluntary social insurance schemes, the Government has considered other directions and policies to increase herders' social insurance enrolment. In 2015 the Parliament approved the *State Pension Reform Policy 2015/2030* (Parliamentary Resolution No. 53). This contained clear policy guidance on the social protection of herders. For example, the resolution sought to establish a special compulsory pension insurance program for herders, the self-employed, and those working in the informal sector. To do this, the following activities were expected to be undertaken:

- Establishment of a special pension insurance fund for herders, self-employed and informal workers, and regulation of the amount and duration of contributions, retirement age, and the calculation and payment of pensions.
- Covered by the State, of at least 50% of the pension insurance contributions for herders, self-employed and informal workers, and regulation (by law) of the period for the cover of pension insurance contributions.
- Simplification and clarification of the methodology for calculating pensions, and the amount of pension to be dependent on the length of time the insured has paid contributions.
- Collection of contributions by the social insurance organization within a special fund, documentation of the contributions paid by the insured (and the contributions paid by the state), and informing of the insured.
- Investment in government bonds, securities, and other low-risk banking, financial, and capital markets, in order to increase the accumulated assets of the special fund.
- Increase the accumulated assets of the special fund, investment in government bonds, securities, and other low-risk banking, financial, and capital markets.

In addition to that, following the Resolution No. 34 of January 29, 2020, the Government of Mongolia approved the "Mongolian Herder" National Program for 2020-2024. Within the framework of the program, it was planned to undertake an awareness-raising campaign and promote the SIF among herders (Government of Mongolia, 2020).

¹³ Articles 2.2¹ and 2² of the Law on the Exemption from Social Insurance Premiums and Providing Support from the Unemployment Insurance Fund

¹⁴ Source- Social Insurance General Office

4.4. Gaps and issues (laws and policy frameworks)

The research team conducted a detailed study of the legal environment and the interrelationships among stakeholders to identify the problems on the legal and implementation sides. The following findings are based on data collected specifically for the study, interviews with stakeholders, and the review of laws and regulations,

4.4.1. Legal side (laws and policy frameworks)

Getting herders to engage in social insurance schemes presents significant challenges related to the distances and time involved. In response to seasonal demands and a harsh and extreme climate, herders are constantly moving between pastures, grasslands, and waterways. Therefore, there is a need to create an insurance system tailored to their needs and situations. In Mongolia, the following laws are in force governing the social insurance coverage of herders.:

1. Law on Social Insurance (1994)
1. Law on Pensions and Benefits Provided by the Social Insurance Fund (1994)
2. Law on Pension, Benefits, and Payments provided by the Social Insurance Fund in Respect of Industrial Accidents and Occupational Diseases (1994)
3. Law on Procedures Concerning the Application of Social Insurance Laws (1994)
4. Law on Individual Pension Insurance Contributions (1999)
5. Law on Retrospective Payment of Contributions for Employment Years and Pension Insurance (2012)
6. Law on Retrospective Payment of the Pension Insurance Contribution of Herders and the Self-employed (2017)

A careful review of the core concepts and relevant provisions of the aforementioned laws and the aspects that might potentially affect herders' social insurance coverage, identified the following issues.

- **The Law on Social Insurance allows herders to voluntarily contribute to social insurance, resulting in low coverage.** There are two types of social insurance coverages available, compulsory and voluntary. The self-employed, herders, and freelancers fall under the voluntary social insurance. The fact that the demographic groups are divided into compulsory and voluntary groups based on their occupation grants certain groups a right not to subscribe to a coverage. Moreover, calculating the voluntary insurance contributions in relation to the minimum wage means that the future pensions and benefits of the voluntary insured who are interested in paying the minimum contributions could be lower among these groups.
- **Restricting the contributing herders' right to select an insurance that meets their needs from the social insurance package and obliging them to take the full insurance package adversely affects herders' motivation to take up social insurance coverage.** As stated in article 4, herders are obliged to take Pension, Benefits and IAODI as a package. This all-or-nothing policy has driven herders away, rather than acting as a leverage for coverage. In particular, it obliges those that are not working, for example mothers who are caring for their children, to select the IAODI. Requiring herders to choose (and pay for) in their eyes irrelevant insurance has a negative impact on herders' willingness to take up the social insurance package. This in turn adversely affects the financial sustainability of the social insurance fund.

Moreover, as stated in the Article 7 of the 'Law on Social Insurance', the insured persons shall not receive pensions or benefits from a same type of social insurance fund in a duplicate manner. However, according to the interpretation of the Supreme Court, five types of social insurance funds are understood as one fund, and more than one type of benefits and pensions will not be available from two different social insurance funds, in a duplicate fashion. And the insured persons are entitled to select the more favorable pension (or benefit) only once. For example, in the case of an insured receiving an invalid's pension after an industrial accident, it would no longer be possible to reimburse the cost of rehabilitation treatment from the IAOD Fund. This sets a limit that despite contributing to five types of funds, the citizens shall not be able to receive more than one type of pension or benefit at the same time. Accordingly, it is meaningless for the insured to subscribe to the IAODI compulsorily while not having right to recover his/ her potential risks.

- **The social insurance system is considered actuarially unfair.** Although it is appropriate to take the specific characteristics of demographic groups into account, the total insurance contributions schedule is deliberated differently for each demographic group. For example, specific demographic groups with occupations indicated in Article 4 of the Law on Social Insurance who have worked for 20-25 years are entitled to a pension from the Pension Fund. This seems to be an unfair distribution for those who have been continuously contributing since a young age, and that eventually receive a similar pension despite having been contributed for more years or contributed more contributions. This negative outlook may induce some citizens to not sign up for social insurance coverage. Moreover, the principle of fair distribution of the pension insurance fund has been violated.
- **Laws and regulations approved in relation to the retrospective payment of social insurance contributions do not only instigate herders but also other citizens to not sign up for insurance.** They rather have their insurance retrospectively paid and may wait for a similar legislation to be adopted in the future. This leads to reduced coverage rates and is in contradiction to the provisions of the Law on Social Insurance, which states that "social insurance contribution is the advance payment made by the insured and the employer to the social insurance fund within the period specified by law for the purpose of social insurance." However, the Law on Retrospective Payment of the Pension Insurance Contribution of Herders and the Self-employed essentially violated this clause by allowing retrospective payments. Although this law provided an opportunity for herders nearing the age of retirement to make up for missed social insurance contribution payments, the implementation of this provision may cause young herders to delay seeking social insurance in favor of waiting for the next adoption of reinsurance law.
- **The social insurance contributions schedules and policy renewals are incompatible with herders' livelihoods and income generation intervals and may not only disrupt herders' contributions but also hinder herders' access to social security benefits and pensions.** As stated in the Paragraph 6 of Article 16 of the Law on Social Insurance, the voluntary insured shall pay social insurance contributions monthly, quarterly, semi-annually, and annually in accordance with the policy. While implementing this provision of the Law, social insurance organizations collect the contributions in advance and not retrospectively, that is at the end of the period. Depending on the payment schedule, this poses challenges for the herders. For example, herders face high fodder costs at the beginning of the year while earning no income. Revenues from cashmere comes in April and May, or from meat or livestock at the end of the year. Interviews with herders suggest that

herders are highly motivated to retrospectively pay their social insurance contributions in the second quarter of the year with the income they generate from the sales of wool and cashmere in the spring season. Unfortunately, the contributions for January to April of the year are not collected retrospectively, which negatively affects the insurance subscriptions.

Herders who have not been able to contribute for a quarter due to income instability experience an interruption in their contributions and will not be able to receive the benefits in case of need. For example, as stated in the Article 19, mothers have to pay the contributions of benefits insurance for at least 12 months before being eligible for maternity benefits. This in turn, adversely impacts their entitlement to pensions and benefits, especially when a basic requirement to eligibility to pensions and benefits is an uninterrupted contribution. According to this provision of the law, the possibility of the voluntary insured to receive this benefit is very low due to the incompatibility between the frequency of insurance contributions schedule and herders' livelihoods and income generation intervals.

4.4.2. Implementation issues

- **The sparsely populated way of life of nomadic herders makes it difficult to reach every herder, especially those residing in remote areas.** It is estimated that Mongolia's pastureland amounts to about one million km². Therefore, reaching out to and getting herders to engage in social insurance schemes presents significant challenges for social insurance staff, inspectors and governors given the distances and time involved. In response to seasonal demands and a harsh and extreme climate, herders are constantly moving between pastures, grasslands, and waterways. Therefore, it is difficult to identify their locations and reach out to herders in remote areas.
- **Lack of information on the possibility of receiving compensations from the Social Insurance Fund limits the ability of the insured to take advantage of the insurance and thus reduces their interest in the Social Insurance.** For example, herders are not always able to receive insurance compensation for accidents, childbirth and/or hospitalizations because the system is not flexible enough to request compensation. The main reasons for these are the remoteness of the soum centers at the time and a lack of manpower to seek emergency medical care and compensation. This is also due to herders' lack of accessibility to compensations, insufficient knowledge about pensions and benefits from the Social Insurance Fund, and poor outreach and publicity of insurance inspectors.
- **Local social insurance inspectors have limited financial resources to reach every herder.** Especially in some aimags, it requires a considerable amount of time and money to reach herders due to the geographical location. Moreover, the fact that planning and budgeting are currently not developed in consideration of the number of herders, the size of the area and the dispersion of herders results in varying workloads among local inspectors and unequal service provision. A total of 352 inspectors in 330 soums are serving 233,147 herders who are eligible for social insurance across Mongolia, with (on average) one inspector serving 662 herders. With respect to the number of local social insurance workers and the number of insured herders, one social insurance inspector is in charge of 166 herders in social insurance. Hence, the 352 inspectors lack both time and financial resources to reach out and provide services across this vast area.

4.5. Summary of achievements and issues

The herders of Mongolia are one of the world's last group of people still maintaining a nomadic way of life. Getting herders to engage in social insurance schemes presents significant challenges given the distance and time involved. In response to seasonal demands, and a harsh and extreme climate, herders are constantly moving between pastures, grasslands, and waterways. Therefore, there is a need to create a social and health insurance system tailored to their needs and situations.

The demographic composition of herders is slowly changing. The number of young herders is declining, and there are more male than female herders. Demographically, this has negative consequences for herders, such as leading to late marriages, declining birth rates and internal migration. Yet, on the positive side, the younger the herders are, the higher the level of their education. Three out of four herders have sufficient livestock to meet their basic livelihood needs. The main income stems from the sale of livestock and livestock-sourced products. Most of the income is used for fodder and loan repayments, which are the two main expenditures. Herders are more exposed to risks due to their living environment, climate and lifestyle. Due to their geographical location and nomadic nature, they have limited access to social services, especially in emergencies, they have limited access to health care services, timely information and public services.

The social insurance of herders is regulated by a total of seven key legislations. According to the Law on Social Insurance, herders are stipulated to voluntarily subscribe to social insurance and contribute a minimum of MNT 60.9 thousand monthly or MNT 730.8 thousand per year. As of 2020, only 16.4% of all herders are covered by social insurance, indicating extremely low coverage among herders.

There are several reasons to explain low social insurance coverage among herders. First of all, in terms of the legal environment, giving herders the right to voluntarily subscribe to the social insurance allows herders to make their own choices. This was a major factor instigating them not contributing to and not having a coverage. Furthermore, the fact that different demographic groups are entitled to a pension from the Social Insurance Fund in a dissimilar manner leads those who continuously contribute to view the SIF has an unfair distribution. Within the framework of the Law on Retrospective Payment of the Pension Insurance Contribution for Herders and Self-employed provides a certain advantage to non-contributing demographic groups by giving them an opportunity to make their contributions retrospectively and in some cases even allows the government to reduce the contributions creates a negative attitude among those who contribute continuously and fairly and leaving young herders to rely on similar legislation without subscribing to social insurance or delaying their contributions.

In addition, covered and non-covered herders' lack of knowledge about the benefits and fruits of contributing to the social insurance plays a part in the low enrolment. For example, despite having an entitlement to pensions and benefits, due to poor knowledge about compensation, benefits and pensions, the contributing herders are unable to enjoy the fruits of their contributions and may lose their confidence in the system. This is also due to the fact that herders, especially those in remote rural areas have limited access to information and publicity of social insurance. In particular, the fact that the local social insurance offices do not plan and budget for services in consideration of the number of herders and their geographical location limits the human, financial and technical resources that could outreach the local communities. As a result, herders in remote soums and rural areas are poorly informed about social insurance or do not understand its importance, and thus have low coverage.

5. HERDERS BEHAVIOUR TOWARDS SOCIAL AND HEALTH INSURANCE

This chapter presents the results from the survey conducted among 4,000 herders. The survey was designed to better understand the herders' attitudes towards and perception of the social and health insurance schemes. The first sections describe the demographic and socio-economic characteristics of the respondents and their households. Subsequently, the report analyses idiosyncratic lifecycle risks and respondents' awareness, knowledge, and perception of social and health insurance schemes. In the final sections the analysis concentrates on the factors affecting social and health insurance enrollment and retention and presents the results from a framing experiment among herders.

5.1. Personal and household demographics and socioeconomic status

5.1.1. Personal Demographics

Of the 4,000 interviewed herders, 55% are male and 45% female. Most of the respondents are the household head (55%), and out of those who are not, 82% are the spouse. The majority of the respondents are between 35 to 44 years old (39%) and about a quarter each are 25 to 34, or 45 to 54 years old (27% and 28% respectively). Four out of five respondents are married (81%).

Figure 8. Respondents, by age group

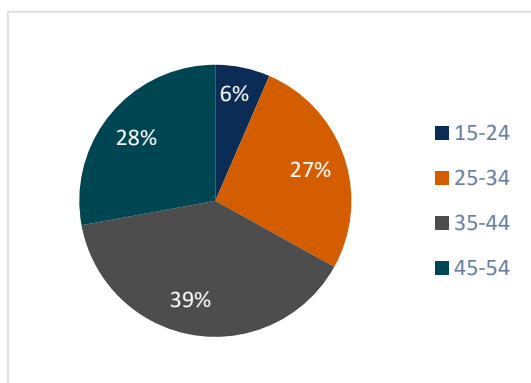
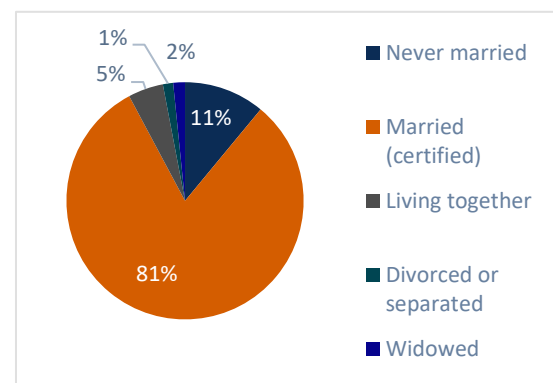


Figure 9. Respondents, by marital status



Over one third of the respondents have not completed secondary education, and only 8% of them has received a higher education. Assessing the gender distribution of education level, the share of women with secondary or higher education is slightly higher than for men.

Figure 10. Respondents' education level, by gender

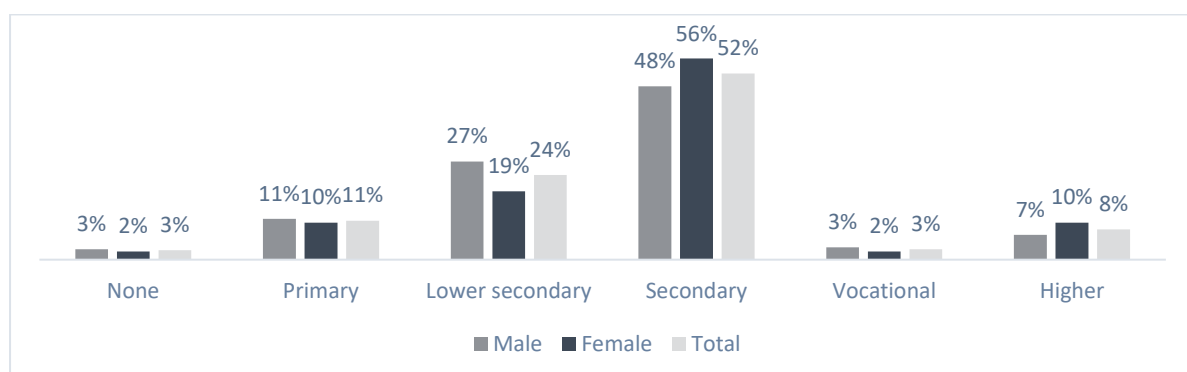
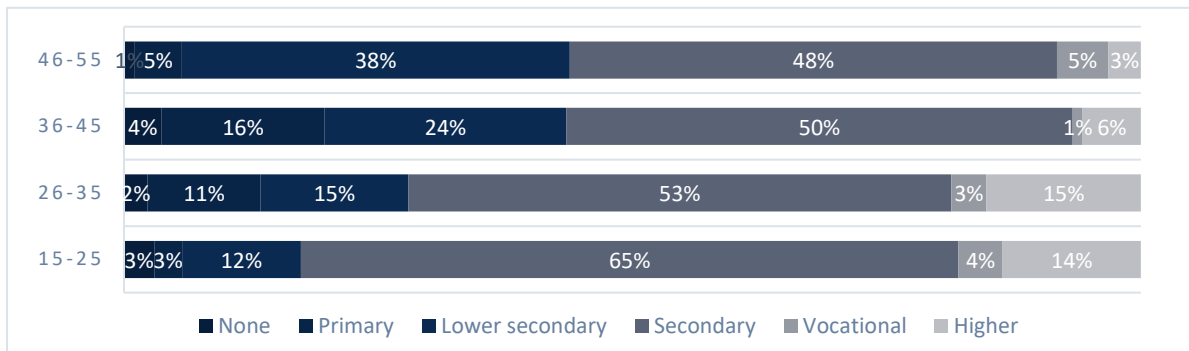


Figure 11. Respondents education level, by age group



As shown above, the level of education is on average higher among the younger age groups. Half of the people who received higher education were between 25 and 34 years old.

Figure 12. Number of children

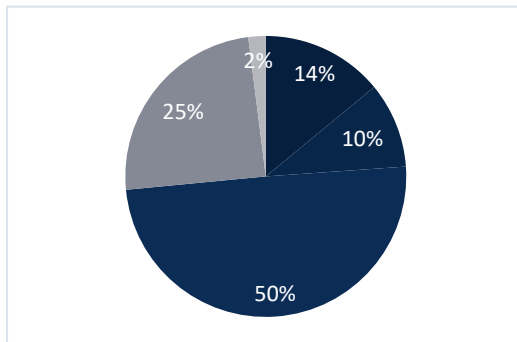
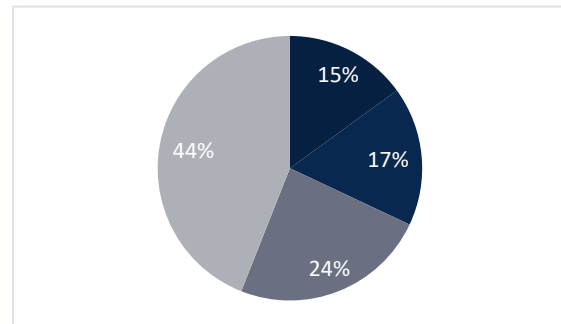


Figure 13. Who is taking care of your parents



The majority of respondents (86%) have children. The average number of children is 2.9. About a quarter of the households has four or five children. Only 15% of the participants care for their parents, and 17% of them receives care from someone else

5.1.2. Household Composition, Dwelling and Assets

Household sizes seem to be quite large, with an average of 4.3 members per household. Nearly half of the herders reportedly having four to five household members and another 22% has more than six members. Moreover, almost every household has a registered herder (98%), and most of them have even more than one herder in the family (74%).

