

Migration, Environment and Climate Change: Policy Brief Series

ISSN 2410-4930

Issue 1 | Vol. 3 | February 2017

The *Migration, Environment and Climate Change: Policy Brief Series* is produced as part of the **Migration, Environment and Climate Change: Evidence for Policy (MECLEP)** project funded by the European Union, implemented by IOM through a consortium with six research partners.



A typical Mongolian ger in Selenge Province, Mongolia. © IOM 2016

The changing climates, cultures and choices of Mongolian nomadic pastoralists

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1. Introduction

Climate change and natural disasters are reported to have caused the displacement of millions of people worldwide (IDMC and NRC, 2015:8). Mongolia's unique geographical location,¹ harsh climate and the dependence of the

nation's rural population on animal husbandry make it vulnerable to the impacts of climate change (Ministry of Environment and Green Development (MEGD), 2014:22). Mongolia is already experiencing dramatic rural-to-urban migration, with the urban population as a percentage of the total having increased from 57 per cent in 2000, to

1 Mongolia has an already harsh continental climate due to its geographic location in the central Eurasian continent, landlocked, surrounded by high mountains with an average altitude of 1.5 km (MEGD, 2014:66).



This project is funded by the
European Union



This project is implemented by the
International Organization for Migration



A flock of sheep that did not survive *dzuds*, 2011.

over 72 per cent in 2015 (World Bank, 2016).² This is a result of multiple factors,³ including declining livelihood opportunities in rural areas, a phenomenon exacerbated by environmental changes and natural disasters, such as drought and *dzud*⁴ (MEGD, 2014:146–7). Ongoing climate change is expected to present a growing challenge to the traditional pastoral way of life of many in Mongolia and likely to continue to impact human mobility (ibid., 144).

This policy brief provides an overview of the link between natural disasters, climate change and migration in

Mongolia, including some of the conceptual challenges related to nomadic pastoralism and displacement, and the complexity of decision-making when it comes to migration. The policy brief then provides an analysis of the key policy challenges, and a summary of relevant policies and programmes in place that contribute to addressing these challenges. Lastly, the policy brief provides some conclusions and recommendations.

2. Natural disasters, climate change and migration in Mongolia

Natural disasters, including drought and *dzud*, are known drivers of migration and displacement in Mongolia (Ministry of Social Welfare and Labor et al., 2009:104). Mongolia is particularly vulnerable to the impacts of climate change, with warming already occurring at more than twice the global average (MEGD, 2014). Continuing climate change is expected to increase the extent and frequency of natural disasters such as drought and *dzud* (MEGD, 2014:144).⁵

² The main destination areas are the capital, Ulaanbaatar, the second largest urban centre, Darkhan, and the mining towns of Umnugobi province (NSO, 2016).

³ These factors include political change following the shift to a multiparty democracy, and changes in the constitution of Mongolia in 1992 that allowed “freedom of movement within the country and freedom to choose the place of one’s residence” (The State Great Khural of the Mongolian People’s Republic, 1992: art. 6).

⁴ *Dzud* is a complex natural disaster unique to Mongolia. It typically consists of a summer drought followed by a deterioration of the weather conditions in winter, and a spring during which shortage of pasture and water leads to large scale death of animals (UNOCHA, 2016:1; CFE-DMHA, 2014:20). *Dzuds* come in various forms, including white *dzud* (thick snow covers pastureland), black *dzud* (little snow, and colder than average temperatures), iron *dzud* (cover of ice over pastureland), hoof *dzud* (drought) or combined *dzud* (a combination of the above) (CFE-DMHA, 2014:20). *Dzud* conditions typically evolve slowly, but can be triggered by rapid-onset events such as snowstorms. The term *dzud* implies both exposure to weather conditions and also the impacts (Marin, 2010:163).

⁵ The summer drought index is expected to increase from -0.24 in 1990 (1980–1999 average) to 2.63–2.45 by 2055 (2046–2065 average), the *dzud* index is expected to increase from -0.69 in 1990 to 1.97–2.44 by 2055; and the animal mortality rate is expected to increase from 2.1 per cent in 1990 to 9.39–10.1 per cent by 2055, based on Special Report on Emissions Scenarios (SRES) A2 and SRES B1 scenarios respectively (MEGD, 2014:144).

