

MONGOLIA

Dzuds

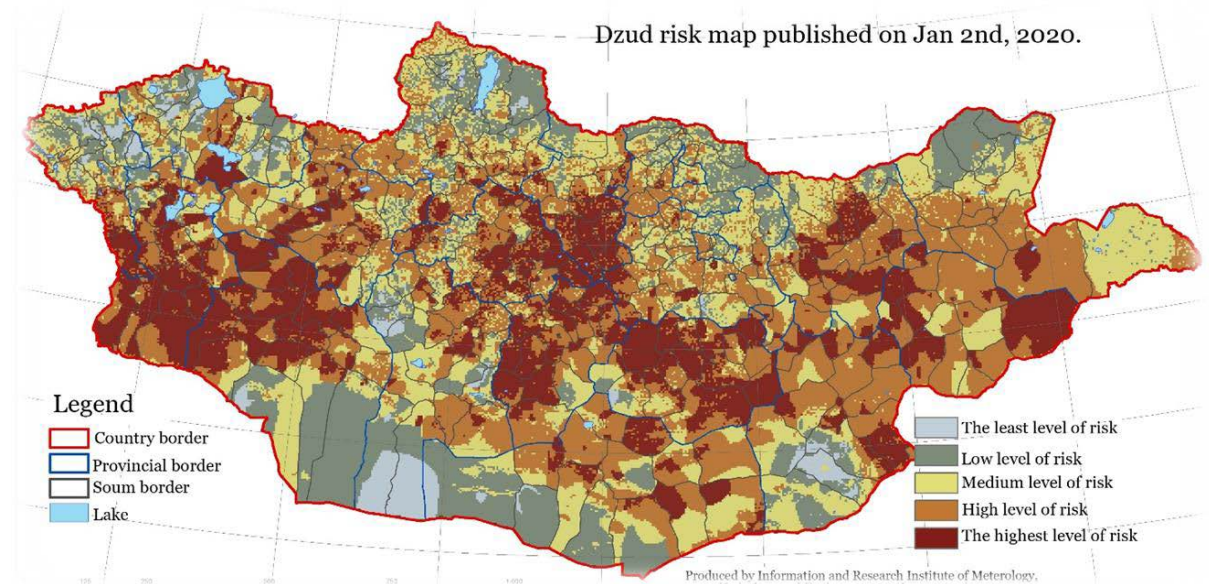
CRISIS IMPACT OVERVIEW

300,000 semi-nomadic herders live in the Mongolian steppe, where they generate an income from farming and livestock. Over the past two decades, climate change has made what is known as a *dzud* more severe and more frequent. *Dzuds* are extreme winters characterised by freezing temperatures, heavy snow, and frozen ground, with temperatures reaching lows of -25°C , 10°C below the average (The World Bank 06/2012). While herders and animals living in this region are resilient to environmental hazards, and are used to hot summers and cold winters, *dzuds* put an additional strain on the lives of herders, who receive 35% of their income from livestock (FAO 2018).

More than 60 million animals, such as camels, horses, cows, buffalos, and goats, rely on the steppe for pasture. In 2018, Mongolia's harsh winter killed more than 700,000 heads of livestock (Reuters 14/03/2018). Larger households have on average 1,200–1,500 livestock, but the poorest ones can only rely on a few hundred animals. During harsh winters, the poorest Mongolian households risk losing all means of securing their livelihoods (FAO 22/12/2017).

There is evidence that climate change is intensifying the frequency of *dzuds* in some Mongolian regions. In January 2020, the provinces (or *aimags*) at risk of *dzuds* were Khovd, Gobi-Altai, Uvurkhangaï, Dundgobi, Zavkhan, Arkhangai, Bulgan, Khentii, Sukhbaatar, Dornogobi, and some areas of Bayankhongor (IFRC 01/2020). According to the National Agency for Meteorology and Environmental Monitoring, the harsh weather expected during the coldest months, December and January, puts 50% of herders living in the monitored areas at risk of loss of livelihoods (IFRC 23/01/2020).

Dzud Risk Areas in mongolia, January 2020



Source: IFRC 01/2020

ANTICIPATED SCOPE AND SCALE

In 1999–2000, 2000–2001, and 2001–2002, Mongolia was hit by three *dzuds* in a row, in which a combined number of 11 million livestock (25% of Mongolia's herd) perished. This period also coincided with severe and extensive summer droughts and more than 12,000 herder families lost their entire herds, while thousands more were pushed to subsistence levels below the poverty line by the loss of animals (IFRC 12/2020).

As climate change intensifies, *dzuds* are predicted to become more frequent and occur almost every year between December and January (IFRC 23/01/2020).

The frequency of severe winters has doubled in the past 20 years, making only 1% of the steppe suitable for growing crops (FAO 22/12/2017). These conditions are commonly preceded by a dry summer with equally scant grazing. Livestock struggle to build up the stores of fat they need for winter, and families risk losing their main source of income (FAO 2018).