Figure 14. Number of household members

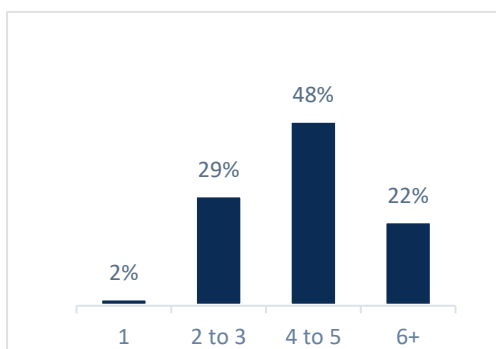
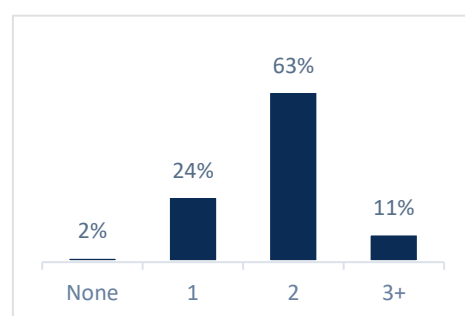


Figure 15. Number of registered herders per household



Almost half of the respondents own two or more dwellings in total. Most respondents live in rural areas (69%), 22% live in a soum center and only 9% live in an aimag center. Hence, it is not surprising that most of the survey respondents (86%) own at least one dwelling in the rural area, 2% of the respondents have a dwelling in the capital city as well.

Figure 16. Do you have dwellings in the following location?

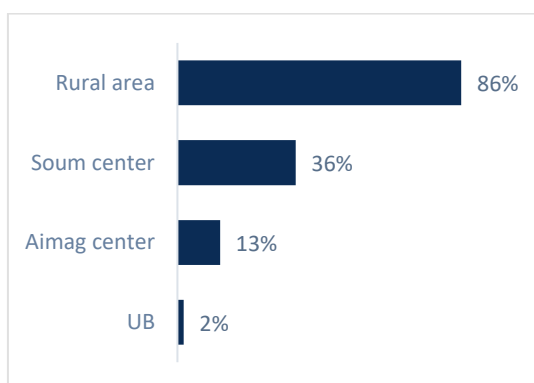
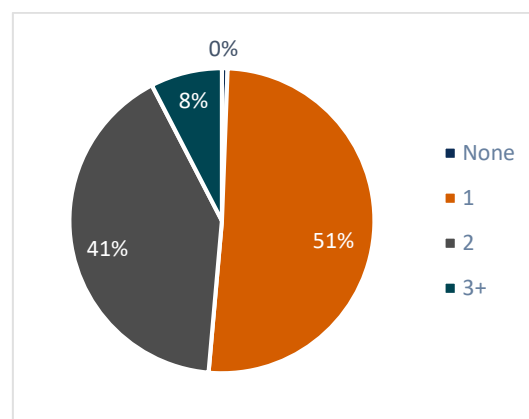


Figure 17. How many dwellings do you have?



Despite being nomads, almost half of the herders own land. Most of the participants own a motorcycle (70%) and slightly less than half own a car.

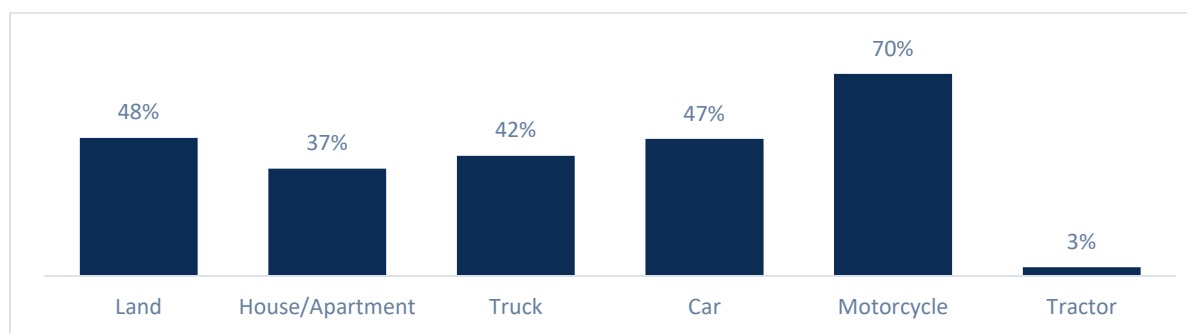
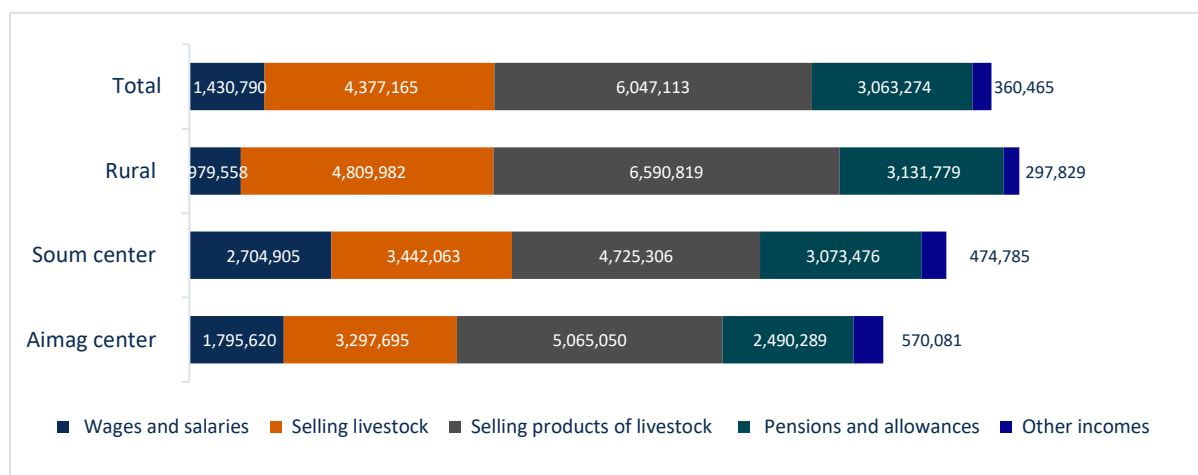


Figure 18. Does your family own these assets? [multiple options]

5.1.3. Income Information

Among herders, the main sources of income are livestock sales, livestock products, and pensions and allowances. The average annual household income of the surveyed herders was MNT 15,278,807; close to the NSO reported average. Based on their location, the income of rural households was higher than the average income of all herders. Conversely, the income of herders in aimag centers and soum centers was relatively lower. Yet, the share of income from wages and salaries is considerably higher among herders that are based in the soum or aimag centers.

Figure 19. How much, on average, is your household income per year?



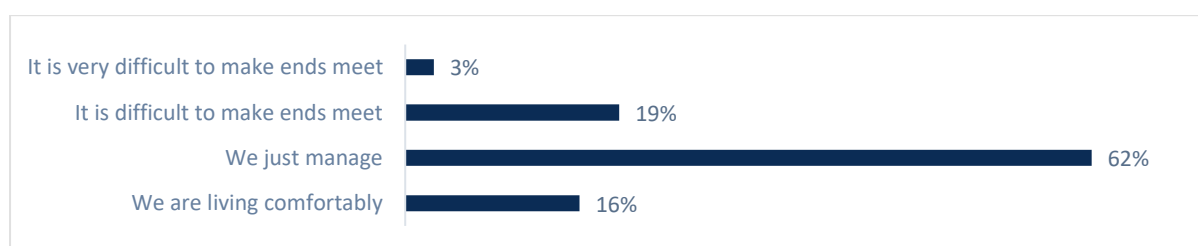
The majority of the respondents (81%) receive child support benefits, as well as a significant proportion receive maternity benefits for children under 3 years old (22%). Only 14% of the herder households benefit from an old-age pension.

Table 16. Social protection benefits among herder families

Social Benefits	Percentage
Child money	81%
Allowance to mothers who gave birth to and raised many children	26%
Maternity benefits and taking care of a child under 3 years of age.	22%
Old age pension	14%
Disability pension	12%
Allowance for taking care	4%
Social welfare pension for seniors, children under 18 who lost the bread winner, single mother/father and dwarf persons aged 16+	3%
Food and nutrition support (food stamps)	3%
Concessions for elderly and disabled for sanatorium and resort services	1%
Other benefit, allowance and concessions	1%
Other	1%

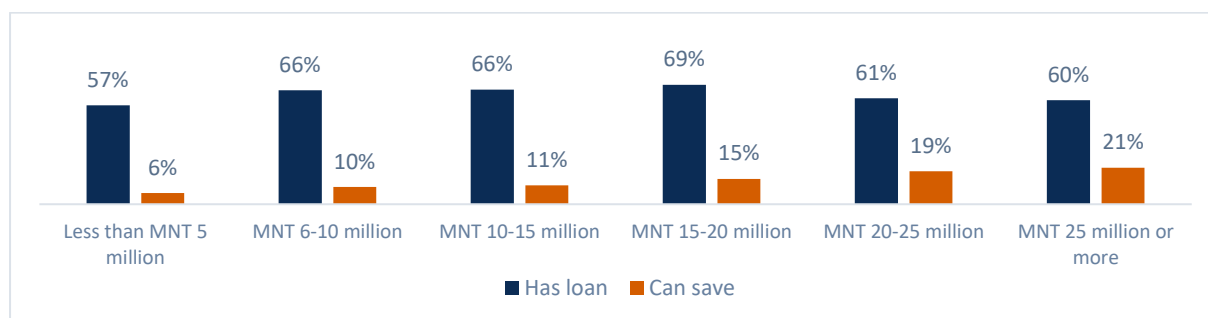
When asked whether the families are able to make ends meet, most of them (62%) declare that they just manage. More than one in five says that it is difficult (19%) or even very difficult (3%) to make ends meet. There is only a small group of herders that says to live comfortably.

Figure 20. How do you feel about your household income?



Most herders have loans, but the percentage of herders with savings is very low. The share of households with a loan is 64%, yet only 12% of the participants' households are able to save some of their income. The share of those that can save is increasing by income level. On average, they can save MNT 4.1 million per year. However, half those with savings can save less than MNT 2.4 million per year. The share of households with outstanding loans is initially increasing with income, however, it gradually decreases as income grows.

Figure 21. Loan and saving status by income level



Surveyed households own an average of 49 large and 353 small livestock, and in the previous 12 months, 8% of their livestock had been lost to natural disasters, theft, wolves, or dogs. In total, 4,000 surveyed herders own a total of 1,607,784 livestock, 12% of which are small livestock, and the rest (88%) are large animals. By location, 6% of the total livestock are herded around the aimag center, 18% around the soum center, and 76% in the rest of countryside.

Table 17 Number of livestock and number of livestock lost in the previous 12 months, by location

Category	Livestock, by location				% (of total for each category)	Livestock lost in the previous 12 months to natural disasters, crime, diseases, or animal attacks				% (of total for each category)
	Aimag center	Soum Center	Rural	Total		Aimag center	Soum center	Rural	Total	
Cattle	638	1,951	13,185	15,774	1	86	389	1,282	1,757	11
Horse	5,066	15,808	71,453	92,327	6	419	1,716	6,963	9,098	10
Camel	5,821	16,014	66,055	87,890	5	433	1,810	6,795	9,038	10
Sheep	44,694	121,250	549,016	714,960	44	3,957	9,916	37,755	51,628	7
Goat	48,543	128,632	519,645	696,820	43	3,499	10,323	37,812	51,634	7
Other	0	2	11	13	0	0	0	0	0	0
Total	104,762	283,657	1,219,365	1,607,784	-	8,394	24,154	90,607	123,155	8
%(of total)	6	18	76	100	100	7	20	73	100	-

Though it is common for soum and rural herders to be members of associations, cooperatives and partnerships, animal husbandry related decisions are usually made at the household level. One fifth (20%) of herders belong to some type of herder group, cooperative or association; but membership varies by location, age and income.

Figure 22. Does your household belong to any herders' group/cooperatives/associations?, by location

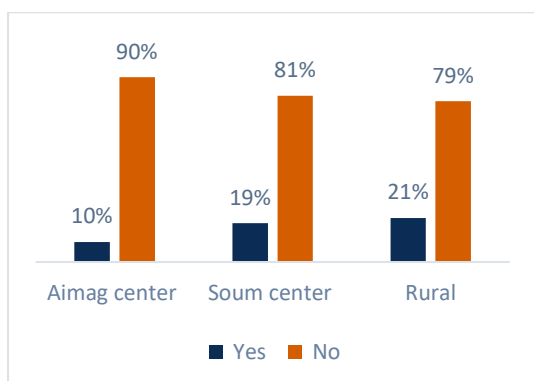
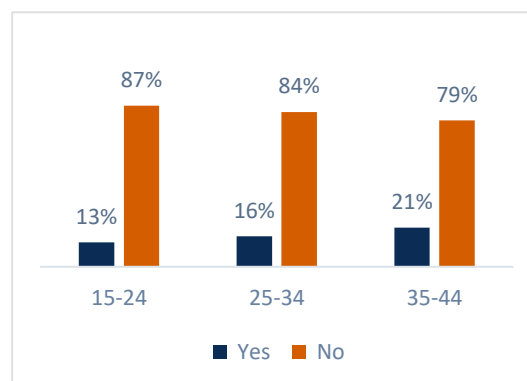


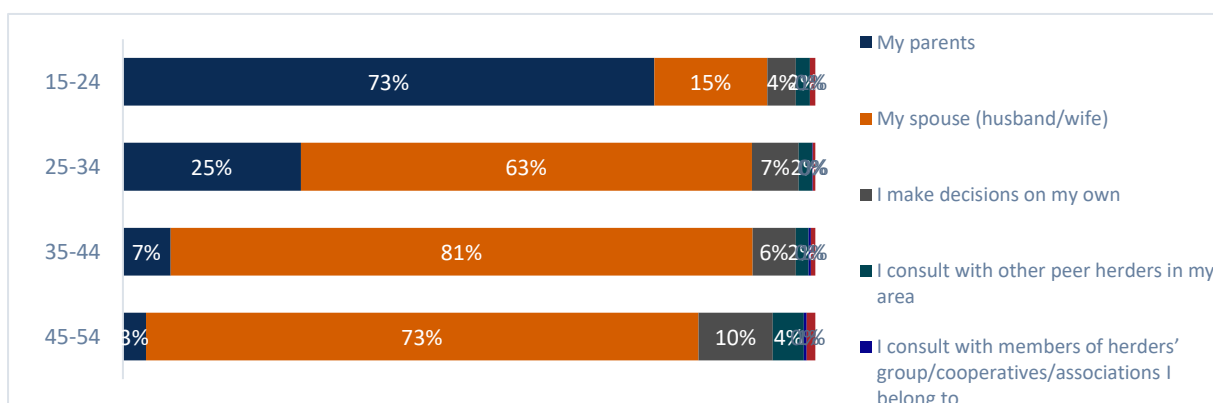
Figure 23. Does your household belong to any herders' group/cooperatives/associations?, by age group



Rural herders and older herder households are more likely to be members of associations. Moreover, membership of associations among households with an annual income of MNT 20 million or more (28%) is at least seven percentage points higher than the level of membership among lower income households.

However, membership of associations makes no significant difference on livestock related decision-making. Particularly, 70% of herders make decisions with their spouses, 14% with their parents, and just 7% on their own. That is, more than 80% of herders make decisions within their households, in consulting with family members.

Figure 24. Who do you mostly consult with before you make important livestock-related decisions?

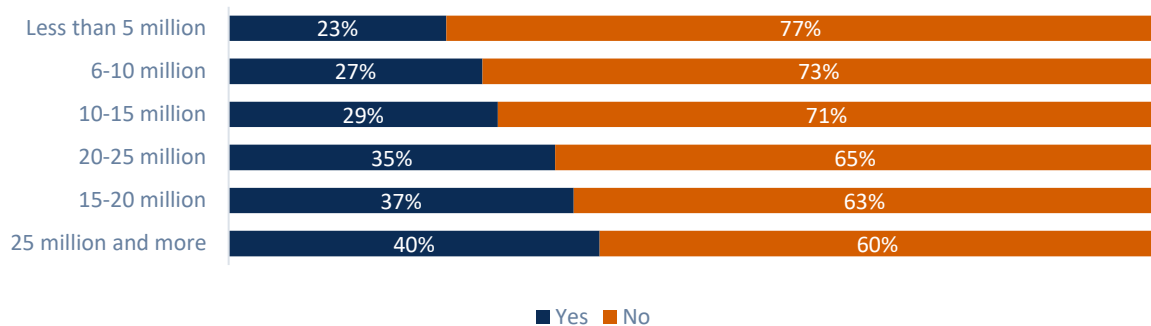


With respect to age, most herders under 24 years consult with their parents, whereas those over 25 are more likely to consult with their spouses.

Herders, for whom livestock and livestock products are the main sources of household income, are more likely to insure their animals and the insurance subscription period is also longer. One in three herders (31%) buys livestock insurance against natural disasters, crime and infectious diseases. By location, herders in aimag centers are less likely (66%) to be without livestock insurance. Being a member of an cooperative or association also increases the likelihood of livestock insurance. Of those that are member, 40% have insurance. In terms of the duration of the livestock insurance, herders had

their livestock insured for on average 4.5 years. More than half of herders (54%) had their animals insured for less than four years.

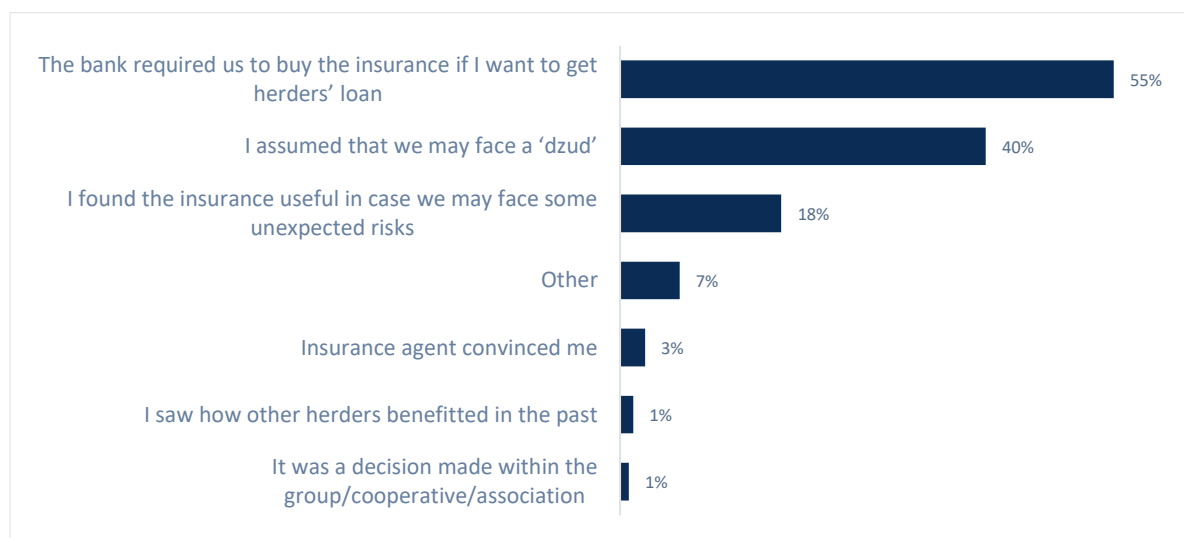
Figure 25. Do you currently have your livestock insured? By household income level



Subscription to livestock insurance depends upon household income and the number of herders in the household. For example, herders with relatively high household incomes exhibit a higher rate of livestock insurance. In addition, households with two or more herders, have insured their livestock for four years or more. In contrast, 70% of households with only one herder have been insuring their livestock for three years or less. The rate of livestock insurance is also positively correlated with the number of livestock owned.