The way that natural disasters and environmental changes influence migration patterns in a nomadic society is complex. Herding remains a primary source of livelihood in Mongolia, and nomadic movements from one pastureland to another have long been a way of coping with extreme weather and environmental fluctuations (Lkhagvadorj et al., 2013). Many herders have already noticed environmental changes, such as rangeland degradation, changing precipitation patterns and desertification that have affected their livestock, leading to adjustments in herding practices. Some herders change their seasonal mobility patterns to adapt to changing season timings, while others cope through using quick or unexpected movements to better pasturelands in times of emergencies. Both strategies in moving to other herders' traditional pasturelands can trigger or exacerbate latent conflict that current institutions struggle to regulate (Diniega, 2016). Tubach (2016) argues that changing environmental conditions have exceeded the limits of traditional adaptive strategies such as nomadic movements and that herders are now facing "menacing uncertainty" rather than merely "calculable risks".

Natural disasters, which are increasing in frequency, may also be driving some pastoralists away from herding altogether (Save the Children, 2013:3). Mongolia was impacted by three consecutive nationwide *dzuds* between 1999 and 2002, which killed close to one third of Mongolia's livestock (Lise, Hess and Purev, 2006 in Intergovernmental Panel on Climate Change (IPCC), 2014:501). Mongolia was again impacted by a *dzud* in 2009 and 2010, in which a fifth of the national

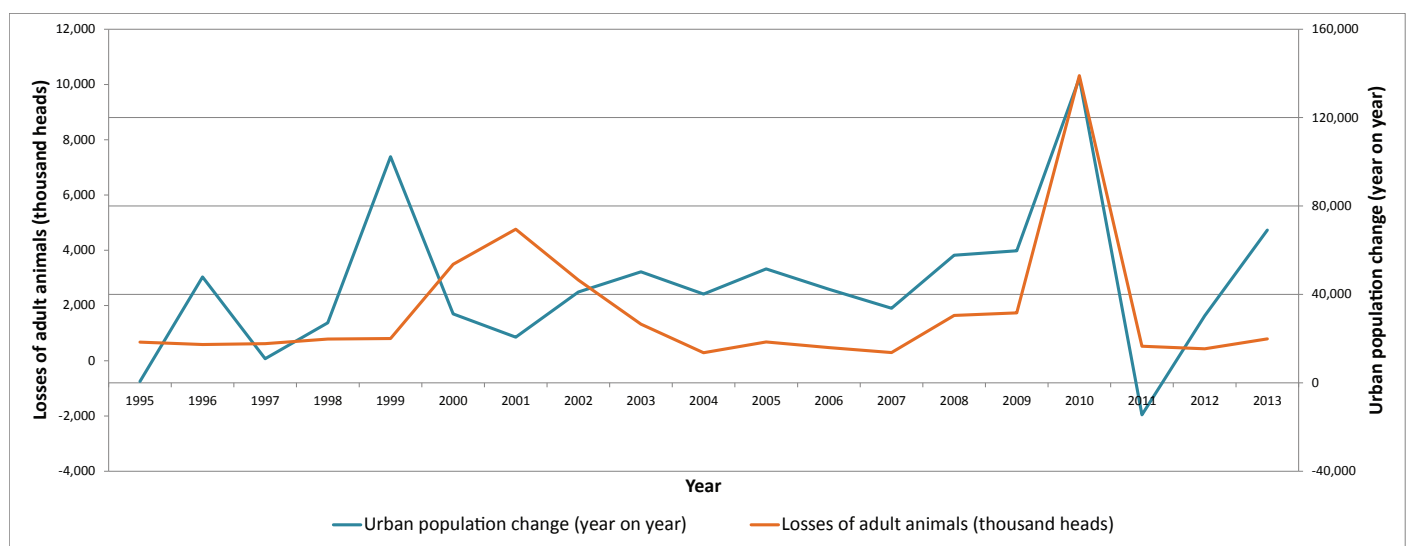
livestock was lost. More than half of the country's herders were affected by the *dzud* (Sternberg, 2010 in IPCC, 2014:501). Although consistent data on internal migration in Mongolia remain limited, Government and United Nations (UN) reports and anecdotal observations converge to indicate that many herders from *dzud*-impacted regions moved to urban areas, in particular Ulaanbaatar, in search of alternative livelihoods, either immediately after or in the years following natural disasters (see for example UNOCHA, 2010:12; National Statistics Office of Mongolia (NSO), 2016; IOM, 2010; Fernandez-Gimenez, Batjav and Baival, 2012:3). *Dzuds* and the ensuing loss of livestock exacerbate the factors that drive rural-to-urban migration in Mongolia.

The graph below shows adult animal losses (thousand heads), which is an indicator of *dzud* years, overlaid with urban population change year by year.⁶ Based on NSO data, the graph shows a steady increase in the population of urban areas, with notable peaks in 1999 and 2010, which coincide with *dzud* years. The NSO does not currently survey migration resulting from *dzud* or drought.⁷

6 Urban population includes population residing in Ulaanbaatar City, *aimag* (province) centres and towns, while the rural population includes populations residing in *soum* (sub-province) centres and rural areas (NSO, 2016).

