



# SOCIO-ECONOMIC IMPACT ASSESSMENT OF DZUD 2023-2024: DZUD RESILIENCE STRATEGY POLICY RECOMMENDATIONS

EXECUTIVE SUMMARY

IN COLLABORATION WITH:



2025

# EXECUTIVE SUMMARY

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Mongolia is currently facing significant challenges as a result of climate change, particularly in the form of extreme weather phenomena known as dzuds. These events have severely impacted herder households, leading to substantial livestock mortality and considerable economic losses during the period of 2023 to 2024. This report aims to evaluate the socio-economic impacts and response to dzuds, while identifying gaps in preparedness and resilience mechanisms. It presents detailed analysis of Mongolia's climate and disaster risk profile, current

legal and policy frameworks, and proposes recommendations for enhancing long-term resilience, including improved early warning systems and community engagement. During the winter 2023-2024, devastating dzuds resulted in the death of 8.1 million animals approximately (12.5%). This has significantly impacted herder livelihoods and food security. While, international aid and domestic support has been provided, the need for comprehensive strategies to enhance resilience and address socio-economic vulnerabilities remains critical.

## ■ The key insights of the study are the following

- Mongolia faces significant socio-economic challenges due to climate change, particularly from dzuds. Livestock mortality and income decline are severe for herders, with losses leading to decline in the sector contribution to GDP by -27 percent in the first half of 2024.
- Iron Dzud resulted in higher mortality as evident from Sukhbaatar, Dornogobi, Gobisumber, and Khentii Aimags.
- The SEIA revealed that besides negative effect of livelihood and economy, there were considerable social impacts including physical and mental health issues for the affected herders, disruption of education for children in herder families, transportation challenges, increasing incidence of migration to urban areas, and Gender Based Violence (GBV) in affected households.
- Besides assessing the impacts, the SEIA report helped in identifying policy recommendations for effective disaster risk reduction and climate adaptation and resilience-building mechanisms based on the field surveys and interaction with key stakeholders.
- Although field surveys depict that small herders are highly vulnerable, there are examples that small herders could save their livestock successfully. This could be owed to preparedness for dzud in terms of destocking the animals, stockpiling of enough hay and fodder, maintaining shelters of appropriate design and adequate capacities which helped in reducing mortality under the worst scenario.
- Early Warning Systems (EWS) and community-based management of disasters are essential for mitigating the impact of future climate-induced severe weather conditions.
- The country is making progress in forecasting and warning mechanisms and herders are receiving early warnings. However, the response capacity at community level is limited in the case of events like 2023-2024 dzud. Inaccessibility to pastureland and shortage of trained human resources and equipment was noted as core challenges at local levels.
- Access to the internet and usage of smartphones is very high in Mongolia and hence technology-based solutions for forecasting, Early Warning (EW) as well as damage assessment need to be optimised.
- Government, humanitarian and development partners worked in close coordination during the dzud and the response mechanism was found effective via Humanitarian Country Team mechanism. Although collective intervention mobilized dzud response from the onset the livestock loss to 8.1 million were very high.
- While work on Impact Based Forecasting is already in progress, it needs to be complemented by Forecast Based Financing for meeting the anticipated financial challenges faced by herder families, before the advent of disasters, to reduce the livestock mortality and resultant socio-economic impacts.
- After the 2017 Amendment of the disaster law, budgeting for disaster risk reduction has been increased by 4.5 times (DRR budget in 2018 was 2.3 billion MNT and increased up to 10.4 billion MNT in 2022) in all the 21 Aimags. Between 2015 and 2022 the budget related to disaster protection and disaster risk reduction have been utilized based on severity and intensity of the event.