For herders, the main reasons for opting for livestock insurance are to fulfil the insurance requirements of financial institutions, and the high risk of a dzud. Qualitative research showed that commercial banks require herders to insure their livestock in order to qualify for herder loans. It was common for herders to subscribe to insurance on an obligatory basis rather than on a voluntary basis. The second (main) reason for taking out insurance, was to prevent mitigate the risk of dzud, when a natural disaster (dzud) was likely to occur in a given year. Meanwhile, only 18% insured their livestock against other potential risks, such as crime or infectious diseases. As can be seen in the figure above, insurance-related information, insurance benefits or group persuasions do not significantly affect the willingness to take out insurance coverage.

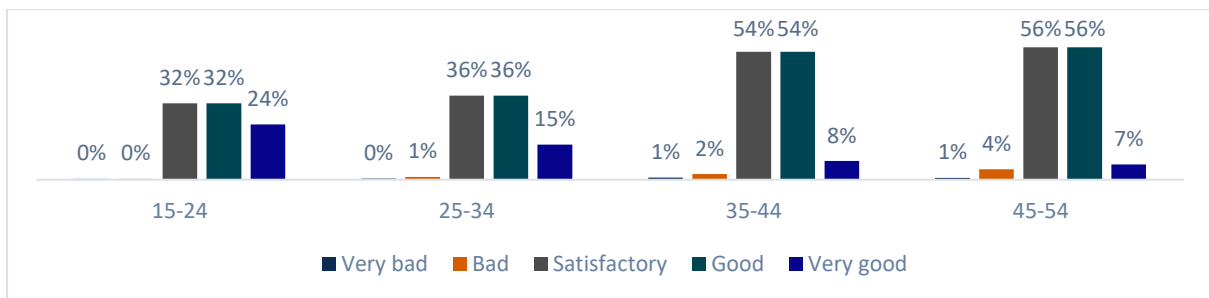
Figure 26. What was the reason to insure the livestock?



5.2. Herders' life cycle risks

The vast majority (96%) of respondents report to be having a satisfactory (or better) health status. When health status assessment is analyzed by age groups, older respondents (35-53 years old) tend to believe that their health is satisfactory. On the other hand, the majority of the participants who believe that they have a good or very good health are younger (under 35 years old).

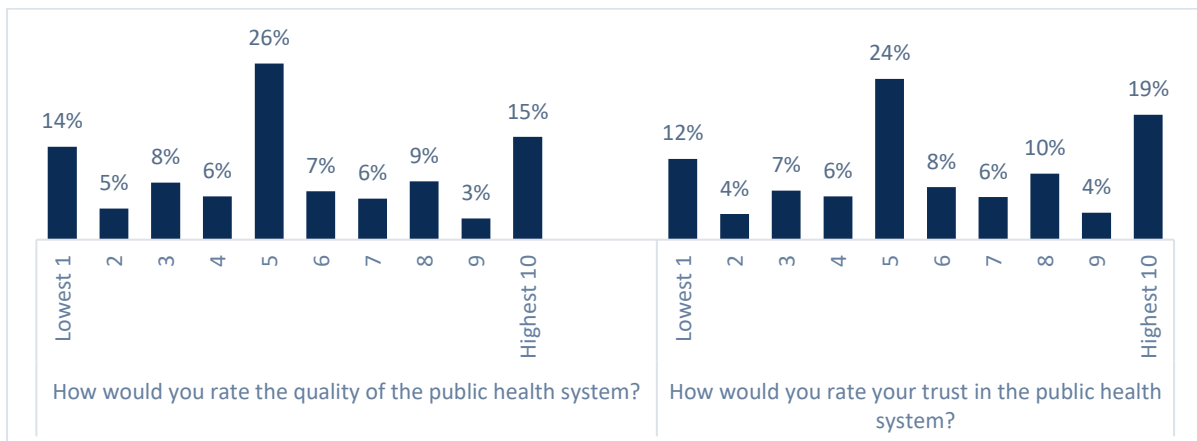
Figure 27. Health status, by age group



The health status assessment by income level shows that respondents with satisfactory or good health are evenly distributed amongst different income groups. However, most of the herders who have a bad or very bad health belong to the lowest income group.

The average rating of the quality of the public health system is 5.4 on a scale from 1 (lowest) to 10 (highest). Most of the respondents who gave the lowest rating to the public health system quality have bad or very bad health statuses. People with satisfactory or good health status rate the quality of the public health system with 5 out of 10. Trust in the public health system is on average slightly higher with 5.8 on a scale from 1 (low) to 10 (high trust). Healthier people have more trust than those with lower self-assessed health status.

Figure 28. Public Health System; Quality and Trust Ratings by Health Status



The share of herders with permanent disabilities is relatively low amongst the respondents and their family members, however, a significant portion of the people with disabilities are not officially registered; hence, they are not able to receive any government or insurance benefits. As for disability status, 8% of the respondents have a permanent disability, in which 3% is not officially registered. Thus, almost 40% of the respondents with a permanent disability are unregistered.

Figure 29. Are you suffering from a permanent disability?

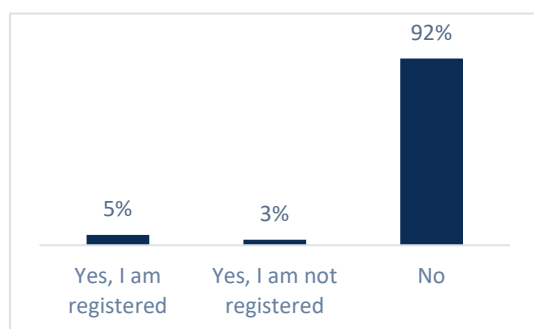
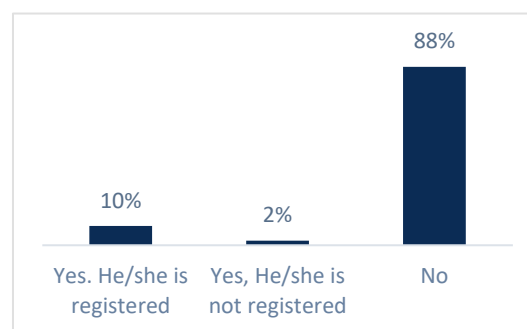
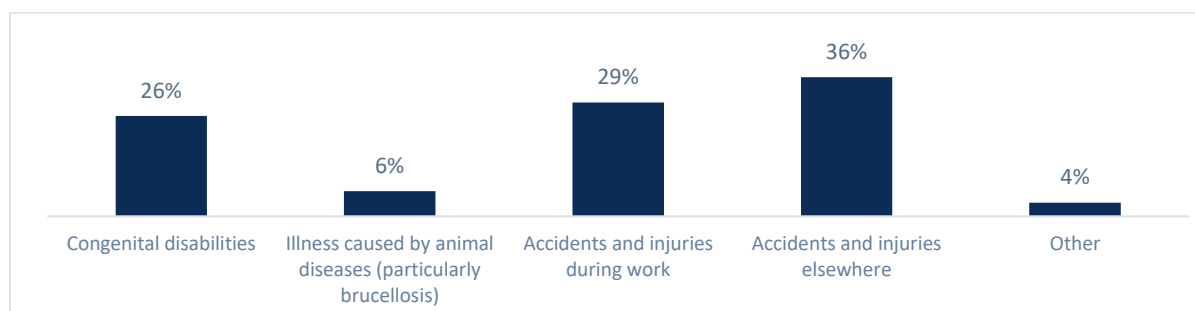


Figure 30. Is anybody in your household suffering from a permanent disability?



Furthermore, 12% of the respondents' family member has a permanent disability and 2% are not registered, so almost 20% of the family members with disability are not registered. **Accidents and injuries are leading causes of disability among herders.** The survey results show that the leading causes of disability among herders are accidents and injuries (65% of all causes for disability) half of which are occupational accidents and injuries. Also, congenital disabilities accounted for around 26% of permanent disabilities.

Figure 31. What is the cause of your disability?



More particularly, male herders with disabilities by occupational accidents can be found predominantly among rural herders. For example, 31% of male herders with disabilities and 27% of female herders with disabilities, were victims of occupational accidents. By location, 31% of herders with disabilities (among rural households) were victims of occupational accidents, while 26% of the herders in aimag centers and soum centers, shared the same causes of disability.

Despite herders and their family members being in situations to receive health-related pensions and benefits, the proportion of those receiving adequate benefits was quite low. For example, one or two out of ten herders experienced a serious illness, pregnancy, gave birth or lost their family member because of severe illness in the last twelve months. Very few of those cases receive social welfare benefits. For example, only 13% of the households that lost a breadwinner received a 'loss of breadwinner allowance'. Likewise, 57% of households where one member became pregnant or gave birth had received a maternity benefit.

5.3. Herders' awareness, knowledge and perceptions about social and health insurance scheme

Contribution to the health insurance fund significantly varies depending upon gender and age.

Two thirds (66%) of all herders declare to be covered by health insurance. As shown in the figure below, the health insurance coverage of female herders is 12 percentage points higher than that of male herders. According to interviews with herders, female herders are more likely to receive gender-specific health services which may contribute to a higher health insurance coverage for female herders.

Figure 32. Do you have national health insurance, by gender

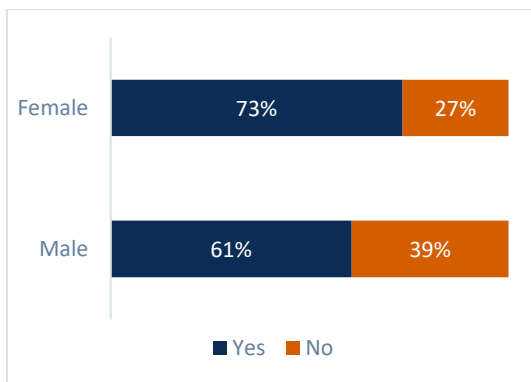
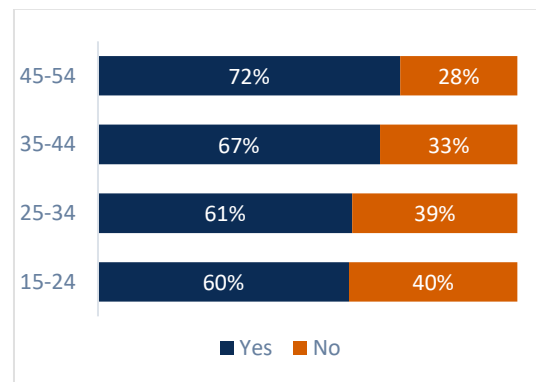


Figure 33. Do you have national health insurance, by age groups



In terms of age, health insurance coverage increases among people aged 35 years and above. In particular, interviews with herders and local social insurance inspectors highlighted the increasing interest among herders in health care, old-age benefits and retirement. as they approach retirement age.

Socio-economic indicators of herders play an important role in health insurance coverage. The higher the level of education of herders and the household income, the higher the level of health insurance coverage.

Figure 34. Do you have national health insurance?, by education level

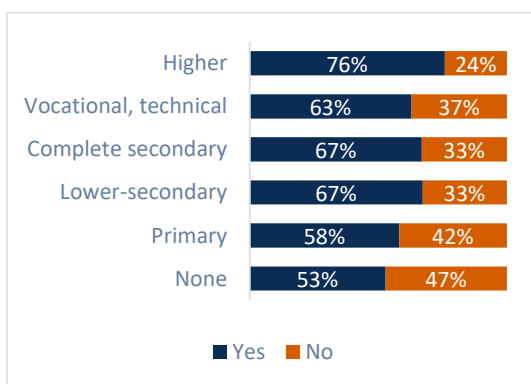
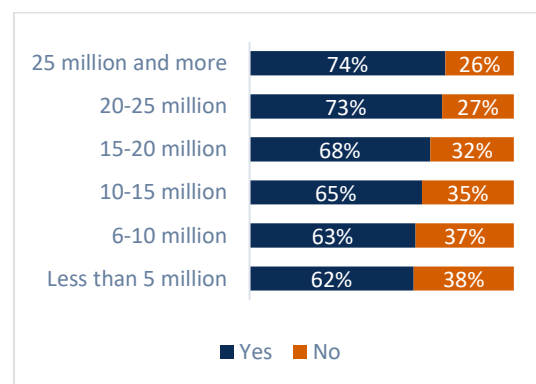


Figure 35. Do you have national health insurance, by income group



Herders with higher education levels and herders with an annual household income of MNT 20 million or more are more likely to have health insurance coverage. Conversely, the capacity to pay is closely correlated with education level, knowledge and understanding of health insurance and higher earnings.

The reasons for herders opting for health insurance vary depending on the age of the herder. The most frequently mentioned reasons are: *'because it is mandatory'* (41%) and *'to protect myself and my family against the risk of falling sick'* (36%).

Table 18. What is the reason that you have national health insurance?

	Age groups				Total
	15-24	25-34	35-44	45-54	
Because it is mandatory	46%	45%	39%	39%	41%
To protect myself and my family against the risk of falling sick	21%	32%	39%	40%	36%
To have health services at lower cost	19%	20%	26%	27%	24%
To protect myself and my family if I get sick	28%	18%	22%	24%	22%
To protect my finances in case of getting sick	18%	11%	13%	12%	13%
Other	8%	9%	5%	4%	6%

In terms of age, 15-34 year olds (relatively young herders) are more likely to choose *'because it is mandatory'*, while those over 35 declare more than other age groups that they are insured *'to protect myself and my family against the risk of falling sick'*. These results suggest that as herders age, they tend to pay more attention to health issues, and uptake insurance to manage risks.

Among the main reasons for not signing up for health insurance coverage, the common response is that health insurance is insignificant and expensive. Moreover, the reasons for not being insured vary depending on gender, age and income level. Herders not currently covered by health insurance most commonly cite two reasons: *"health insurance is not important"* (27%) and that *"it is expensive"* (22%).

Among the common reasons mentioned, male herders (30%) lean towards the response that health insurance is not important, while female herders (28%) consider it is too expensive. For men, the tendency to ignore health insurance is by choice (a major negative factor), whereas for women it is a different situation as they want to be covered and yet are unable due to economic constraints.

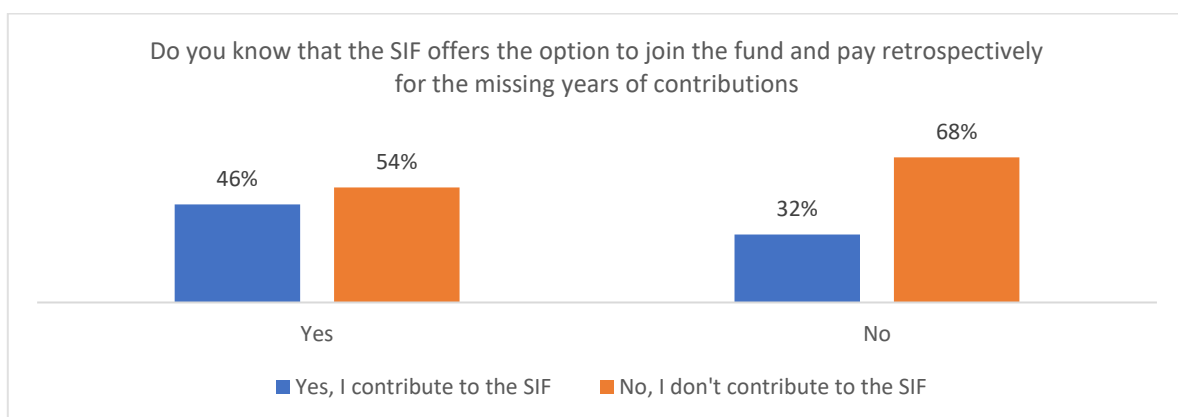
Table 19. Why are you not covered by the national health insurance?

	Age groups				Education Level						Total
	15-24	25-34	35-44	45-54	None	Primary	Lower-secondary	Complete secondary	Vocational, technical	Higher	
Do not think it is important	27	26	29	28	26	34	28	26	26	27	27
It is too expensive for me	10	18	23	30	22	22	26	20	26	21	22
Do not know how to access to it	19	16	14	12	28	11	15	16	9	9	15
Do not need it	10	13	15	10	10	12	13	13	23	10	13
I was not aware that it was available for me	23	18	10	8	8	12	11	14	7	21	13
Do not trust it	3	6	7	6	10	8	4	6	5	10	6
I have my private insurance	1	1	2	1	0	2	1	1	0	1	1

In terms of age, young herders (under 34 years) respond that '*they do not know how to access to it*' (to health insurance), while herders aged 35 and above overwhelmingly respond that it is '*too expensive*'. Yet, these numbers indicate that particularly younger herders could be reached with targeted information campaigns. It seems they are lacking relevant information on the existence of health insurance and how to access it. Additionally, the higher the household income level, the higher the share of people who do not consider health insurance to be important. On the contrary, the lower the household income, the higher the percentage of respondents who declare that '*health insurance is too expensive*'. Herders respond differently depending on their level of education. For example, herders with secondary or lower secondary education, answered '*I don't know how to access to it*' most commonly. That implies that any information material or public campaign needs to be carefully formulated and designed in order to convince those with lower educational levels.

There is a lack of knowledge and understanding of social insurance among herders, which plays a significant impact on social insurance coverage. The majority of herders do not have a basic understanding of social security. For example, only 35% of herders are aware of the basics, while 47% have knowledge of the retrospective nature of the payment of pension insurance premiums. However, only 39% of herders currently make their social insurance contributions, and choosing various forms of payment options such as voluntary (29%), compulsory (9%), or any other (0.4%).

Figure 36. Knowledge about option to join the fund and pay retrospectively by current contribution status



Knowledge of the basics does not necessarily go hand in hand with coverage. For example, 42% of herders who respond that they are aware of the basics of social insurance are insured with the SIF. Meanwhile, only 37% of people without such basic understanding about its benefit, are currently enrolled. Similarly, 46% of herders who are aware of the retrospective options, are presently covered by social insurance, while 32% of herders who lack information about retrospective options have insurance coverage. These results indicate that herders who have relatively more information and knowledge are more likely covered. It also suggests that a significant share of herders are informed but not yet covered by social insurance.

Basic knowledge and information concerning social insurance differs significantly depending on the age and education level of herders. In particular, soum center senior herders with high level of education had a high-level of basic understanding of social insurance.

Figure 37. Knowledge about SIF, by age group

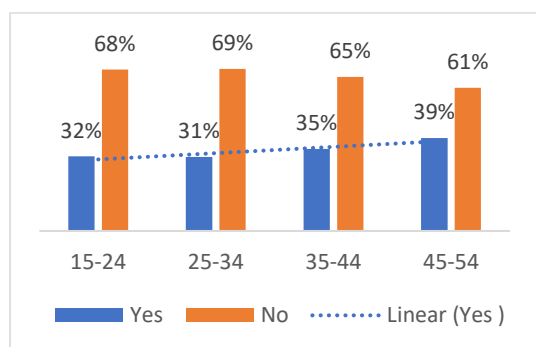
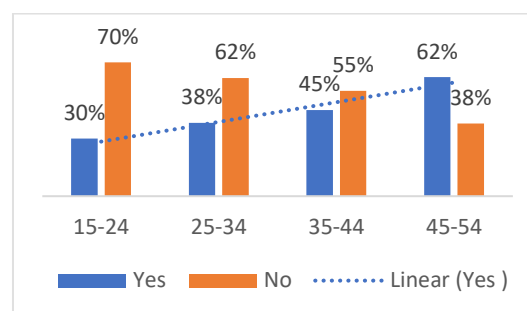


Figure 38. Knowledge about option to join the fund and pay retrospectively, by age group



More particularly, among older herders, the share of those who have knowledge of the retrospective payment of pension insurance contributions is higher than the share of those who are aware of the basics of social insurance. This may indicate that herders decide to opt for social insurance on the basis of additional opportunities and retrospective payment options, rather than starting to contribute while they are young (and upon acquiring a basic understanding of social insurance).