ANTICIPATED IMPACT

Vulnerable groups

A large portion of Mongolia's population, as well as children, are vulnerable to extreme weather events. Dzuds are likely to affect children in different ways. Children become increasingly engaged in risky household coping strategies such as livestock herding during snow blizzards. Children cannot be protected and cared for properly when their parents are under extreme stress or overworked. As a consequence, children can be traumatised by the lack of care and suffer from severe psychological distress. Psychological distress also makes it more difficult for these children to enter education, which in Mongolia's rural areas is characterised by high levels of school dropout. 47% of children in areas affected by a dzud presented signs of psychological stress according to a 2010 study (UNICEF 2010). More children will drop out of school and some children may be coerced into or enter child labour out of necessity following a dzud in order to help their parents. Boys are especially vulnerable to having to work, and a particularly hazardous form of child labour is informal mining (UNICEF 2010).

Health and COVID-19

During past *dzuds*, healthcare professionals were concerned about malnutrition that could significantly limit herders' immunity, especially children. There are shortages of vitamins and minerals that would support children's immune systems, and – although commonly used by herder households when someone becomes ill – medicines are often not easily available in villages. In a typical rural Mongolian village, there is generally only one pharmacy – this affects the price and availability of medicines. For all of these reasons, pregnant women and children in herder households are particularly vulnerable during *dzuds* (Save the Children 22/01/2017).

As at December 2020, Mongolia had recorded 1,000 positive COVID-19 cases, with clusters – among others – observed in the provinces of Dornogovi, Orkhon, and Darkhan-Uul, where the risk of *dzuds* is high (WHO 22/11/2020; IFRC 23/01/2020). Although the government has taken swift action including contact tracing, the immediate testing of identified contacts, quarantine, and treatment of positive cases, the number of COVID-19 patients is rising. Mongolia's State Emergency Commission has organised random and targeted surveillance testing at various sites to determine whether there is wider community transmission; it has concluded that Mongolia is dealing with cluster transmission (UNFPA 11/2020). The overlapping of COVID-19 cases and people seeking medical assistance because of *dzud*-induced conditions may be a contributing factor to the spread of the virus.

Food security

The effects of *dzuds* are aggravated because herders' livestock are typically their only source of livelihoods. Large portions of the population can become impoverished and food insecure from one season to the next if livestock are lost. In the 2009–2010 *dzud*, about 8.5 million livestock died – approximately 20% of the country's livestock population – affecting 769,000 people or 28% of Mongolia's total population. Past *dzuds* have severely impacted crops, potatoes, buck, and wheat (FAO 22/12/2017). Poor households (those with 50 or less heads of livestock – about a quarter of the total herder population) are particularly vulnerable and often require humanitarian assistance when hit by a *dzud* (Mary Robinson Foundation 04/2013). The livestock sector accounts for 87% of agricultural production, while the remaining 13% is sourced from crops (FAO 22/12/2017).

Economic vulnerability

Herders have faced economic insecurity as a result of the country's transition from a centralised planned economy to a free market economic system post-1990. Mongolia's heavy dependence on the exports of a few key commodities, such as copper, gold, and cashmere, has made its economy particularly vulnerable to fluctuations in commodity prices and natural disasters. This vulnerability was evident during 2000–2001, when an extreme summer drought followed by a harsh dzud took a heavy toll on the herd stock and depressed GDP growth (IMF 11/2003).

During the transition period, inadequate income and savings, coupled with an undeveloped market and high inflation rates, encouraged herders to sell their products cheaply or accept disadvantageous bartering through intermediaries. The situation worsened when the country experienced a series of consecutive droughts and *dzud* disasters in the early 2000s (FAO 2002). The increase in the frequency of *dzuds*, coupled with the deterioration of Mongolia's economy, is likely to reproduce these mechanisms among herders, who have been forced to sell their livestock to cope with economic insecurity or have got into debt. The recurrence of *dzuds* leads to many herders taking on financial loans, which are relatively easy to obtain in Mongolia using livestock as a guarantee (FAO 2018).

Migration

As a consequence of these difficulties, rural to urban migration becomes herders' coping strategy for socioeconomic insecurity, creating further challenges. When herders' livelihoods are devastated by the cumulative effects of the *dzuds*, and by the high interest loans they take out in order to survive, many are forced to move. Migratory groups often settle in suburban areas (known as 'ger') of the capital, Ulaanbaatar – where infrastructure and public services cannot sustain and support newly migrated herders, who face food security issues, particularly during the winter periods (FAO 21/12/2020). Herders who migrate to find employment often have none of the skills needed to find a job in the local economy (FAO 2018). Herders tend to live in shacks and yurts on the outskirts of Ulaanbaatar, where they have no access to working infrastructure, are burdened by social problems, and are unable to break out of a downward cycle of poverty (FAO 2018).