- The New Cooperative Initiative by the government<sup>1</sup> is welcomed by the herders, but they are yet to benefit from this as the initiative is in its infancy and herders need education and advocacy to understand procedural complexities in processing of loans and issues related to collateral requirements.
- Insurance coverage is found to be less than 10 percent. Changes in parametric insurance mechanisms need to be made to benefit small herders.
- The dzud impact assessment is focussed mostly on assessing the impact of livestock mortality. A holistic assessment of the post disaster impacts and recovery needs assessment is required for developing a comprehensive resilience strategies at state and aimag level and institutionalizing resilience in future development plans.
- Recovery from the 2024 dzud to be used as an opportunity for introducing better livestock management, increase in environmentally-sustainable productivity of the livestock, generating more income from dairy products, meat and leather instead of just restocking animals.
- Based on the SEIA study and interaction with key stakeholders i.e. government, UN Agencies, the IFRC and the MRCS, NGOs and INGOs, elected representatives at Bagh level as well as affected herder families, strategic policy recommendations for developing resilience to dzud are developed. This includes both short term and long term measures, which are holistic in nature.



Photo credit: UNDP Mongolia

<sup>1</sup> "New Cooperative Initiative" was launched by the Mongolian Government in 2024 to support herding families to increase revenue from livestock, and boost the incomes of herders through the production of animal-derived raw materials and products

## ■ Short Term Recommendations



### 1. Enhanced Impact-Based Forecasting and Early Warning Systems (EWS):

Develop and implement forecasting and early warning systems tailored for different audiences and conduct community awareness programs for effective use.



### 2. Forecast Based Financing:

Allocate resources for immediate relief and essential supplies. Provide emergency funds and financial aid based on forecasts. Expedite livestock insurance claims in the event of disaster.



### 3. Response Mechanism Capacity:

Improve emergency response capacity, ensure continuous supply of essentials, and increase all season mobile services for herding communities.



### 4. Technological Solutions:

Use technology for rapid assessment and tracking responses, expand weather observation networks, and use social media crowdsourcing for crisis mapping. Further, introduce online learning platforms for the herder families and enhance market opportunities through e-commerce platforms in rural areas to create opportunities.



### 5. Health and Psychological Support:

Ensure nutrition and medical care for vulnerable groups, provide guidelines for gender-based violence in disasters, and offer mental health support and counselling. For remote area population, online clinics for veterinary care as well as physical and mental health of affected families can be viable solution to address the needs of the herders to help them understand the changing risk scenario and measures to cope with and adapt to the changing conditions.

## ■ Long-term Recommendations



### 1. Improved Livestock Management:

Invest in extension services, build herder capacity, and implement sustainable livestock management practices for long-term resilience.



### 2. Rural Infrastructure Improvement:

Invest in roads, communication networks, and livestock value chains and veterinary care centres. Improve herders access to socio-economic services to reduce rural-urban migration.



### 3. Climate Adaptation and Risk Management:

Enhance resilience through research, adoption of climate-adaptive practices, and strategic resource allocations.



### 4. Pastureland Management:

Conduct risk assessments, monitor pastureland conditions, and implement sustainable land management practices.



### 5. Long-term Community-Based Planning:

Educate and involve communities in planning and response strategies.



### 6. Economic Diversification:

Invest in integrated land management, renewable energy, and alternative livelihood programs including rural small and medium enterprises (SMEs) to reduce dependency on livestock. Introduce, ecommerce solutions in remote areas for herder cooperatives and SMEs.



### 7. Financial Provisions:

Develop National Disaster Risk Financing Strategy and Climate Financing mechanism. Introduce policies for green climate loans and parametric weather insurance.

While changes in legal and policy frameworks are essential at local level to develop and implement an integrated action plan, international support is necessary for the operationalization of activities. It is important to enhance the adaptive capacity and resilience of the herders to reduce the impact of dzud since the impacts of disasters are

large scale. Additionally, it is difficult for the local governments to reach out to the herders without enough resources and equipment due to difficult terrain conditions and inaccessibility during disasters. Hence, there is a need for long-term resilience building and adaptation to avoid large scale losses in future.