Social insurance coverage varies significantly depending on the demographics of herders. The comparative demographics of contributing and non-contributing herders, suggest that the share of older and female contributing herders is higher. The results show that women have higher social insurance enrolment rates.

Figure 39. Distribution of herders by contribution status



In particular, local social insurance specialists and female herders mention that one of the motivating factors is that by participating in the insurance scheme women are able to access additional gender-specific benefits, notably the maternity benefit. Furthermore, the payment of social insurance contributions increases for herders who approach retirement age. According to interviews with herders, older herders display stronger will, and interest, in contributions, so as to benefit in the future from the Pension Insurance Fund and the Insurance Fund against Industrial Accident and Occupational Diseases.

Herder groups with different incomes and levels of education have dissimilar social insurance enrolment rates. For example, among the currently contributing herders, the share of those with higher levels of education and income is higher than for other income levels.

Figure 40. Current contribution status, by education level

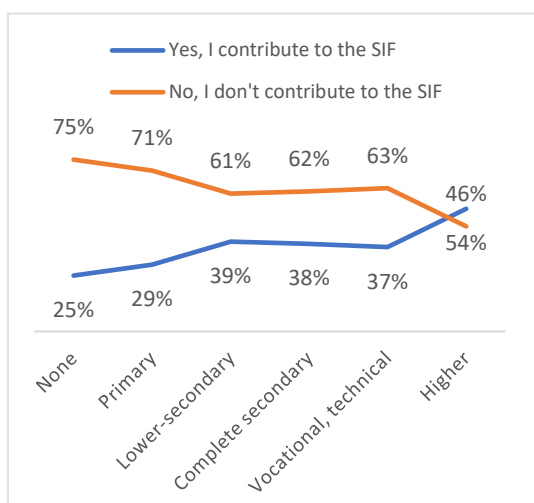
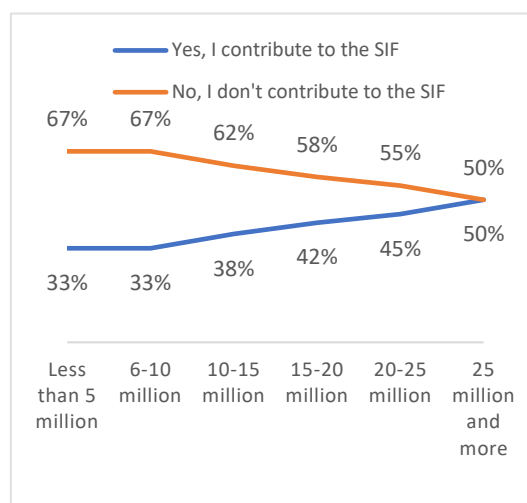
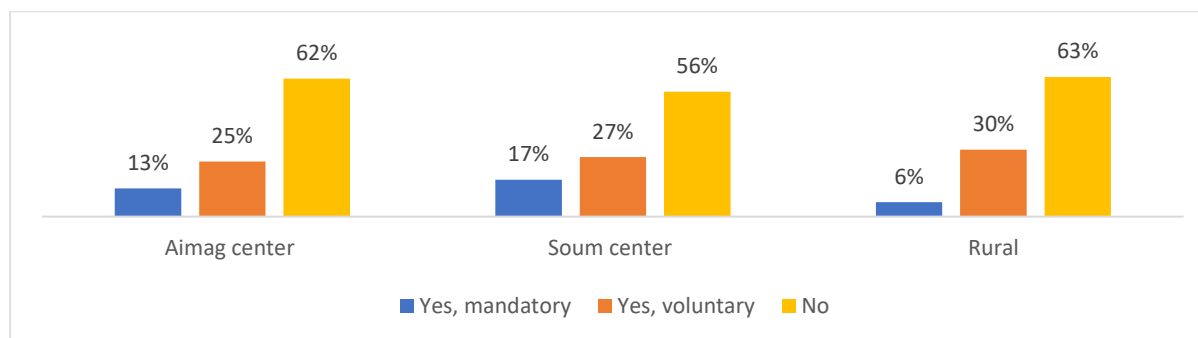


Figure 41. Current contribution status, by household income group



The share of soum center herders who have coverage of social insurance is higher than insured herders in aimag centers and rural areas. This is due to the relatively higher proportion of soum center herders having higher education and incomes, or dual employment. For soum center herders, the share of highly educated herders is higher than in the aimag center and among rural herders. Moreover, soum center herders have a near average household incomes, and the share of soum center herders who have extra jobs (in addition to herding livestock) at 29% is higher than among those in aimag centers (27%) and rural areas (11%). In relation to dual employment, soum center herders are more likely to be compulsorily insured.

Figure 42. Current contribution status, by location



Due to educational and employment advantages, soum center herders have an insurance coverage rate of 44%; at least six percentage points higher than those in aimag centers (38%) and rural areas (37%).

The share of herders who pay contributions to qualify for the old age pension is six times higher than the share of herders who pay to be insured against contingencies such as maternity, sickness, and accidents. The majority of herders who are currently contributing (67%) report that they do so because they want to retire in the future. The next most popular answer is that contributions are paid 'to prevent from potential risks one might face' (11%).

Table 20. Why have you started contributing to the SIF?, by age group

	15-24	25-34	35-44	45-54	Total
I wanted to plan for my future retirement	40%	48%	69%	79%	67%
I wanted to be insured in case of maternity, sickness, accidents, or a sudden funeral	12%	14%	11%	10%	11%
I was convinced by a social security inspector	2%	4%	4%	3%	4%
It was my partner's decision	0%	2%	3%	3%	3%
I was convinced by an information campaign	0%	3%	2%	2%	2%
An event happened to my family which made me make this decision	4%	2%	2%	2%	2%
An event happened to someone I know which made me make this decision	2%	1%	1%	2%	1%
I was convinced by members of my group/cooperative/association	0%	1%	1%	1%	1%

The age group comparison reveals a significant difference in the main reasons for starting contributing to the SIF. For example, 69% of those aged 35 years and above declare that they would like to retire in the future, while less than 50% of those aged 35 and below give a similar response. Moreover, by way of comparison, the share of those below the age of 34 who choose "to prevent from potential risks one might face" is higher than those in the older-age group. Family, friends and social inspectors do not have strong influence on herders' choices about whether to enroll or not.

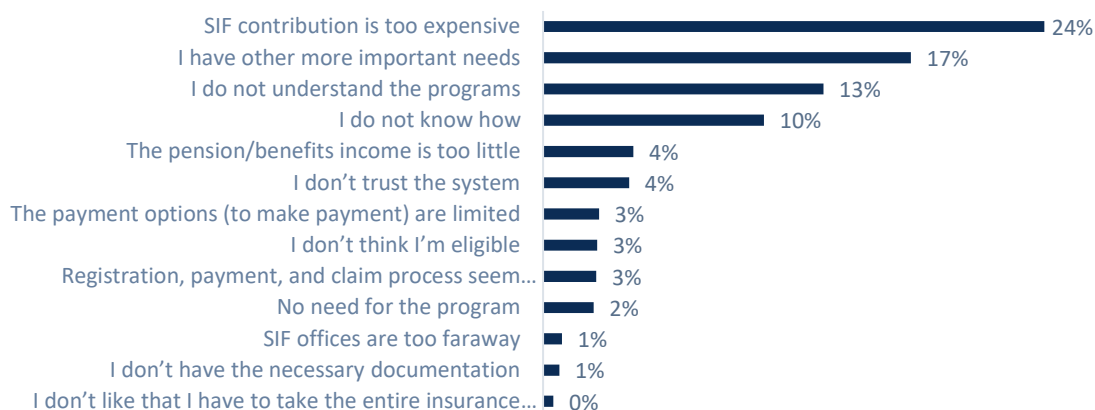
Among herders who have stopped paying contributions, the reason is mainly related to economic capacity. Almost one third of all herders report that they have stopped contributing to the SIF. In particular, the most commonly selected responses (24% of herders who stopped contributing) relate to SIF rates being too high and that other pressing needs (13%) are more critical. Conversely, very few reasons related to other social insurance systems, contributions, or other services were cited. This may indicate a discontinuity between the required SIF contribution rates and the financial capacity of citizens.

Table 21. Why did you stop contributing to the SIF? (multiple choice), by age group

	15-24	25-34	35-44	45-54	Total (n=1415)
SIF contribution is too expensive	16%	17%	29%	26%	24%
I have other more important needs	6%	10%	15%	14%	13%
I don't trust the system	0%	4%	4%	3%	4%
The pension/benefits income is too little	0%	3%	4%	4%	4%
The payment options (to make payment) are limited	3%	2%	2%	1%	2%
No need for the program	6%	1%	1%	2%	2%
I don't have the necessary documentation	0%	0%	1%	1%	1%
I did not like that I had to take the entire insurance package	0%	1%	1%	0%	1%
I have private insurance	0%	0%	1%	0%	0%

For herders who have never paid social insurance contributions, there are several reasons. The main reasons cited are, again, the financial capacity and the lack of knowledge and information. Meanwhile, issues such as the herders' location, the process of paying social insurance contributions, documentation, and the remote location of social insurance offices were not considered to be major problems.

Figure 43. Why don't you participate in the SIF?



Among herders who have never paid social insurance, no demographic or socio-economic-dependent differences were observed. In addition to the given answers, herders mention reasons such as 'a lack of information', 'inheriting pension benefits is not allowed', 'unwilling to pay', 'a lack of financial capacity' or 'savings are more profitable' etc., ○

One in every three herders who have taken the advantage of the Law on Retrospective Payment of the Pension Insurance Contribution for Herders and the Self-employed (and retrospectively made their past contributions) has stopped paying for the social insurance contributions. Seventeen percent of all herders took advantage of the law to retrospectively pay for their social security contributions. More than half of such herders (62%) continued their contributions, while almost a third did not. This suggests that while herders have benefited from the law, they may not continue to do so in the future.

Figure 44. Percentage of herders who have taken advantage of the law, by current contribution status

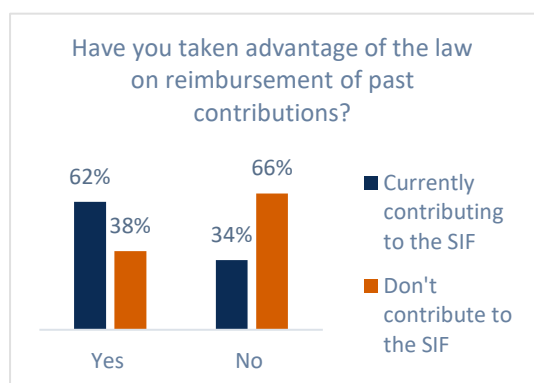
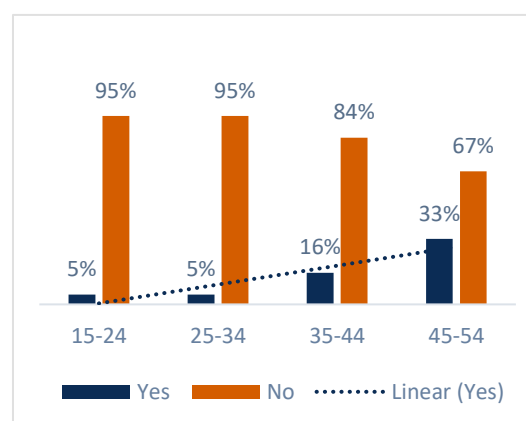


Figure 45. Percentage of herders who have taken advantage of the law, by age group



Due to the characteristics of the law, herders aged 35 and above display a higher rate of retrospective payment of past contributions. Herders' location, gender and level of education do not have a significant impact on the payment of contributions.

Herders with higher incomes and savings are more likely to benefit from the Law on retrospective payment of the Pension Insurance Contribution for Herders and the Self-employed, compared to the economically disadvantaged herders. For example, herders with high household incomes and ability to save for their households, exhibit a higher rate of retrospective payment of contributions under this law.

Figure 46. Percentage of herders who have taken advantage of the law, by household income group

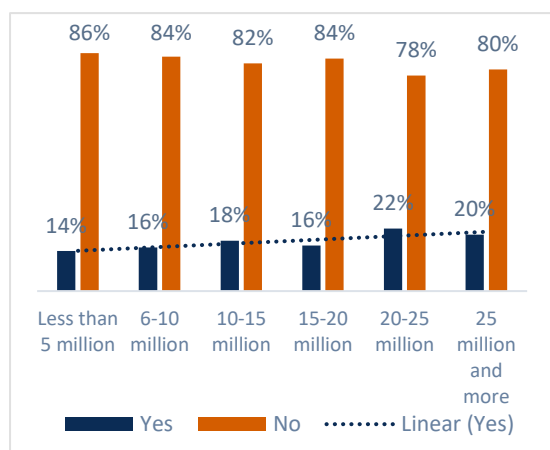
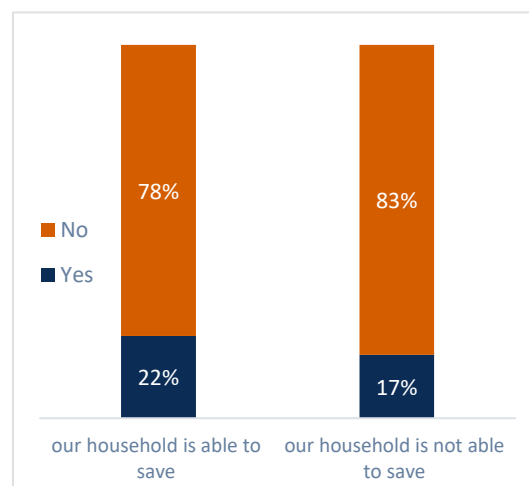


Figure 47. Percentage of herders who have taken advantage of the law, by saving status



Eighteen percent of herders with an income of up to MNT 20 million and 20% or more of herders with an annual income of MNT 20 million, have retrospectively paid for their contributions. Furthermore, herders who responded that they can make household savings, show a higher rate of retrospective contributions payments.

Although the share of herders interested in receiving a pension in the future is high, among these herders the share of contributors is very low. Eighty-one percent of all herders are interested in, and planning to, retire in the future. This interest is particularly high for women and senior herders. Differences in location, education level, and income level do not play a significant role, and the interest is consistently high.

However, only 44% of herders who are interested in contributing currently indeed contribute to the SIF, and only 18% of those who are not interested in contributing to the SIF pay for it. This shows that there are herders who are unenthusiastic and not planning for a pension in the future. Conversely, the fact that more than half of herders who plan to retire in the future do not currently contribute, means that there are many herders who either have financial drawbacks or wish to take advantage of the Law on Retrospective Payment of the Pension Insurance Contribution at a certain point of their working life.

Herders lack provision of sufficient knowledge and advice on social insurance, and it is common that household members consult each other on such issues. Around 40% of herders have been suggested to pay SIF contributions, and the proportion of such herders is higher among the soum center and rural herders.

Figure 48. Has anyone recommended/ suggested that you contributed to the SIF?

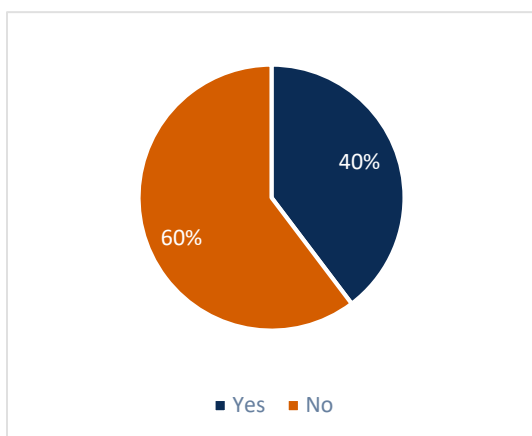
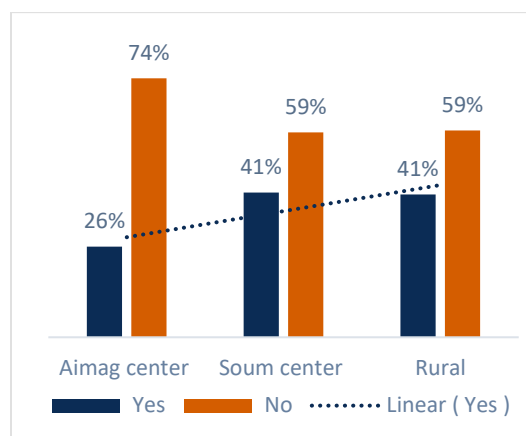


Figure 49. Has anyone recommended/suggested that you contributed to the SIF?, by location?



Only 56% of herders declare knowing other people who currently contribute to the SIF. The fact that almost half of the herders have not been suggested or recommended that they should contribute to the SIF demonstrates insufficient provision of knowledge and information of the SIF to the herders.

5.4. Attitudes towards risks, time discounting, and trust

The questionnaire includes three questions to measure risk aversion, time discounting, and trust. The rationale for including these question items is to answer hypotheses regarding the relationship between individual preferences and behaviour towards social insurance. Another reason is to provide control variables for identifying causal effects of other factors correlated with preferences. The questions are derived from the "Global Preferences Survey" (GPS), a globally representative dataset on risk and time preferences, positive and negative reciprocity, altruism, and trust (Falk et al., 2018). Currently, Mongolia is absent from this dataset.

Because of the Computer-Assisted Telephone Interview (CATI) technique used for data collection, the original GPS questions were shortened and reduced to bear the time and cognitive burden of the CATI process. Therefore, results from this section are limited to the Mongolian herder sample only and cannot be compared with the GPS global results.

Attitudes towards risks, time discounting, and people's trust have been measured with three Likert-scale items (1-10). The mean average attitude towards risk is 4.92, with a standard deviation of 3.0 points around the mean. Attitude towards time discounting averages 5.64 with a standard deviation of 3.38. The mean average attitude towards trust is 5.04, with a standard deviation of 3.13 (See Table 22). Overall, these means show a concentration toward central values but significant dispersion towards the minimum and maximum values.

Table 22. Attitudes towards risks, time-discounting, and trust, percentages.

	Mean	Std. Dev.	Min	Max
Attitude towards risk	4.92	3.00	1.00	10.00
Attitude towards time-discounting	5.64	3.38	1.00	10.00
Attitude towards trust	5.04	3.13	1.00	10.00
Observations				4000

Note: Significance levels of mean differences are based on t test (mean-comparison test) and are "****" for p-value ≤ 0.01 , "***" for p-value ≤ 0.05 , and "**" for p-value ≤ 0.1

Source: Own elaboration

Female respondents are significantly more risk-averse than male respondents. Conversely, male respondents assume a more trust-taking stance towards others. Respondents attitude towards time-discounting does not significantly differ by sex. Age does not significantly contribute to different attitudes. Older age groups are more trustful towards others, and slightly less risk-averse than younger herders (See Table 2323).

Attitudes disaggregated by the highest educational level achieved show that herders with primary education are the most risk-averse and are less willing to give something up now for a higher benefit in the future. Herders with the highest levels of education are more forward-looking and willing to give up something today. But they are least trusting towards others.

Unsurprisingly, insured herders have a more positive attitude towards time-discounting. Nonetheless, herders enrolled in the SIF are more willing to take risks than their uninsured counterparts. This result would contradict the hypothesis of risk-aversion as a predicting variable for insurance take-up and suggest that insured herders may be more willing to take risks due to being insured. Similarly, herders with health insurance are more risk-taking than uninsured ones.

