

EARLY WARNING EARLY ACTION

## Early action against *dzud* safeguards herders' livelihoods in Mongolia

A *dzud* is a term used in Mongolia to describe a very harsh winter which is preceded by a hot and dry summer. The combination of these two events results in limited availability of fodder and wheat, a key food source for livestock to build up essential fat stores needed to last the winter. In these events, the most vulnerable herders cannot afford extra fodder, of which there is limited availability on the market. These climatic conditions can result in high livestock mortality where herders can lose their entire stock. Consequently, herders can become more indebted.

The increasing quality and reliability of early warning information allows forecasting the occurrence of *dzud* with a fairly good degree of confidence. These warnings create the conditions for triggering acting early to safeguard the livelihoods of the most vulnerable herders in the areas potentially most affected, rather than waiting for the full extent of the *dzud* impact to be known. This brief describes the early actions implemented by FAO to mitigate the effect of 2017/18 localized *dzud* on livestock, and it discusses the avoided losses and added benefits deriving from this anticipatory approach.

### ***Dzud* early warning: the trigger for action**

The triggering for the *dzud* came from layering and analyzing information from a focused collection of key monitoring sources.

The first was a Crop and Livestock Assessment Mission carried jointly by FAO and the World Food Programme from June to October 2017. It found that 80 percent of Mongolia endured drought conditions and that wheat production was down by 30 to 70 percent. This raised the first alarm. The second alarm came from the Government of Mongolia, who produce a *dzud* risk map annually. It combines 15 different indicators including snow cover days, weather patterns and agriculture vulnerability. For the 2017/18 season, it forecasted that 30 percent of the country was at high-risk – and another 30 percent at medium risk – of a severe *dzud*.

### KEY MESSAGES

- ▶ For every US dollar invested in early actions, vulnerable herders obtained USD 7.1 through avoided losses and added benefits.
- ▶ Timely early warning information formed the basis for effective early action to protect livestock assets against *dzud* in Mongolia.
- ▶ Safeguarding vulnerable herder livelihoods helped reduce indebtedness, ultimately contributing to resilience building.

With this information, the alarm was raised in 5 key areas where also the Ministry of Social Development stressed vulnerable herders lived. Accordingly, FAO planned interventions in the soums – or administrative districts – of Arkhangai, Bulgan, Zavkhan, Uvurkangi and Tuv.

### **Early action against *dzud*: getting the timing right**

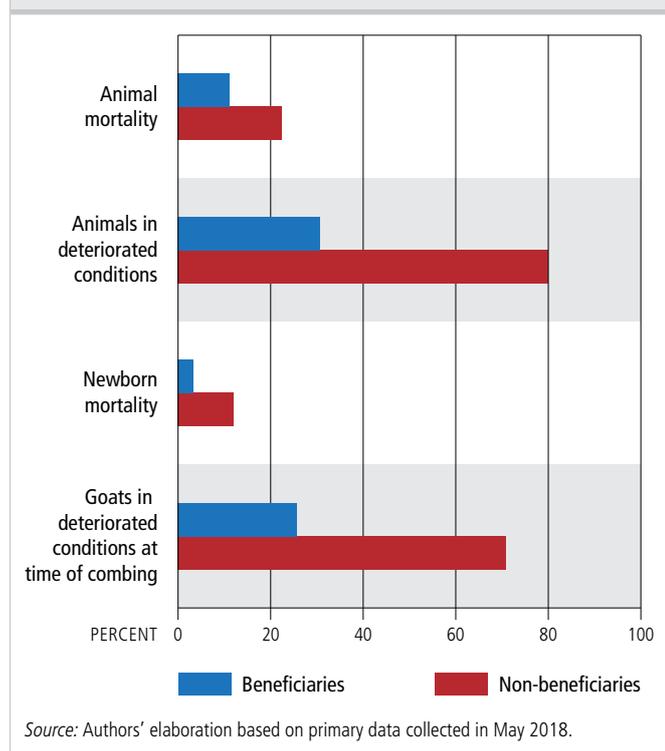
Timely early warning information allowed FAO to design and implement an Early Action project to mitigate the impact of *dzud*. The intervention targeted 504 vulnerable herders with the following activities:

1. **Destocking-for-cash:** in December 2017, when prices of hay were not yet spiking, cash was provided to targeted households in exchange for meat. The meat was then distributed to poor vulnerable households who live on the periphery of Ulaanbaatar.
2. **Animal feed distribution:** in early February, when fodder reserves were almost depleted, animal feed was distributed to help herders keep their key breeding livestock healthy.

## FAO's return on investment

The return of investment study measured the ratio between the direct benefits of the early actions and the cost of implementing early actions on the ground. Overall, the study showcased that the impact of *dzud* on livestock was significantly lower in households that benefitted from early actions as compared to non-beneficiaries (Figure 1). The analysis is based on primary data collected from 87 beneficiary and 54 non-beneficiary households. The return of investment study measured the ratio between the direct benefits of the early actions and the cost of implementing early actions on the ground.

FIGURE 1. Average impact of *dzud* on livestock in beneficiary and non-beneficiary households



The overall cost of the livestock interventions came to USD 285 for each household involved. In return, each household benefitted by USD 2 008, which gives a 7.1 benefit to cost ratio. Depending on the assumptions used (e.g. prices of animals in good and deteriorated conditions, number of milking days), the benefit-cost ratio can range between 5.1 and 12.1. Direct benefits included the value of both adult and new-born animals saved, the avoided loss of cashmere production value, extra milk and the avoided drop in the value of livestock due to poor body conditions.

## Escaping the poverty trap: indirect impact of early action on loan uptake and repayment

Vulnerable Mongolian herders are often forced to take up new loans to cope with the impact of *dzud*. In turn, debt prevents household investments in income diversification and resilience building. Due to the positive impact of early actions, many herder families avoided taking out loans to sustain their livestock. Further, beneficiary households were better able to repay loans than non-beneficiaries.

## Closing the circle: benefits of meat distribution from destocking

The meat purchased as part of the destocking-for-cash initiative was distributed among poor households living in poor areas – known as *gers* – on the edges of Ulaanbaatar. Thanks to the intervention, the average monthly food expenditures of beneficiary households during the winter period declined by USD 16 on average, corresponding to about one-fifth of a monthly pension. Families used the extra cash to purchase fuel, medicine, clothes or school supplies for their children, among others.

## Lessons learned and policy considerations

### ▲ Use of available forecast information to trigger early actions.

The government of Mongolia annually monitors a set of forecast indicators on *dzud* severity. This information could be used to institutionalize an Early Warning Early Action (EWEA) system, which would ensure systematic, timely and targeted interventions ahead of severe *dzud* events.

### ▲ Destocking as a sustainable coping strategy.

The destocking-for-cash initiative proved successful in providing herders with cash needed for purchasing animal feed, while reducing the size of their herds ahead of the *dzud*. Destocking as a coping strategy also contributes to reduce the impact of overgrazing on pasture scarcity and desertification. However, limited access to markets and value chains represents a major barrier to destocking.

### ▲ Early action's contribution to resilience building.

In Mongolia, early actions contributed to reduce indebtedness, safeguard assets, protect dignity and enhance self-confidence of vulnerable herder families. Although limited to a narrow timeframe comprised between an early warning trigger and a hazardous event, early actions are an important piece of the broader resilience agenda.

### Early Warning Early Action (EWEA)

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