Table 23. Attitudes towards risks, time-discounting, and trust disaggregated by descriptive statistics, percentages.

n=4000		Risk	Time	Trust
Sex of respondent	Female	4.77***	5.66	4.69***
	Male	5.05***	5.62	5.34***
Age (10-year age bands)	15-25	5.07	5.72	4.97
	26-35	5.00	5.64	4.99
	36-45	4.82**	5.69	4.94*
	46-55	4.97	5.52	5.31***
Household head or relationship	Head	5.00	5.60	5.30***
	Spouse of head	4.72***	5.70	4.72***
	Other relative	5.41***	5.61	4.83
Marital status	Never married	5.25**	5.54	4.94
	Married (certified)	4.92	5.66	5.07
	Living together	4.73	5.31	4.85
	Divorced or separated	4.53	6.10	4.86
	Widowed	4.08**	5.63	4.98
	None	4.65	5.25	5.05

Highest education/qualification level achieved	Primary	5.35***	5.17***	5.25
	Lower-secondary	4.95	5.46**	5.30***
	Complete secondary	4.79***	5.75**	4.97
	Vocational, technical	5.04	5.43	4.79
	Higher	5.16	6.23***	4.60***
Number of children	1 child	5.06	5.72	5.06
	2-3 children	4.86	5.65	5.02
	4-5 children	4.90	5.60	5.09
	6+ children	5.14	5.18	5.54
Livestock insurance	Insured	5.63	5.02	4.85
	Not Insured	5.66	5.09	4.96
Social Insurance	Insured	5.01**	5.44***	5.09
	Not Insured	4.80**	4.96***	4.96
Health insurance	Insured	5.11***	5.56	5.1*
	Not Insured	4.83***	5.68	4.99*
Total average		4.92	5.64	5.04

Note: Significance levels of mean differences are based on t test (mean-comparison test) and are "****" for p-value ≤ 0.01 , "***" for p-value ≤ 0.05 , and "**" for p-value ≤ 0.1

Source: Own elaboration

5.5. Factors affecting the social insurance enrollment and retention

Two binary models are specified to understand the factors affecting social insurance enrollment and retention (see Table 24). Model 1 includes a set of explanatory variables which we expect to be associated with social insurance membership. The model accounts for household wealth (quintile of per capita household income), livestock insurance, locus of control, attitudes towards risk, time, and trust, most consulted person for decisions, knowing other insured herders, and internet access. The second model controls for the demographic characteristics of the herder (sex, age, education, household size) and the Aimag. The models are specified through logistic regressions, and the dependent variable defines enrollment in the social insurance fund (0 "No", 1 "Yes").

The results show a strong positive relationship with higher per capita household income levels. Herders with livestock insurance are more likely to be members of the social insurance fund. Time preferences also play a role. Being willing to give up something today for a future benefit is a significant and positive predictor for enrollment. Knowing others insured in their social network significantly increases the propensity of being enrolled by 1.9 times.

Among control variables, sex, age, education, and region are significantly correlated with enrollment. Female respondents are 1.43 times more likely to be enrolled, and enrollment is more likely by 1.06 times per every additional year of age. While the level of education does not affect enrollment in general, herders with the highest level of education are 3.2 times more likely to be enrolled than those with no education.

Among the eight Aimags included in the sample, the one constituting the logistic model base is Bayan-Ulg, meaning that significance levels are compared with it. Bayan-Ulg is also the Aimag with the lowest enrollment rate (22.6%). Hence, all other Aimags coefficients are significant and higher than 1 (increased

probability of enrollment). The only exceptions are Khuvsgul and Tuv Aimags. In these Aimags, enrollment rates are 31.2% and 33.6%. The odds-ratios of these two Aimags are not significant. Therefore, herders in these Aimags are as likely as in Bayan-Ulg to be enrolled when controlling for covariates.

Table 24. Binary regression models of SIF membership, coefficients in odds ratio.

Variable	model1	model2
Make ends meet (1=Yes)	1.233*	1.294**
Has livestock insurance	1.557***	1.447***
Locus of control (1-internal/5-external)	0.871*	0.886
Attitude towards risk (1-10)	0.976*	0.991
Time preference (1-10)	1.046***	1.032**
Trust in others (1-10)	0.985	0.984
Know other people who contribute to the SIF (1=Yes)	1.685***	1.604***
Internet access (1=Yes)		1.178*
Sex (male=1)		0.735***
Age (years)		1.058***
Education		
None		(base)
Primary		1.150
Lower-secondary		1.417
Complete secondary		1.487
Vocational, technical		1.503
Higher		3.376***
Size of the household		1.037
Aimag		
Bayan-Ulgii		(base)
Zavkhan		2.439***
Uvurkhangai		2.563***
Khuvsgul		1.262
Bayankhongor		2.444***
Tuv		1.359
Umnugobi		1.992***
Sukhbaatar		2.202***
Constant	0.455***	0.018***
N	4000	4000

Note: Significance "****" for p-value <= 0.01, "***" for p-value <= 0.05, and "*" for p-value <= 0.1

Source: Own elaboration

Because health insurance and social insurance are correlated (see **Error! Reference source not found.**), their models (see **Error! Reference source not found.**24) show closely similar results. Livestock insurance is not strictly correlated with either social or health insurance. The three logistic regression models (Annexes

Annex A) predict the probability of being enrolled in social, health, or livestock insurance schemes (separately). The purpose of these estimates is to cross-check the validity of the same predictor variables in estimating the propensity to enrol in different schemes.

Table 25. Livestock, health, and social insurance enrollment pairwise linear correlation matrix

	Livestock insurance	Health insurance	Social insurance
Livestock insurance	1		
Health insurance	0.1394	1	
Social insurance	0.1719	0.5103	1

Note: Linear correlation coefficient is Rho

Source: Own elaboration

As shown so far, the main sociodemographic factors affecting enrollment are found in the perceived capacity of making ends meet, herders' network, education, sex, age, educational attainment, and Aimag. While 61.4% of respondents are still not insured under the SIF scheme, 80% of respondents declare that saving for retirement is important or very important. Moreover, among the respondents that answered that saving for retirement is important or very important, close to 50% is still not enrolled in the SIF and is not saving for retirement in any other way. The following section focuses on uncovering the main reasons herders are currently not enrolled in the SIF and which factors can determine the higher probability of being willing to start paying contributions to the SIF.

5.6. Framing experiment

The Mongolian social insurance scheme's attributes are deemed accommodating and favourable to herders, and the scheme has been in place since 1994. Yet, less than 40% of the herders contributes to the SIF. This low take-up of SIF is a puzzle. Chemin (2018), from a field experiment on health insurance take-up, found that even in the case of a favourable policy design, the lack of information, transaction costs, and credit constraints have significant explanatory power. On top of these factors, we hypothesize that herders may be biased towards the social security institutions, lacking trust or confidence that the institution maintains its commitments (i.e. ending past contributions' subsidization in 2022 or converting the voluntary scheme to mandatory). To test whether herders could be induced to participate in the SIF by changing the mode of communicating the benefits of SIF participation, we apply an experimental setting based on framing effects over gain-loss symmetry. In our design, we provide different informational nudges to herders to verify the risk tendency of uninsured herders towards lifecycle risks, focusing on pension and disability. This design aims at finding explanatory power for social and health insurance non-take-up in sociodemographic, behavioural, and informational variables.

In the experimental setting of the data collection survey, we test respondents' willingness to pay for social insurance through a *framing experiment*. Following the suggestion of Atzmüller & Steiner (2010) and Chemin (2008), all respondents have been presented with a common hypothetical risk scenario, and subsequently, they have been randomly presented with different alternatives.

The framing experiment is based on the division of the sample into four groups: (1) Treatment 1, (2) Treatment 2, (3) Active control, and (4) Placebo. The first treatment group (eliciting risk-seeking behaviour) investigates how limited information on the benefits may influence take-up. In particular, the first treatment frames the immediate payment needs without explaining the benefits that enrolling may provide. The second treatment elicits risk-averse behaviour, facing respondents with details over the benefits in place

but not disclosing the contributions requirements. The third group provides the entire set of information to respondents. This third group aims to control respondents' behaviour eliciting their willingness to pay (WTP) for the most realistic and disclosed scenario. Finally, a placebo group that does not add additional information is provided. After hearing their scenario, respondents have been asked if they would be willing to contribute to the social insurance scheme, and if not, why.

Restricting the analysis to the non-insured only, across all four treatment groups, there is a widespread declared WTP for the membership to the SIF (see Table 26). The average WTP of the four experimental groups is 71.7%, and the undecided respondents are 9.7%. Hence respondents declaring to be unwilling to pay are 18.6% of the sample. Nonetheless, because of the intense focus of the questionnaire on social insurance, respondents might have been biased towards such a response, which did not entail any commitment to the SIF.

Table 26. Willingness to pay for contribution among not insured, by treatment group percentages.

	Framing experiment treatment group				Total
	1	2	3	4	
Yes	66.6	71.8	72.5	76.5	71.7
No	20.7	18.6	17.4	17.6	18.6
Don't know	12.7	9.6	10.1	5.9	9.7
Respondents	667	613	585	592	2,457

Note: Linear correlation coefficient is Rho

Source: Own elaboration

A crucial assumption in a randomized experiment is random allocation into treatment groups. This assumption can be verified by controlling the covariates balance between treatment groups. The balancing check of the treatment groups can be found in Annex B. Because the four groups lack several balancing properties among covariates, the randomization process is replicated through a propensity score matching (PSM) technique, using a kernel matching algorithm with a bandwidth of 0.05. After matching, it is possible to assess the treatment's average treatment effect (ATT). The procedure has been conducted pairwise, meaning that the ATT is tested by pairs of groups. Most treatments have significant effects on the probability of being willing to start paying for contributions (see Table 27). Nonetheless, the most relevant result is that the placebo group (T4) declares a WTP significantly higher than Treatment 1 (T1), Treatment 2 (T2), and the Active control (T3). Across treatment groups, the significance and difference of the probability of being WTP suggest that:

- Limiting information to social security contributions only (T1) elicits a lower probability of being WTP than limiting information to benefits only (T2), than disclosing complete information on contributions and benefits (T3), and then not providing any information (T4).
- Limiting information to benefits only (T2) elicits a probability of being WTP similar to disclosing complete information on contributions and benefits (T3) but lower than not providing any information (T4).
- Disclosing complete information on contributions and benefits (T3) still elicits a lower probability of being WTP than not providing any information (T4).

Because these results seem to point to the fact that the information provided to respondents is almost counterproductive to increasing enrollment, the following paragraphs explore further explanatory variables being able to predict the WTP of respondents.

Table 27. Pairwise average treatment effect on treated after propensity score matching.

T(a) vs T(b)	(a)	(b)	Difference	S.E.	T-stat	Significance
T1 vs T2	0.736	0.791	0.055	0.020	2.78	***
T1 vs T3	0.731	0.791	0.060	0.020	3.04	***
T1 vs T4	0.732	0.826	0.094	0.019	4.92	***
T2 vs T3	0.791	0.791	0.000	0.019	0.02	-
T2 vs T4	0.792	0.825	0.033	0.018	1.78	*
T3 vs T4	0.788	0.825	0.037	0.018	2.05	**

Note: S.E. for standard error. Significance "****" for p-value <= 0.01, "***" for p-value <= 0.05, and "**" for p-value <= 0.1. T1 is Treatment 1, T2 is Treatment 2, T3 is Active control, T4 is placebo group.

Source: Own elaboration

Table 2828 presents the analysis of explanatory variables determining the propensity to pay for the SIF scheme among the herders currently not enrolled. The significance of each explanatory variable is tested in the following paragraphs with a binary regression model.

Table 28. Willingness to pay for contribution among not insured, by explanatory variables, percentages.

		WTP %
Quintiles of per capita household income	1	71.7
	2	70.3
	3	70.2
	4	74.1
	5	72.5
Expected caretaker in old age	Myself	66.6
	My children	72.9
	My spouse	70.6
	My community	74.1
	The state	91.6
	Nobody	54.8
	Other	74.7
Most consulted person for relevant decision-making	My parents	71.0
	My spouse (husband/wife)	72.3
	I make decisions on my own	63.0
	I consult with other peer herders in my area	79.3
	I consult with members of herders group, cooperatives, associations I belong to	60.0
	I follow what local governor or public officers ordered	76.5
	Other	75.2
Knowledge of SIF retrospective payments of SSC	No	68.3
	Yes	76.5
Know other people who contribute to the SIF	No	67.6
	Yes	75.6
Internet access	No	70.3

Yes	76.5
Total	71.7

Source: Own elaboration

A binary regression model is used to assess the significance of explanatory factors affecting WTP probability. The dependent variable defines the declared willingness to start paying contributions after being asked the framing question. The variable is coded as binary (0 "No" & "Don't know", 1 "Yes"). Hence the model predicts the probability of being willing to pay for SIF membership. The independent explanatory variables (predictors) are the treatment group, the perceived capacity to make ends meet, whom respondents think will take care of after retirement age, attitudes towards risk, time, and trust, and perceived quality and trust towards the SIF institution. The model also includes controlling covariates (having a second job, the highest level of education attained, sex, age, household size, and Aimag). The model is restricted to those respondents who were not enrolled in the SIF at the moment of the interview. Therefore, the number of observations is 2,457. Two models are specified, one with predictors only and one with predictors and controlling variables (see Table 29). The coefficients are expressed in odds ratios.

The estimates results point at several findings:

- The controlling covariates (sex, age, and second job) are not significant, suggesting no **significant differences by sociodemographic attributes**.
- Aimags do not have significant differences, strengthening the hypothesis that WTP is affected by exogenous factors. However, in Tuv, there is a significantly higher probability of being WTP for SIF. Together with the findings on enrollment at the Aimag level, this suggests that **there may be local barriers to enrollment in Tuv**.
- Education levels generally do not influence the WTP, but respondents with the highest education level show a significantly higher probability of being WTP for SIF.
- The perceived **capacity to make ends meet is not a significant predictor**, which contradicts the hypothesis from Table 24 that low enrollment can be due to monetary constraints.
- Attitudes toward risk, **time-discounting**, and trust are **not significant predictors**, contradicting the hypotheses that enrollment is determined by inner attitudes, especially positive time-discounting attitudes.
- Despite being confined to non-enrolled herders, the model highlights that WTP is strictly correlated with the expectation of being protected by the state during old age. This result points to the possibility of **exogenous barriers to enrollment such as price, access, and administrative barriers**.
- The SIF quality and trust rating are highly significant: **higher levels of perceived quality and trust can increase the probability of being WTP contributions** by 1.08 times per each higher level of both items.
- Being aware that the SIF offers an option to join the fund, which subsidizes past contributions, significantly increases the probability of being WTP for contribution by 1.5 times.

Table 29. Logistic regression models of willingness to start paying contributions to the SIF, results in odds-ratio.

Variable	model3	model4
Treatment group		
Placebo	(base)	(base)
T1 Elicit risk-seeking	0.601***	0.625***
T2 Elicit risk-averse	0.757*	0.754*
T3 Active control	0.789	0.797
Make ends meet (1=Yes)	1.121	1.091
Expected caretaker in old age		
Myself	(base)	(base)
My children	1.265	1.268
My spouse	1.183	1.188
My community	1.305	1.293
The state	5.598***	5.718***
Nobody	0.756	0.782
Other	1.578	1.628
Attitude towards risk (1-10)	0.972	0.978
Time preference (1-10)	1.012	1.008
Trust in others (1-10)	0.991	0.997
SIF system quality rating	1.085***	1.086***
Trust in SIF system rating	1.081***	1.080***
68. Knowledge of SIF retrospective payments of SSC	1.468***	1.532***
Second job		0.942
Education		
None		(base)
Primary		0.764
Lower-secondary		0.829
Complete secondary		0.897
Vocational, technical		0.675
Higher		0.767
Sex (male=1)		0.767**
Age (years)		0.995
Size of the household		0.950
Aimag		
Bayan-Ulgii		(base)
Zavkhan		1.161
Uvurkhangai		1.131
Khuvsgul		1.063
Bayankhongor		1.003
Tuv		1.599*
Umnugobi		0.995
Sukhbaatar		1.314
Constant	0.961	1.568
N	2457	2457

Note: Significance "****" for p-value <= 0.01, "***" for p-value <= 0.05, and "**" for p-value <= 0.1

Source: Own elaboration

Respondents not willing to start paying contributions were asked to justify their choice with a multiple-choice question to which they could answer twice. The first three chosen items have been "SIF contribution is too expensive" (21.4%), "No need of the program" (21.0%), and "I do not understand the programs" (15.1%), see **Table 30**.

Table 30. Reasons for not being willing to start paying contributions, percentages.

	First answer	Second answer
SIF contribution is too expensive	21.4	6.0
No need of the program	21.0	10.5
I do not understand the programs	15.1	8.2
Other	14.2	10.5
I don't trust the system	9.2	9.7
I do not know how	5.7	17.2
Registration, payment, and claim process seem complicated	4.4	7.5
I don't think I am eligible	3.3	11.9
I have other more important needs	3.1	11.2
I don't like the insurance package	1.8	6.7
SIF offices are too far away	0.4	0.8
I don't have the necessary documentation	0.4	...
I have private insurance	0.2	...
respondents	458	134

Source: Own elaboration

Moreover, it is possible to analyze why herders currently do not contribute, disaggregated by the declared willingness to pay, restricting the sample to non-insured herders only. Among uninsured herders, 46.5% declare that they are currently not enrolled because of the level of social security contributions, but 75.6% of them would be willing to start paying. Among these, only 48% declared to be knowing that "the SIF offers the option to join the fund and pay retrospectively for the missing years of contributions (law on reimbursement of past contributions)". Further, 12.2% of herders responded to the question through the open answer tool and explained that their main reasons for not contributing are: *I think I'm going to pay, Never paid, Not expected to pay, Don't know, Information scarce, He is not old or under the age of 21, No understanding of Social Security, Because of the lack of jobs, Because I was fired, No fixed income*. The main remaining reasons are a lack of understanding of the programs (11.7%) and more important needs (10.4%).

Table 31. Main reason for currently not contributing to the SIF, by WTP (row percentages, and total column distribution)

	Not WTP	WTP	Total
SIF contribution is too expensive	24.5	75.6	46.5
Other	24.7	75.3	12.2
I do not understand the programs	32.4	67.6	11.7
I have other more important needs	29.3	70.7	10.4
I do not know how	24.8	75.2	5.3
The pension/benefits income is too little	47.8	52.2	3.7
I don't trust the system	51.6	48.4	2.5

The payment options (to make payment) are limited	25.5	74.5	1.9
Registration, payment, and claim process seem complicated	34.2	65.9	1.7
I don't think I'm eligible	38.5	61.5	1.6
No need for the program	54.3	45.7	1.4
SIF offices are too far away	23.1	76.9	0.5
I don't have the necessary documentation	16.7	83.3	0.5
I don't like that I have to take the entire insurance package	75.0	25.0	0.2
Total	696	1,760	2,456 (100%)

6. DISCUSSIONS AND RECOMMENDATIONS

6.1. Demand side challenges

Following the theoretical framework outlined in section 2.1 *Factors influencing social and health insurance take-up* the research project implemented a survey among a representative sample of the herder population to identify the demand side challenges to social and health insurance take-up. The survey gathered information on perceptions and behaviours, accessibility, needs, barriers and obstacles, and on reasons preventing herders from enrolling or being enrolled in social protection schemes. Thus, the following paragraphs summarize the main findings, divided in broader categories.

6.1.1. Perceived importance and knowledge of social security payments

The majority of herders do not have a complete understanding of social and health insurance schemes: this factor plays a significant impact on enrollment. Among the main reasons for not signing up for health insurance coverage, a common response across demographic groups is that health insurance is not important for them. Lack of understanding and low importance are two among the top three reasons for not contributing to social insurance. Indeed, awareness of the “redemption law” subsidizing past contributions significantly increases the probability of being willing to start paying contributions.

However, the perception of importance increases with age. Unsurprisingly, aging relates to higher enrollment rates and higher relevance attributed to insurance and savings. Education level is a relevant factor too. Higher education levels register higher enrollment rates, but among the not-enrolled only the highest educated herders declare themselves willing to start paying contributions.

6.1.2. Attitudes and expectations

Lower levels of trust in the Social Insurance Fund and a lower perceived quality are significantly lower among herders currently not paying social security contributions. When it comes to herders being willing to start paying contributions, quality and trust ratings are highly significant again.

The majority of herders think that during old age they will be taken care of by their family (particularly their children). Among these herders, the enrollment rate is significantly lower than among those herders thinking that the State will take care of them. Because the latter may be a tautology, restricting the analysis to non-enrolled herders, the findings show that non-enrolled herders expecting the State to take care of them have higher willingness to start paying contributions. This result may point to the possibility of supply-side challenges to enrollment, at least for this specific group.

Furthermore, positive time-discounting attitudes (i.e., the capacity of choosing options with long-term benefits) positively affects social insurance enrollment. However, the willingness to start paying contribution is also not determined by time preferences.

6.1.3. Financial capacity

Household income is positively correlated with higher enrollment rates in both social and health insurance. High cost is the first explaining factor for not paying social and health contributions, as well as for having stopped contributing in the past. Nonetheless, holding all other factors constant, the perceived capacity of making ends meet does not influence the willingness to start contributing to the social insurance fund. This means that while financial capacity can explain current enrollment levels, it cannot be the unique element hindering the potential coverage extension among the not-enrolled.

6.1.4. Geographical location

Among the eight Aimags Bayan-Ulg, Khuvsgul and Tuv present significantly lower enrollment rates. Enrollment is higher among herders living in Soum centres than in Aimag centres and in rural areas. In Tuv, there is a significantly higher probability of being willing to start paying contributions than in other Aimags. This may suggest the existence of specific local barriers to enrollment in this Aimag.

6.2. Supply side challenges

Based on the legal analysis, stakeholder analysis, and interview findings conducted among key informants, the following disadvantages and challenges are identified

6.2.1. Challenges to herder's social insurance coverage in the legal environment

Section 4 and subsection 2 of Article 4 of the Law on Social Insurance allows people working without an employment contract, the self-employed, **herders** and freelancers to be excluded from mandatory social insurance. Section 3 of Article 4 of the Law on Social Insurance stipulates that the voluntary insured (**herders**) have to take the Pension insurance, Benefit insurance, and Industrial accident and occupational disease insurance (IAODI) packages. The same clause '*Citizens other than those specified in paragraph 2 of Article 4 of this Law may voluntarily enroll into the social insurance.....*' restricted right of the insured by mandatory insurance to take additional voluntary insurance at his/her own request. This could be an issue for those herders that have a small employment contract, which provides them with mandatory insurance but does not account for the work as self-employed herder. Hence, future social insurance benefits will be low and not compensate the entire earning capacity loss. A multi-tier social insurance system could provide additional insurance for those with multiple jobs.

According to the *Law on Social Insurance*, '**social insurance contributions is the advance payment made by the insured and the employer to the social insurance fund within the period specified by law for the purpose of social insurance.**' However, the Law on Recognition of the Past Services and Redemption of the Pension Insurance Contributions allowed retrospective payments. While it increased the pension coverage of herders closer to retirement age, the approach should be used with caution as it creates expectations among young herders that someday such opportunities will also be available to them. Hence, they may be less incentivized to contribute to the SIF regularly, which may undermine the financial sustainability of the SIF in the longer term.

6.2.2. Challenges of services delivery

Educating herders and encouraging them to contribute to the SIF requires a long-term effort. However, insufficient numbers of local social insurance inspectors and the lack of a budget for field visits, make it difficult to reach out to all herders and educate them throughout the year.

The ratio between social insurance inspectors and herders is too small. On average, a social insurance inspector handles an area with 662 herders, managing most of the services for them. Therefore, local social insurance inspectors are not able to contact all herders and visit rural herders, because some herders might be absent at the time of field visits.

Local insurance officers and bank branches only work on weekdays. Therefore, rural herders are not able to get services all the time they come from their remote rural areas. Accordingly, herders are not able to obtain information about the amount of contributions that they are expected to pay, nor pay the contributions when they might otherwise wish to. Because of inaccessible services and insufficient numbers of payment methods/options, herders cannot pay the contributions whenever they choose to visit urban areas.

Local government officials should be able to substitute each other's roles. Herders receive much information from bagh meetings. When an official from the soum governor's office visits one of these meetings, he/she should be able to provide information on all services provided (by the state) through the soum governor's office; including social insurance.

6.3. Recommendations

The *Law on Social Insurance* facilitates herders and private business owners' right to voluntary insurance. Coverage of all groups of the population of Mongolia in social protection will help protect them against potential risks. However, voluntary insurance has proven to not be reaching its coverage objectives, and can put people at risk of not being insured and being excluded from social protection. From international experiences, extending coverage through mandatory schemes has proven to be more effective, in terms of broad coverage and adequacy, than voluntary mechanisms. **This suggests that the main necessary design change may be the shift from voluntary to compulsory social insurance, thereby ensuring the inclusion of specific tailored features for herders.** The shift towards a mandatory system for Mongolian herders (and other self-employed persons) shall be the starting point of a comprehensive strategy comprising a number of subsidiary recommendations preparing a convenient policy environment for participants, and establishing enforcement mechanisms. For attaining these objectives, the following recommendations are proposed.

Recommendation 1: Suspend the clause on retroactive payment of social insurance contributions.

The suspension of the clause on retroactive payment of social insurance contributions – contained in the *Law on Social Insurance* - would encourage young herders' to pay social insurance contribution, timely and persistently from an early age. Nonetheless, given the reiterated amendment and renewal of this measure in the past, such a revision has to be accompanied with a targeted and sensible communication campaign to ensure that the herders, and the public in general, understands the resolute end of the clause.

Recommendation 2: Draw a legal provision concerning the regulation for herders' social insurance.

Nomadic pastoralism predominates in Mongolia. A *Law on Herders Pension and Benefits*, or a legal environment that is more suited for existing circumstances, should be established. Such regulations should aim at providing provisions that favour herders membership to the Social Insurance Fund, designing a herders' specific contributions and pensions regime, with a separate classification from the national definition of the self-employed. While being tailored to the specificities of herders, the regime shall not be designed as a separated scheme to ensure funds pooling and allow portability of entitlements in case of workers changing employment sector.

Recommendation 3: Tailor contributions to herders' financial capacity.

Notwithstanding the current design being permissive in terms of the schedule of contributions, the contributions are deemed to be too high by a large share of non-enrolled herders. In particular, it is advised to maintain a flexible approach to herders' contribution payment requirement (i.e., allowing for self-defined schedules, according to seasonal earnings).

While the contribution rates required to herders are similar to the ones for other employees, herders (and self-employed in general) do not receive matching contributions from employers. This causes the burden of double contribution for obtaining the same old-age benefits. It is advised to the government to fill this gap by allocating funds to the subsidization of the "employers" share of contributions, up to 50% of the total contributions (from international practices), as well as to prepare a mid-term roll-back plan to be effectively communicated to the insured. The successful extension of coverage implies a financial investment to the government, which may partially be covered by the dismissal of the clause on redemption on past contributions.

The current provision regarding voluntary membership defines the lowest payable amount as a share of the minimum wage. Herders caring for higher pension benefits in the future can contribute with higher contributions, on a voluntary basis too. Under a mandatory regime, a system capable of formulating appropriate bases for the establishment of contribution rates should be put in place. This system could, for example, define herders' actual contribution capacity, possibly on the basis of the same or past year livestock (products) sales. This way, herders' income can be categorized according to a wealth scale which can serve as salary basis for calculating contributions. This can be coordinated with the system of livestock insurance, so that herders do not pay extra costs in case of livestock losses. Once entitlement to pensions and benefits from the Social Insurance Fund is issued, extension of the deadline for submission of documents (and evidence required for compensation) and compensation raise regarding continuous payment should be allowed by an appropriate regulation.

Recommendation 4: Incentivize youth membership through reduced contributions.

Incentivization of younger herders' membership can be done via a stronger subsidization element. The system can envisage a reduced contribution rate for a youth age-band (e.g., 15-24) in order to attract membership as from a younger age.

Recommendation 5: Ensure and incentivize contribution collection and compliance

The SIF should formulate and communicate transparent rules concerning contribution payment non-compliance. For example, the process of periodically defining the contribution base subject to herders' sales can be enforced so that income is not underreported. For doing so, estimates based on livestock ownership and production processes can indicate under-declaration of income, to be matched with social insurance inspector visits. Furthermore, collaboration with external organizations (such as health insurance fund, tax authorities, commercial banks, telecommunication partners, and herder cooperatives) on compliance and contribution collection could include data exchange for obtaining relevant and cross-checked information about contributors. Key elements of such collaboration should include (i) agreements between organisations involved, (ii) mechanisms for monitoring data exchange, and (iii) means for resolving disputes.

Following international examples, various levers can provide incentives to foster SIF membership and continued contributions. For example, adding a non-contributory element to the benefit, providing additional free-of-charge insurance for other risks, and guaranteed inflation-proof interest rate for accumulated savings in individual accounts. Further incentives to correctly declaring income can be set up through the inclusion of herders' social insurance check in certification processes such as the MNS 6926:2021 - Standard for Sustainable Textile Production, or even by a national scale-up of a program such as the "Green Pasture Project - Responsible Nomads" tracking herders' compliance with the social insurance fund. Enforcement and sanction systems could consider the implementation of a licensing system for herding on state-owned land, to be revoked in the case of multiple violations.

Recommendation 6: Increase and train the social insurance staff

The ratio between social insurance inspectors and herders is too small. On average, a social insurance inspector handles an area with 662 herders, managing most of the services for them. The number of inspectors in each soum should be increased in line with the number of the herders. This should be associated with increased training and public awareness activities, and improved access to services, as currently too many herders are allocated to one inspector. On the one hand specific services such as the collection of contributions and benefits payments can be digitalized as much as possible. On the other hand, inspectors can be effective agents of trust and knowledge promotion. Therefore, the ratio inspectors/herders may be increased by hiring and training additional staff, starting from those areas where the ratio inspectors/herders is lower, and where this ratio creates the highest obstacles.

Recommendation 7: Facilitate access to social insurance services

Online submission, confirmation and enquiries – through the e-Mongolia platform - should be made more accessible to the herders; to reference the size of payments, and to request extensions of contracts with social insurance organizations. A payment service that allows herders to pay social insurance contributions online or mobile banking (using their ID number with no time limits) should be introduced to complement that already available by conventional banking.

During the annual livestock census, social insurance inspectors should visit local herder households, along with the soum governor and other officers, to promote registration in social insurance. The creation of assistant inspector positions - responsible for training and promotion - will make advocacy more accessible

to remote herders. Based on an integrated database of the herders, national or local hotlines (under the social insurance offices) should be established for herders; to enquire about their SIFs, obtain other necessary information, seek for advice, and extend their social insurance contracts. Livestock product markets during springtime would be a good place to provide SIF information, training and advocacy - as well as to register and collect payment fees - when herders gather to trade their livestock products, including hides/skins, sheep wool and cashmere. Given the high incomes - and willingness of rural herders to pay social insurance contribution - expenditures regarding travel, drivers and transport, should be allocated in the local social insurance organizations' budgets; to intensify their work.

A further facilitating process may entail supporting the institution of group-based social insurance. These bodies, e.g., based upon cooperatives or communities, could simplify access to services and encourage contribution collection and compliance among members. Moreover, through these collective agreements, further incentivization of membership can be achieved by allowing for discounts on social contributions to participating members.

Recommendation 8: Improve knowledge of, and attitudes towards, social security schemes.

Depending on their age and level of education, a significant share of herders may have a hard time understanding (the relevance of) social security, or being convinced that their relatives (daughters and sons particularly) will take care of them during old-age or in case of accidents. Communication and awareness campaigns can be promoted, through social and traditional media, tailoring the messages depending on the recipient groups.

Younger herders, through social media, can be made aware of the relevance of savings for old age, and insuring against accidents. Nevertheless, the social security fund presence cannot be limited to be online for younger herders. Presential meetings can be held at the bagh level to establish the relationship between (potential) members and the fund.

Older herders, through social and standard media, can be informed of the reality of demographic and labour force changes in the country, as well as the earnestness of public provisions in terms of social security reforms. Older herders can also be reached by periodic phone calls informing them of payment deadlines, design options, and foreseen reforms. For this, a personal and trusted relationship with the soum social insurance inspector is essential.

7. CONCLUSIONS

1. Within the framework of the study on herders' perception of, and behavior towards, social and health insurance schemes

- It is common for herders to think that the age to enroll in social insurance is over 40 years. On the one hand, this is due to the lack of basic knowledge on social insurance. On the other hand, it is due to certain provision of the *Law on Pensions and Benefits from the Social Insurance Fund*. For instance, the law sets the retirement age at 55 and 60 years, and the minimum years of service the person shall pay contributions is 20. This leads young people to believe that they can meet this requirement if they start paying social insurance contributions after reaching 40 years of age.
- Herders' insufficient basic understanding of social insurance, leads to them not enrolling in social insurance schemes, not paying contributions regularly, discontinuing payments, and not claiming insurance benefits even when they are entitled to do so.
- Qualitative interviews show that traditionally, Mongolians place more importance on current or immediate issues, rather than prospective benefits. This attitude has a negative impact on herder's social insurance coverage.

2. Within the framework of the study on herders' current access to, needs, barriers and obstacles in social and health insurance schemes

- Herders have a high rate of accidents and injuries. However, insured herders miss out on the opportunity to claim reimbursement (or benefits) by providing necessary documents, due to a lack of knowledge. This creates distrust in insurance and reduces enrollment.
- Traditionally, herders have relied more on their family (spouses, children, etc.) rather than on social insurance after retirement. Therefore, they do not put much emphasis on the benefits they would receive after their retirement age.
- Herders' lack of interest in social insurance, inability to pay social insurance contributions due to their lack of regular income, remoteness from urban settlements, and frequent *dzuds*, all have a negative impact on social insurance coverage.
- The fact that herders continue to engage in animal husbandry, whether they have reached the retirement age or not, contributes to the tendency to cope with unexpected risks (by selling their livestock, and livestock products).
- Herders have varying levels of education and do not have set working hours. They do not read the distributed information and promotional materials, do not understand, and/or forget easily (if they read them). They do not believe the information unless they hear it from the social insurance inspectors. There are also many incidents where herders were absent herding when the inspectors visited their homes. Social insurance inspectors reported that the abovementioned reasons were the main reasons herders lacked knowledge of social insurance.

3. Reasons that prevent herders from enrolling, or being enrolled, in social protection schemes.

- Herder's social insurance enrollment rates vary depending on demographics and social indicators such as gender, education level, location and income. Herders who are knowledgeable and have

sufficient household income are more likely to be aware of social insurance, and therefore willing to pay.

- Female herders who enjoy additional benefits from the social insurance contributions - based on the characteristics of their gender - are more interested in enrolling in social protection schemes.
- Conversely, male herders, who have little information, live in remote locations, or work another job on the side, are less likely to pay for social insurance contributions (or pay in the future). This is because: men have a lower life expectancy, the social insurance contributions cannot be bequeathed, or they rely on their own income from herding.
- Most herders who stopped paying social insurance contributions reported that the primary reasons were the high rate of social security contributions, and the requirement to meet other basic needs. For households with incomes below the subsistence level, providing basic necessities is a major reason for not enrolling in the social insurance schemes.

4. Existing capacity in Mongolia to implement improved service delivery

- Herders' social insurance coverage relies heavily on the timing of their income, the locations where they pay their contributions, the frequency of visits to and return from towns, and the working hours of local financial service providers.
- Herders not enrolled in social insurance schemes are often from remote areas and there is a need to reach out to them and provide information and promote social insurance. However, some social insurance inspectors have limited transport and financial resources.
- Mongolia has 355 soums, and researchers estimate that there are 233,000 herders who are eligible for social insurance spread across one million square kilometres of pastureland. With 352 local social insurance inspectors, the number of herders per inspector is 662. Therefore, there is a shortage of financial, human, and transportation resources to reach all herders and provide services, training, and information.

5. Bottlenecks in the legal environment and service delivery of the Government in the areas of social and health insurance, that limit the effective coverage of herders.

- The *Law on Health Insurance* requires every citizen of Mongolia to enroll in the health insurance scheme, so herders are more likely to be covered by the health insurance.
- Paragraph 4.5 of the *Law on Social Insurance* stipulates that the terms and regulations of compulsory enrollment for the self-employed, herders and private businesses may be determined by law. It is necessary to legislate for this.
- The *Law on Recognition of the Past Services and Redemption of the Pension Insurance Contributions* and the *Law on Redemption of Pension Contribution for Herders and Self-Employed persons* create an expectation among young herders that the state will take measures when they approach retirement age.

6. Organizational and technological delivery systems to facilitate herders' access to social and health insurance.

- To make insurance claims for reimbursement, herders are required to document and submit their application in a short period of time. The reimbursement is small, and the compensation is paid long after the risk has passed. This prevents herders from reaping the necessary benefits. For instance, in the event of an accident or injury, herders will not be able to document and deliver items to the *Social Insurance Fund* due to their health status, and the cost of documenting and delivering it is almost equal to the social security compensation they might receive. This deters herders from making compensation claims.
- There is a lack of remote services and hotlines that: allow herders to renew their social insurance contracts at any time (regardless of working hours and location of government organizations), make inquiries about the rate of social insurance contributions, pay and confirm social insurance contributions (through online and mobile banking), gain information and advice. All of which negatively affects herders' social insurance coverage.

Annexes

Annex A. Logistic regression models of probability to be enrolled in social, health, and livestock insurance using the same covariates, coefficients in odds-ratio

Variable	Social insurance	Health insurance	Livestock insurance
Make ends meet (1=Yes)	1.353***	1.319***	1.091
Locus of control (1-internal/5-external)	0.855*	0.784***	1.097
Attitude towards risk (1-10)	0.987	0.978	0.982
Time preference (1-10)	1.033**	1.001	0.991
Trust in others (1-10)	0.983	0.989	1.011
Mostly consulted for make important decision			
My parents	(base)	(base)	(base)
My spouse (husband/w..)	0.759*	0.868	0.997
I make decisions on m..	0.584**	0.716*	0.738
I consult with other ..	1.026	0.823	0.525*
I consult with member..	0.629	1.316	0.649
I follow what local g..	0.912	0.556	1.259
Other	0.696	0.832	1.066
Belong to any herders' group / cooperatives / associations (1=Yes)	0.655***	0.783**	0.605***
Sex (male=1)	0.707***	0.549***	0.762***
Age (years)	1.062***	1.027***	1.005
Education			
None	(base)	(base)	(base)
Primary	1.180	1.105	1.031
Lower-secondary	1.486	1.510	1.037
Complete secondary	1.585	1.471	1.103
Vocational, technical	1.615	1.323	0.953
Higher	3.852***	2.384***	1.346
Size of the household	1.036	0.964	1.038

Aimag			
Bayan-Ulgii	(base)	(base)	(base)
Zavkhan	2.533***	1.186	1.370*
Uvurkhangai	2.689***	1.682***	0.534***
Khuvsgul	1.274	1.345*	0.766
Bayankhongor	2.704***	1.522**	2.265***
Tuv	1.357	1.141	0.957
Umnugobi	2.033***	1.367*	0.951
Sukhbaatar	2.272***	1.909***	1.342*
Constant	0.067***	1.724	0.640
N	4000	4000	4000

*Note: Significance "****" for p-value <= 0.01, "***" for p-value <= 0.05, and "**" for p-value <= 0.1*

Source: Own elaboration

Annex B. Balance check between treatment groups (in bold if the difference is significantly different, p-value < 0.05)

	Mean				P-value						
	T1	T2	T3	T4	D/1-2	D/1-3	D/1-4	D/2-3	D/2-4	D/3-4	
Male	0.60	0.47	0.55	0.57	0.000	0.013	0.123	0.001	0.000	0.345	
Age	38.28	38.34	38.83	37.77	0.893	0.155	0.198	0.187	0.147	0.006	
N children	1.89	1.78	1.89	1.76	0.063	0.935	0.039	0.074	0.831	0.046	
Household size	2.94	2.87	2.94	2.83	0.047	0.953	0.003	0.042	0.313	0.002	
Livestock insurance	0.31	0.31	0.31	0.30	1.000	0.923	0.808	0.923	0.808	0.884	
Social insurance	0.33	0.39	0.41	0.41	0.012	0.000	0.000	0.201	0.337	0.751	
Health insurance	0.66	0.66	0.65	0.69	0.962	0.742	0.127	0.707	0.139	0.064	
N cattle	3.22	2.83	4.64	5.08	0.669	0.129	0.044	0.085	0.030	0.682	
N horse	22.80	23.17	22.90	23.45	0.852	0.965	0.799	0.886	0.907	0.825	
N camel	20.81	24.39	21.63	21.07	0.020	0.578	0.861	0.081	0.036	0.711	
N sheep	165.39	192.60	183.85	170.36	0.022	0.057	0.558	0.501	0.067	0.175	
N goat	159.10	156.36	199.97	181.38	0.703	0.001	0.002	0.001	0.001	0.150	
PC household income (millions)	5.47	5.64	5.61	5.64	0.638	0.707	0.628	0.903	1.000	0.898	
Education 1	0.03	0.02	0.02	0.03	0.012	0.185	0.802	0.204	0.022	0.280	
Education 2	0.11	0.15	0.11	0.07	0.016	0.772	0.007	0.007	0.000	0.016	
Education 3	0.24	0.23	0.26	0.21	0.493	0.353	0.135	0.106	0.419	0.016	
Education 4	0.51	0.49	0.51	0.56	0.502	0.788	0.028	0.348	0.004	0.054	
Education 5	0.03	0.03	0.03	0.03	0.786	0.786	0.606	1.000	0.432	0.432	
Education 6	0.08	0.09	0.07	0.09	0.339	0.500	0.339	0.104	1.000	0.104	
Overall for education					0.026	0.707	0.038	0.026	0.000	0.008	

Head 1	0.59	0.49	0.56	0.54	0.000	0.175	0.015	0.003	0.054	0.281
Head 2	0.33	0.43	0.37	0.37	0.000	0.049	0.035	0.005	0.007	0.890
Head 3	0.08	0.08	0.07	0.09	0.563	0.315	0.477	0.668	0.198	0.087
Overall for head					0.000	0.120	0.051	0.010	0.022	0.199
Region 1	0.27	0.25	0.25	0.24	0.306	0.414	0.199	0.836	0.795	0.641
Region 2	0.27	0.28	0.27	0.30	0.653	0.802	0.216	0.484	0.431	0.137
Region 3	0.22	0.27	0.26	0.23	0.013	0.047	0.668	0.612	0.039	0.118
Region 4	0.24	0.20	0.22	0.23	0.046	0.367	0.673	0.274	0.116	0.631
Overall for region					0.033	0.243	0.458	0.678	0.130	0.287
Observation	1,000	1,000	1,000	1,000						

Annex C. Quantitative survey tool

INTRODUCTION

Hello. How are you? My name is [ENUMERATOR NAME], and I am working with a team from IRIM and Maastricht University. We are conducting a survey among herders, and you were chosen to be interviewed.

I would like to ask you some questions about you and your household. We want to understand how herders think about health and other insurance and how they plan for their retirement. We hope that this information will eventually benefit the entire community by allowing us to understand the challenges that herders like your face, and how best to mitigate them.

We are seeking your consent because we would like to ask you some questions today as part of our survey.

Would you like to continue? YES/NO

Any information you give to us will be treated with confidentiality and respect. We will not tell anybody else about the answers you give to us. There will be no ramifications from this study, and nobody will be able to identify you from the data as all data will be anonymized. The answers you give do not have any consequences, and no benefit you receive from the government will be affected by the answers you give, and it will not affect any tax you have to pay. The data we collect will be put onto a database and kept securely at Maastricht University for 10 years, after which the data will be destroyed.

Your participation in this study is completely voluntary. You are free to terminate the interview at any time or decline to participate in any or all components of the study. Such a decision will not have any consequences. If there are any questions you would rather not answer, please indicate to me and I will move to the next question.

QUESTIONNAIRE

PART 0. GENERAL INFORMATION

1. Phone call id
2. Phone call date YYYY/MM/DD
3. Does household belong to:
 - 3.1. Treatment 1
 - 3.2. Treatment 2
 - 3.3. Treatment 3
 - 3.4. Control
4. Result
 - 4.1. Complete
 - 4.2. No respondent
 - 4.3. Temporarily not present
 - 4.4. Postponed
 - 4.5. Refused
5. Where are you currently located?
 - 5.1. UB
 - 5.2. AIMAG CENTER
 - 5.3. SOUM CENTER
 - 5.4. RURAL
6. What is the approximate distance from the summer location to the soum center?
 - 6.1. [...] km
7. What is the approximate distance from the winter location to the soum center?
 - 7.1. [...] km

PART 1 PERSONAL AND HOUSEHOLD INFORMATION

PERSONAL INFORMATION RESPONDENT

8. Sex
 - 8.1. Male
 - 8.2. Female
9. How old are you (AGE IN YEARS)
10. Are you the head of the household?
 - 10.1. Yes, go to 12
 - 10.2. No
11. if not, what is your relationship to the household head?
 - 11.1. Spouse
 - 11.2. Son / daughter
 - 11.3. Father / mother
 - 11.4. Brother / sister

- 11.5. Father / mother in law
- 11.6. Brother / sister in law
- 11.7. Grand parent
- 11.8. Grandchild
- 11.9. Other relative
- 11.10. Other

12. What is your marital status?

- 12.1. Never married
- 12.2. Married (certified)
- 12.3. Living together
- 12.4. Divorced or separated
- 12.5. Widowed

13. What is your highest education/qualification level achieved?

- 13.1. None
- 13.2. Primary
- 13.3. Lower-secondary
- 13.4. Complete secondary
- 13.5. Vocational, technical
- 13.6. Higher

14. Do you have children (of any age)? (note: only those still alive)?

- 14.1. Yes
- 14.2. No, go to 16

15. If yes, please state the age and gender of each child and the place of living:

15.1	15.2 Age	15.3 Gender 1. Male 2. Female	15.4 Where does the child live? 1. Same household 2. Same soum 3. Different soum, but same aimag 4. Different aimag 5. Capital UB

16. Who is taking care of your parents?

- 16.1. They don't require care
- 16.2. I do
- 16.3. Somebody else does
- 16.4. Not applicable (they passed away)

17. How many years have you been registered as a herder?years

18. Have you currently hired an assistant herder?

18.1. Yes

18.2. No

19. Do you have a second job apart from your work as a herder?

19.1. Yes

19.2. No, go to 41

20. To which of the following categories does your second job belong to?

20.1. Wage Job

20.2. Self-employed job

20.3. Unpaid family worker

20.4. Other

HOUSEHOLD COMPOSITION, DWELLING, AND ASSETS

21. How many people are currently living in this household? ____

22. Of those currently living in this household, how many are

22.1. children below 18 years: ____

22.2. women above 50 years: ____

22.3. men above 55 years: ____

23. How many registered herders are living in this household? _____

24. How many dwellings (including ger) belong to your family in each location? [multiple options]

24.1. UB(number)

24.2. Aimag center(number)

24.3. Soum center(number)

24.4. Rural area(number)

25. Does your household own any of the following assets? [multiple options]

25.1. Land

25.2. House/apartment

25.3. Truck, large truck

25.4. Car, Pick-up

25.5. Motorcycle, snowmobile

25.6. Tractor

26. Does your household have access to the internet?

26.1. Yes

26.2. No

1. HOUSEHOLD INCOME INFORMATION

27. Do you or anybody else in your household receive any of the following social benefits: [yes/no/don't know]

#	Types	Yes No Don't know
1.	Old age pension	
2.	Disability pension	
3.	Social welfare pension for seniors, children under 18 who lost the bread winner, single mother/father and dwarf persons aged 16+	
4.	Maternity benefits and taking care of a child under 3 years of age.	
5.	Allowance for taking care (of elderly, disabled and children in difficult circumstances)	
6.	Food and nutrition support (food stamps)	
7.	Child money	
8.	Concessions for elderly and disabled for sanatorium and resort services	
9.	Allowance to mothers who gave birth to and raised many children (Mother Hero benefit, level 1 and 2)	
10.	Other benefit, allowance and concessions (longevity benefit, emergency and other livelihood support, benefit for reindeer people, concessions for orthopedic tools and firewood etc)	
11.	Other..	

28. How much, on average, is your household income per year? (please include the income from all household members, income from the sale of goods or services, money earned from investment, and any government transfers).

#	Types	How much? (average annual income)
1.	Wages and salaries	
2.	Selling livestock	
3.	Selling products of livestock (meat, milk, wool, cashmere, hide, skin)	
4.	Pensions and allowances	
5.	Other incomes	

29. Which of the following descriptions comes closest to how you feel about your household income?

29.1. We are living comfortably

29.2. We just manage

29.3. It is difficult to make ends meet

29.4. It is very difficult to make ends meet

30. Does your household have any outstanding debts/loans?

- 30.1. Yes
- 30.2. No
- 30.3. Don't know

31. With your current income and spending, is your household able to save?

- 31.1. Yes
- 31.2. No, go to 33

32. How much can your household usually save per year? _____

2. LIVESTOCK

33. Does your household belong to any herders' group/cooperatives/associations?

- 33.1. Yes
- 33.2. No

34. How many ...[ANIMAL]... does the household...?

#	Type	...own right now?	How many animals have you lost any in the last 12 months due to natural disasters, crime, disease, or animal attacks?
1	cattle		
2	horse		
3	camel		
4	sheep		
5	goat		
6	other (.....)		
7	other (.....)		

35. Do you currently have your livestock insured against natural disasters, crimes, diseases, and animal attacks?

- 35.1. Yes
- 35.2. No, go to 38

36. For how many years did you have your livestock insured? ___ [year]

37. What was the reason to insure the livestock? [multiple options] [then go to 39]

- 37.1. I assumed that we may face a 'dzud'
- 37.2. Insurance agent convinced me
- 37.3. I saw how other herders benefitted in the past
- 37.4. It was a decision made within the group/cooperative/association
- 37.5. The bank required us to buy the insurance if I want to get herders' loan
- 37.6. I found the insurance useful in case we may face some unexpected risks.
- 37.7. Other.....

38. What is the reason that you do not have livestock insurance now? [multiple options]

- 38.1. The insurance is expensive; I cannot afford it.
- 38.2. I am not familiar with the livestock insurance
- 38.3. I can take responsibility for my own livestock

38.4. The frequency or period of the payment is not convenient to us

38.5. Other.....

39. Have you had your livestock insured in the past?

39.1. Yes

39.2. No

40. What was the reason for terminating the livestock insurance? [multiple options]

40.1. I have never received compensation.

40.2. The insurance was too expensive; I could not afford it.

40.3. The frequency or period of payments was not convenient.

40.4. I can take responsibility for my own livestock

40.5. I have never terminated the livestock insurance

40.6. Other

3. ATTITUDES TOWARDS RISKS, TIME DISCOUNTING, TRUST, AND LOCUS OF CONTROL

Enumerator: We will now ask a few questions about you as a person.

41. How do you see yourself: are you a person who is generally willing to take risks, or do you try to avoid taking risks?

Please use a scale from 1 to 10, where 1 means you are "completely unwilling to take risks" and 10 means you are "very willing to take risks." You can also use any number between 1 and 10 to indicate where you fall on the scale:

Completely unwilling to take risks									Very willing to take risks
1	2	3	4	5	6	7	8	9	10

42. Are you a person who is generally willing to give up something today in order to benefit from that in the future or are you not willing to do so?

Please use a scale from 1 to 10, where a 1 means you are "completely unwilling to give up something today" and a 10 means you are "very willing to give up something today". You can also use the values in-between to indicate where you fall on the scale.

Completely unwilling to give up something today									Very willing to give up something today
---	--	--	--	--	--	--	--	--	---

1	2	3	4	5	6	7	8	9	10
----------	---	---	---	---	---	---	---	---	-----------

43. In general, do you think that most people can be trusted, or you cannot trust people?

Please use a scale from 1 to 10, where 1 means "you cannot trust people" and a 10 means "most people can be trusted". You can also use the values in-between to indicate where you fall on the scale.

You cannot trust people									Most people can be trusted
1	2	3	4	5	6	7	8	9	10

44. We are now going to read 5 statements to you and would like to know to what extent you agree.

Please use a scale from 1 to 5, where 1 means "strongly disagree" and a 5 means "strongly agree". You can also use the values in-between to indicate where you fall on the scale.

#	Statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
44.1	If I work hard, I will succeed.	1	2	3	4	5
44.2	I am my own boss .	1	2	3	4	5
44.3	Whether at work or in my private life: What I do is mainly determined by others.	1	2	3	4	5
44.4	Chance and luck are very important for what happens in my life.	1	2	3	4	5
44.5.	I do not have enough control over the direction my life is taking.	1	2	3	4	5

45. Who do you mostly consult with before you make important livestock-related decisions?

45.1. My parents

45.2. My spouse (husband/wife)

45.3. I make decisions on my own.

45.4. I consult with other peer herders in my area.

- 45.5. I consult with members of herders' group/cooperatives/associations I belong to
- 45.6. I follow what local governor or public officers ordered
- 45.7. Other

4. FRAMING EXPERIMENT

ENUMERATOR: check whether respondent is a man or woman and which group the respondent was allocated to (group 1, 2, 3 or 4)

For FEMALE respondents:

Please consider now the following situation in your head: imagine you are now 45 years old. You have been working as a herder all your working life. You have repaid the debts you had with the Bank or local shop, but you have little savings. You will probably have to work until your body and your mind allow you to do so...

For MALE respondents:

Please consider now the following situation in your head: imagine you are now 50 years old. You have been working as a herder all your working life. You have repaid the debts you had with the Bank or local shop, but you have little savings. You will probably have to work until your body and your mind allow you to do so...

Group	Description
Treatment 1	[...] During the last Bag meeting, a Social Insurance inspector was talking about the national social insurance scheme. He explained that enrolment is voluntary, but highly recommended. Herders can pay the contributions in flexible instalments and the way they prefer (for example via mobile banking). He also explained that in your case and if you would start right now, you would have to pay a minimum monthly amount of 60,900 MNT as social insurance contributions until retirement.
Treatment 2	[...] During the last Bag meeting, a Social Insurance inspector was talking about the national social insurance scheme. He explained that the social insurance fund will subsidize the contributions for all your past working years until now. Once a member of the scheme, you will be covered for the risk of disability and occupational accidents, on top of having an old-age pension once you retire. Upon turning [Enumerator check! 55 for men / 50 for women] years old, you will be receiving a monthly pension of at least [210,000] MNT.
Active Control	[...] During the latest Bag meeting, a Social Insurance inspector was talking about the national social insurance scheme. Once a member of the scheme, you will be covered for the risk of disability, and occupational accidents, on top of having an old-age pension once you retire. Upon turning [Enumerator check! 55 for men / 50 for women] years old you will be receiving a monthly pension of at least [210,000] MNT. In case of disability or occupational accidents, the social security organization will grant you a benefit replacing your income. The social insurance organization is prepared to subsidize the contributions for all your past working years until 2021. However, starting this year and until the retirement age, you would have to pay a minimum monthly amount of 60,900 MNT as social insurance

	premium. Contributions may be paid in instalments and the way you prefer (for example via mobile banking).
Placebo Control	[NO INFORMATION]

Still imagining the situation described above where you are close to retirement age:

46. Would you start or continue paying contributions to the social insurance fund?

46.1. Yes, go to 48

46.2. No

46.3. Don't know / Doesn't answer

47. If no, why? [multiple options]

47.1. I don't think I'm eligible

47.2. I do not understand the programs

47.3. I do not know how

47.4. Registration, payment, and claim process seem complicated

47.5. SIF offices are too far away

47.6. SIF contribution is too expensive

47.7. I don't like the insurance package

47.8. I have private insurance

47.9. I have other more important needs

47.10. I don't trust the system

47.11. I don't have the necessary documentation

47.12. No need of the program

47.13. Other _____

PART 2 IDIOSYNCRATIC LIFECYCLE RISKS

RISK INFORMATION

48. How would you assess your own health?

48.1. Very good

48.2. Good

48.3. Satisfactory

48.4. Poor

48.5. Very poor

49. Are you suffering from a permanent disability?

49.1. Yes. I am officially registered as a person with disability

49.2. Yes, but I am not officially registered.

49.3. No, go to 51

50. What is the cause of your disability? (then go to 52)

- 50.1. Congenital disabilities
- 50.2. Illness caused by animal diseases (particularly brucellosis)
- 50.3. Accidents and injuries during work
- 50.4. Accidents and injuries elsewhere
- 50.5. Other
- 51. Is anybody in your household suffering from a permanent disability?
 - 51.1. Yes, he/she is officially registered as a person/child with disability
 - 51.2. Yes, he/she is not officially registered
 - 51.3. No
- 52. Have you been seriously ill in the last 12 months?
 - 52.1. Yes
 - 52.2. No
- 53. Has any of your family members been pregnant or given birth to a child in the last 12 months?
 - 53.1. Yes
 - 53.2. No
- 54. Has your household had to unexpectedly pay for treatment or care for a family member with a severe illness in the last 12 months?
 - 54.1. Yes
 - 54.2. No
- 55. Has your household lost a member whose income was contributing substantially to your household sustenance in the last 12 months?
 - 55.1. Yes
 - 55.2. No
- 56. Has anybody in your household (temporarily) been laid-off in the last 12 months?
 - 56.1. Yes
 - 56.2. No

PART 3 QUESTIONS ON INSURANCE

INSURANCE INFORMATION

- 57. Do you have national health insurance?
 - 57.1. Yes
 - 57.2. No, go to 59
- 58. What is the reason that you have national health insurance? [multiple options] [then go to 60]
 - 58.1. To protect myself and my family against the risk of falling sick
 - 58.2. To protect myself and my family if I get sick
 - 58.3. To protect my finances in case of getting sick
 - 58.4. Because it is mandatory
 - 58.5. I can get health services at low cost if I have national health insurance
 - 58.6. Other
- 59. Why are you not covered by the national health insurance? [multiple options]
 - 59.1. I have my private insurance

- 59.2. Do not think it is important
- 59.3. Do not know how to access to it
- 59.4. It is too expensive for me
- 59.5. Do not need it
- 59.6. Do not trust it
- 59.7. I was not aware that it was available for me
- 59.8. Other

60. How would you rate the quality of the public health system on a scale from 1 to 10 (1 is the lowest quality, 10 is the highest quality)?

The lowest quality										The highest quality
1	2	3	4	5	6	7	8	9	10	

61. How would you rate your trust in the public health system on a scale from 1 to 10 (1 is the lowest trust, 10 is the highest trust)?

The lowest trust										The highest trust
1	2	3	4	5	6	7	8	9	10	

62. How important is saving for retirement/old age for you?

- 62.1. Not important at all
- 62.2. Somewhat important
- 62.3. Important
- 62.4. Very important

63. When you retire and are no longer able to work, who do you think will take care of your needs (paying for food, rent, healthcare)? [multiple options]

- 63.1. Myself
- 63.2. My children
- 63.3. My spouse
- 63.4. My community
- 63.5. The state
- 63.6. Nobody
- 63.7. Others, specify _____

64. Do you save for retirement?

- 64.1. Yes

- 64.2.No go to 66
65. How do you save for your retirement? [multiple options] [then go to 67]
- 65.1.Savings in bank account
 - 65.2.Contribute to the SIF
 - 65.3.Have a life insurance
 - 65.4.Own bonds
 - 65.5.Buying property
 - 65.6.Buying livestock
 - 65.7.Others, specify_____
66. Why don't you save for retirement? [multiple options]
- 66.1.My family/community/the country will take care of me when I'm old.
 - 66.2.I don't have enough money to save
 - 66.3.I don't know how
 - 66.4.Others, specify_____
67. Do you know that the Social Insurance Fund has a program where you can save money for old-age, disability, sickness and other emergencies?
- 67.1.Yes
 - 67.2.No
68. Do you know that the SIF offers the option to join the fund and pay retrospectively for the missing years of contributions (law on reimbursement of past contributions)?
- 68.1.Yes
 - 68.2.No
69. In what year have you started contributing to the social insurance fund?___ [year]
70. Have you contributed to the voluntary or mandatory social insurance scheme in the past?
- 70.1.Yes, mandatory
 - 70.2.Yes, voluntary
 - 70.3.Yes, but don't know whether mandatory or voluntary
 - 70.4.No, go to 73
71. Why have you started contributing to the social insurance fund? [multiple choice]
- 71.1.I wanted to plan for my future retirement
 - 71.2.I wanted to be insured in case of maternity, sickness, accidents, or a sudden funeral
 - 71.3.An event happened to my family which made me make this decision
 - 71.4.An event happened to someone I know which made me make this decision
 - 71.5.It was my partner's decision
 - 71.6.I was convinced by a social security inspector
 - 71.7.I was convinced by an information campaign
 - 71.8.I was convinced by members of my group/cooperative/association
 - 71.9.Other:_____
72. How many years have you contributed to the social insurance fund? ___[years]
73. In what year have you stopped contributing to the SIF?
- 73.1. ___ [year]
 - 73.2.I haven't stopped contributing [go to 75]

74. Why did you stop contributing to the social insurance fund? [multiple options] [then go to 79]
- 74.1. The pension/benefits income is too little
 - 74.2. SIF contribution is too expensive
 - 74.3. I did not like that I had to take the entire insurance package
 - 74.4. I have private insurance
 - 74.5. I have other more important needs
 - 74.6. I don't trust the system
 - 74.7. I don't have the necessary documentation
 - 74.8. No need for the program
 - 74.9. The payment options (to make payment) are limited.
 - 74.10. Other _____
75. Are you currently contributing to the Social Insurance Fund?
- 75.1. Yes, mandatory go to 77
 - 75.2. Yes, voluntary go to 77
 - 75.3. Yes, but don't know whether mandatory or voluntary go to 77
 - 75.4. No
76. Why don't you participate in the SIF? [multiple options] [then go to 78]
- 76.1. I don't think I'm eligible
 - 76.2. The pension/benefits income is too little
 - 76.3. I do not understand the programs
 - 76.4. I do not know how
 - 76.5. Registration, payment, and claim process seem complicated
 - 76.6. SIF offices are too faraway
 - 76.7. SIF contribution is too expensive
 - 76.8. I don't like that I have to take the entire insurance package
 - 76.9. I have private insurance
 - 76.10. I have other more important needs
 - 76.11. I don't trust the system
 - 76.12. I don't have the necessary documentation
 - 76.13. No need for the program
 - 76.14. The payment options (to make payment) are limited.
 - 76.15. Other _____
77. What is the total annual contribution that you pay for social insurance per year? ____
78. Have you taken advantage of the law on reimbursement of past contributions?
- 78.1. Yes
 - 78.2. No
79. Are you planning to receive the pension when you reach the retirement-age?
- 79.1. Yes
 - 79.2. No
80. Has anyone (including soum insurance officer) recommended/suggested that you contribute to the SIF?
- 80.1. Yes

80.2.No

81. Do you know other people who contribute to the SIF?

81.1.Yes

81.2.No, go to 83

82. Who are they? [multiple choice]

82.1.My spouse/partner

82.2.My parents

82.3.My grandparents

82.4.My children

82.5.Friends

82.6.Other herders

82.7.Others_____

83. How would you rate the quality of the social insurance system in protecting its members on a scale from 1 to 10 (1 is the lowest quality, 10 is the highest quality)?

The lowest quality									The highest quality
1	2	3	4	5	6	7	8	9	10

84. How would you rate your trust in the social insurance system to maintain its promises on a scale from 1 to 10 (1 is the lowest trust, 10 is the highest trust)?

The lowest trust									The highest trust
1	2	3	4	5	6	7	8	9	10

Thank you very much for your participation!

Annex D. Qualitative survey tool

Introduction

Hello. How are you? My name is [researcher introduces himself/herself]. I am a researcher at the Independent Research Institute (IRIM) and part of a team working with the University of Maastricht in the Netherlands.

With the support of the International Labor Organization, we are conducting a Study on Herders' Behaviour towards Social and Health Insurance in Mongolia. The main goal of our research is to determine herders' enrollment in social insurance schemes, and their accessibility to future pensions and benefits. As a representative of herders and/or a major organization working in the field of insurance for herders, you were selected to participate in our research. We believe that you will be able to contribute to our efforts, and provide useful and accurate information. The information you provide will be a valuable asset, used to address the challenges facing social insurance coverage for herders.

Would you like to participate in our interview? YES/NO

Thank you for accepting our request. Any information you provide will be kept confidential, and will be used solely as part of the research findings. We assure you that your participation in this survey will not cause any adverse consequences to your career or personal life.

Participation in this survey is voluntary. Therefore, you can participate in the interview fully, partially, or refuse to take part. If there are questions you do not wish to answer, please let me know and we can immediately move on to the next question.

We appreciate and respect your active participation, in providing accurate information for our research.

2.1. Interview guide for representatives of aimag social insurance departments and soum social insurance inspectors

1. General question

- i. Briefly introduce yourself, your organization, job title and experience in this position?

2. Herders' understanding and behavior towards social and health insurance schemes

- ii. Where do herders usually obtain information concerning social insurance? What is their perception of social insurance?
- iii. Are they interested in getting information in person, or would they prefer if other people undertake herder-outreach?

3. Looking into the current social and health insurance coverage of herders, their need for insurance services, and pressing challenges and issues

- i. What are your observations about herders' current insurance status in your soum? What is the annual average rate of social insurance coverage?
- ii. What are herders' reasons and explanations for lack of coverage?
 - o What are the common characteristics of uninsured herders? (Are there differences in gender, age, income, marital status, amount of livestock and attitudes?)
 - According to your observations, how do uninsured herders sustain their livelihoods if they are exposed to unexpected risks or unable to tend to their livestock once they reach retirement age?
- iii. What are the common features of insured herders? Are there differences in gender, age, income, marital status, livestock numbers and traditional attitudes?
 - What leads them towards insurance coverage and stable contributions?
 - Starting from what age and how frequently are they covered by insurance? Do they make their contributions regularly or do they often take pauses? What are the reasons?

4. Clarifying the reasons for herders' subscription/non-subscription to social insurance schemes

- i. What are the common risk features and life circumstances for herders that would oblige them to get social insurance coverage?
- ii. What are the alternatives (substitutes) for social insurance benefits? For example, personal insurance, savings, etc. Why would they choose these?
- iii. Are there currently uninsured herders who would like to be insured in the future? If yes, what is preventing them getting coverage?
- iv. How often do soum herders try to address social insurance problems and receive appropriate services?
 - o What is their payment schedule? What do you think is the reason?
 - o What are the common reasons for herders having access to compensation or benefits?
 - o If they were eligible, how many herders would actually make an effort to get the benefits? Could they take advantage of these benefits? If Yes/No, why?

5. Determining the potential capacity and resources to support service improvement

- i. Since enactment of the Law on the Retrospective Payment of the Pension Insurance Contributions for Herders and the Self-Employed, has there been a change in herders' social insurance coverage and behaviours towards it? If so, what were the changes?
- ii. How often and through what channels do you carry out herder-centered awareness raising campaigns or dissemination of social insurance information? What are the most suitable channels, months and measures?
- iii. What are the difficulties you encounter in ensuring herders make their contributions or get coverage, and promoting your services?

- i. Difficulties connected to organizational resources.
 - ii. Difficulties connected to herders' behaviours and lifestyles.
 - iii. Difficulties connected to other laws, regulations and stakeholders.
- iv. Are there suggestion boxes or official channels for herders to submit their feedback on social insurance? If so, describe any reports or related information? Usually, what kind of feedback do you receive?

6. Developing recommendations aimed at enhancing the social and health insurance for herders

- i. What are the most pressing legal changes that need to be introduced in order to ensure herders' insurance coverage?
- ii. In the future, what needs to be enhanced in terms of services (contributions, benefits, payment schedule and methods, etc.) that would lead to increased coverage of herders?
- iii. What are the most effective ways to reach out to herders and improve understanding?

7. How will herders' outlook and structure change in the future? How will these changes affect social insurance schemes? How do you foresee social insurance coverage?

Do you have any other comments or issues to raise?

Thank you for your time.

2.2. Interview guide for representatives of Bagh Governors

1. General question

- i. Briefly introduce yourself and your organization, job title and experience in this position?

2. Looking into the current social and health insurance coverage of herders, their need for insurance services, and pressing challenges and issues

- ii. Where do herders usually obtain information concerning social insurance? What is their perception of social insurance? Are they interested in getting information in person or would they prefer other people undertake herder-outreach?
- iii. How many herders receive retirement pensions in your bagh?
- iv. How often do herders in your bagh receive health care?
 - i. How do herders without health insurance access health care or medical examinations? Are they advised to receive such services? What are the most common types of health problems?
- v. What are the reasons and social and health risks that would encourage your bagh herders to get coverage?

3. Determining the potential capacity and resources to support service improvement

- i. Within the scope of your roles and responsibilities, how much are you involved in herders' social insurance matters? Are there suggestion boxes or official channels for herders to submit their feedback on social insurance? If so, describe any reports or related information? Usually, what kind of feedback do you receive?
- ii. How often and what channels are used for herder-centered awareness raising campaigns or dissemination of social insurance information? What are the most suitable channels, months and measures?

4. Developing recommendations aimed at enhancing the social and health insurance process for herders

- i. What might be herder-friendly options that would increase social insurance coverage and stable contributions? What measures need to be taken; in areas of:
 1. Legislation
 2. Service provision
 3. Changing the knowledge, attitudes and behavior of herders

5. How will herders' outlook and structure change in the future? How will these changes affect social insurance schemes? How do you foresee social insurance coverage?

Do you have any additional comments or issues to raise in consideration of herders?

2.3. Interview guide for representatives of elderly herders

1. General question

- i. Briefly introduce yourself and share your story of being engaged in herding?
- ii. For how many years (and what kind of livestock) have you been herding?

2. Looking into the current social and health insurance coverage of herders, their need for insurance services, and pressing challenges and issues

- i. Have you subscribed to social insurance? What is herders' perception of social insurance?
- ii. Where do you usually obtain information concerning social insurance? Are you interested in getting information in person or would you prefer if other people undertake herder-outreach to give you information?
- iii. How does social insurance contribute to your life? Do you have access to benefits and pensions? How beneficial do you think they are?
- iv. Why did you pay social insurance in the first place? Who persuaded you, and why did you decide to go for it? What are the compelling reasons for social insurance and social and health risks?
- v. Conversely, what are the reasons you cancelled your insurance subscription; or prevent you from signing up for insurance coverage in the future? If there are herders in your circle who have no insurance coverage, what are their reasons?
- vi. Are there other alternatives to social insurance that would guarantee your health and livelihood once you lose your work ability? Do you have family support, resources or savings?

3. Determining the potential capacity and resources to support service improvement

- i. How often and through what channels do you receive herder-centered awareness raising campaigns or dissemination of insurance information?
- ii. What are the most effective forms and measures? When and which approach would reach more people?
- iii. Usually, how often and what kind of payment forms do you use for contributions? When and which form of payment are convenient for you?
- iv. What were the obstacles and delays in obtaining services concerning the payment of social insurance contributions? What were uncomplicated?

4. Developing recommendations aimed at enhancing the social and health insurance process for herders

- ii. What do you think is an optimal approach in persuading herders about increased insurance coverage and stable contributions?
- iii. What could be herder-friendly social insurance options?
 - a. In relation to the payment, schedule, monetary amount, percentage and types of benefits
- iv. What measures need to be taken, in areas of:
 1. Legislation
 2. Service provision
 3. Changing the knowledge, attitudes and behavior of herders

5. Do you have any additional comments or issues to raise in consideration of herders?

2.4. Interview guide for representatives of young herders

1. General question

- i. Briefly introduce yourself and your involvement/engagement in herding?
- ii. How many years and what kind of livestock have you been herding?

2. Looking into the current social and health insurance coverage of herders, their need for insurance services, and pressing challenges and issues

- i. Have you subscribed to social insurance? What is herders' general perception of social insurance?
- ii. Where do you usually get information concerning social insurance? Are you interested in getting information in person or would you prefer other people to undertake the herder-outreach to give you information?
- iii. How does social insurance contribute to your life? Did you have access to benefits? How beneficial do you think they are?
- iv. Why did you pay social insurance in the first place? Who persuaded you, and why did you decide to go for it? What are the compelling reasons for social insurance and social and health risks?
- v. Conversely, what are the reasons you stopped your insurance subscription or prevent you from signing up for social insurance coverage in the future? If there are herders in your circle who have no insurance coverage, what are their reasons?
- vi. Are there other alternatives to social insurance that would guarantee your health and livelihood once you lose your ability to work? Do you have family support, resources or savings? In that case, how do you think you will ensure your life guarantee?

3. Determine potential capacity and resources to support service improvement

- i. How often and what channels are used for herder-centered awareness raising campaigns or the dissemination of social insurance information?
- ii. What are the most effective forms and measures? When and which approach would reach more people?
- iii. If you have subscribed to insurance, how often and what kind of payment forms did you use for the contributions? When and which form of payment were convenient for you?
- iv. What were the obstacles and delays in obtaining services concerning the payment of social insurance contributions? What were uncomplicated?

4. Developing recommendations aimed at enhancing the social and health insurance process for herders

- i. How can herders be encouraged to engage in increased insurance coverage and stable contributions?
 - a. What might be the herder-friendly social insurance options, in relation to the contributions, schedule, monetary amount, percentage and types
- ii. What are herders-specific and mandatory insurable health and social risks?
- v. What measures need to be taken by the state, in the areas of:
 1. Legislation
 2. Service provision
 3. Changing the knowledge, attitudes and behavior of herders.

Do you have any additional comments or issues to raise in consideration of herders?

2.5. Interview guide for representatives of heads and staff of soum settlement centers

1. General question

- i. Briefly introduce yourself, your organization and your job position?

2. Looking into the current social and health insurance coverage of herders, their need for insurance services, and pressing challenges and issues

- i. How often do herders use the services of your settlement center?
- ii. What kind of services do they generally use?
- iii. How many herders receive retirement pensions in your bagh? For people of retirement age, do they usually receive services in person or do they send someone on behalf themselves? How often does someone from the family come to show support? Who do they usually come with, or from who do they get support?

3. Determining the potential capacity and resources to support service improvement

- i. How motivated are herders to social insurance coverage?
- ii. Where do herders usually make their social insurance contributions?
- iii. When, on what occasion and how often do herders use the soum settlement center?
- iv. According to herders, what are the obstacles obtaining prompt financial services?
- v. What kind of challenges do you face in providing financial services to herders, in relation to their knowledge, attitude and habits?
- vi. How well do herders use intangible services such as online and telephone applications? Or do you prefer to come in person? Is there an age difference?
- vii. Does the husband or the wife have more responsibility for, and has more access to, the financial services of the settlement center? Do male herders or female herders have more knowledge and information?

4. Developing recommendations aimed at enhancing the social and health insurance process for herders

- i. How often and what channels are used for herder-centered awareness raising campaigns or dissemination of insurance information?
- ii. What are the most effective forms and measures? When and which approach would reach more people?

5. How will herders' outlook and structure change in the future? How will these changes affect the social insurance scheme? How do you foresee social insurance coverage?

Do you have any additional comments or issues to raise in consideration of herders?

2.6. Interview guide for representatives of the association of agricultural cooperatives

1. General question

- i. Briefly introduce yourself, your organization, job title and experience in this position?
- ii. What kind of member-centered actions does your cooperative undertake?

2. Looking into the current social and health insurance coverage of herders, their need for insurance services, and pressing challenges and issues

- i. How many herders have social insurance coverage in your cooperative? How many herders receive retirement pensions in your cooperative?
- ii. Does the cooperative recommend herders to sign up for social insurance?
 - a. Where do herders usually obtain information concerning social insurance? What is their general understanding and perception of social insurance?
- iii. What are the key reasons herders sign up for social insurance (including health insurance) coverage? According to the experience of the insured, what are the strengths and weaknesses?
- iv. In your opinion, for herders who do not have coverage, what are their reasons?
 - a. Reasons such as alternative and sufficient sources of income, traditional approach of family care, the amount, schedule and options for social insurance contributions, etc.

3. Determining the potential capacity and resources to support service improvement

- i. Are there suggestion boxes or official channels for herders to submit their feedback on social insurance? If so, describe any reports or related information? Usually, what kind of feedback do you receive and in what format?
- ii. How often and what channels are used for herder-centered awareness raising campaigns or dissemination of insurance information?
- iii. What are the most effective forms and measures? When and how could you reach more people?

4. Developing recommendations aimed at enhancing the social and health insurance process for herders

- i. How can herders be persuaded to increased insurance coverage and stable contributions?
- ii. What might be herder-friendly social insurance options, in relation to the contributions, schedule, monetary amount, percentage and types
- iii. What are herder-specific and mandatory insurable health and social risks?
- vi. What measures need to be taken by the state, in the areas of:
 1. Legislation
 2. Service provision
 3. Changing the knowledge, attitudes and behavior of herders.

5. How will herders' outlook and structure change in the future? How will these changes affect the social insurance scheme? How do you foresee social insurance coverage?

Do you have any additional comments or issues to raise in consideration of herders?

2.7. Interview guide for representatives of the mongolian association of the elderly

1. General question

- i. Briefly introduce yourself, your organization, job title and experience in this position?
- ii. What member-centered actions does your association carry out? Do you organize specific actions aimed at herders? If so, which ones?

2. Looking into the current social and health insurance coverage of herders, their need for insurance services, and pressing challenges and issues

- i. How many elderly herders are there in your association?
- ii. What are the key reasons the elderly sign up for social insurance (including health insurance) coverage?
 - a. What are the strengths and weaknesses of being insured?
- iii. For the elderly who do not have coverage, what are their reasons?
 - a. Reasons such as alternative and sufficient sources of income, traditional approaches of family care, the amount, payment schedule and options for social insurance contributions, etc

3. Determining the potential capacity and resources to support service improvement

- i. Are there suggestion boxes or official channels for senior herders to submit their feedback on social insurance? If so, describe any reports or information? Usually, what kind of feedback do you receive and in what format?
- ii. In your experience, how often and what channels are used for senior- and herder-centered awareness raising campaigns for dissemination of social insurance information?
- iii. What are the most suitable channels, months and measures? When and which approach would reach more people?

4. Developing recommendations aimed at enhancing social and health insurance process for herders

- i. How can the pre-retirement population be persuaded to increase social insurance coverage and stable contributions?
- ii. Which social insurance options could be public or herder-friendly ones, in relation to the contributions, schedule, monetary amount, percentage and types
- iii. What are the population-centered or herder-specific health and social risks that should be covered and protected?
- iv. What measures need to be taken by the state, in the areas of:
 - b. Legislation
 - c. Service provision
 - d. Changing the knowledge, attitudes and behaviour of herders.

5. How will herders' outlook and structure change in the future? How will these changes affect the social insurance scheme? How do you foresee social insurance coverage?

Do you have any additional comments or issues to raise in consideration of the elderly, especially senior herders?

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