7 There are some discrepancies in NSO data for different indicators. The above figure is based on data provided for "population of Mongolia, by regions, *aimags* and the capital, urban and rural" (total urban), and "losses of adult animals by type, region, *aimags*, the capital, *soums* and bags" (total).

Figure 1: Losses of adult animals (thousand heads) and urban population change in Mongolia (change year on year)



Source: NSO, 2016.

3. Migration decisions of pastoral nomads

The distinction between “forced” and “voluntary” migration is often unclear, and decision-making on the subject is complex. This is particularly so when population movements are associated with slow-onset disasters or gradual environmental change, and when populations lead traditionally nomadic, pastoral ways of life (IDMC and NRC, 2016:50; IDMC, 2014). The 2015–2016 studies with migrants and source populations conducted by the authors showed that herders’ migration decisions depend not only on environmental triggers, but also on other multiple factors, such as social capital, education and employment opportunities, health-care needs, local government safety nets, age and gender (Bilegsaikhan, 2015; Diniega, 2016). Complementary to the findings of a 2009 population survey, the authors found that social or family connections, employment and education opportunities, as well as loss of livestock due to drought and *dzud* were among the most often cited reasons for migration (Bilegsaikhan, 2015; Diniega, 2016; and Ministry of Social Welfare and Labor et al., 2009:104).⁸

The numerous factors influencing herders’ migration decisions make it difficult to distinguish between forced and voluntary migration. While some herders undertook what may be perceived as “forced” migration when they moved to urban areas in direct response to a *dzud* and its unrecoverable impact on the households’ livelihood, other migration following natural disasters fall in the spectrum between forced and voluntary (Bilegsaikhan, 2015). Some herders decided to move to the city because of perceived risk, after witnessing the impact of *dzud* on neighbours, or simply because they were considering migrating anyway (ibid.). Natural disasters influence migration not just during and just after the event, but also through their economic impact over the following years (UNOCHA, 2010:5). Thus, in different cases, natural disasters and climate change may be understood as factors that directly force herders to migrate, factors that reinforce or trigger decisions to migrate, and also factors that increase the vulnerability and sensitivity of households and communities.

Conversely, when it comes to non-migration decisions, some herders reported that they wanted to move after a *dzud* but were unable to due to age or lack of resources, while others exercised their agency by choosing to stay even in the face of environmental threats or livestock loss. Some herders who lost many animals compared their losses to others’ in forming their thought process and decided to stay to rebuild their livelihoods as herders (Diniega, 2016). Those who stayed behind rather than migrating became more vulnerable to lingering *dzud* effects or other environmental changes in the following years (ibid.). In recent years, some migrants have been returning to herding due to hardships in urban areas and a perception that the environment has become more conducive to herding since the major *dzud* (ibid.). Although not well documented, there is anecdotal evidence that some *dzud*-affected migrants wanted to return to herding in rural areas, but lacked the means to do so (IOM, 2014:7).

4. Policy challenges

There appear to be two main policy challenges resulting from this dramatic rural-to-urban migration. The first is attending to the needs and rights of displaced populations in urban areas, and the second is addressing the issues among rural and herder populations that make them vulnerable in the first place.

Most internal migrants in Mongolia settle in *ger* districts on the outskirts of Ulaanbaatar, which make up close to 60 per cent of Ulaanbaatar’s population (United Nations Development Programme (UNDP), 2016b:112). The rapid growth of the population in these *ger* districts has already outpaced the Government’s provision of basic services. Many in the *ger* areas live below the national poverty line⁹ and lack access to central heating, running water, sewage and sanitation systems. Many new migrants lack the livelihood skills that are suited to urban living and have limited access to economic opportunities. This exacerbates social issues including alcoholism, domestic violence and environmental degradation, including air pollution, as most migrants rely on coal-burning stoves to heat their homes during the winter months¹⁰ (NSO, Asian

⁸ It is worth noting that the population survey was conducted between July 2007 and February 2009, prior to the 2009/2010 *dzud* (Ministry of Social Welfare and Labor et al., 2009:14). Bilegsaikhan (2015) found that factors such as education or employment opportunities were often couple or reinforced by *dzud* and degraded pastureland. In addition to the factors listed, Diniega (2016) also found that age was a reoccurring factor, and that social connections formed the basis of where people chose to migrate to.

⁹ According to UNDP, while poverty has declined in Mongolia in recent years, more than one person in five is still living below the national poverty line (2016:121). Inequality and intra-urban differentials in income, employment, poverty and access to services were quite apparent in the *ger* districts of Ulaanbaatar. In 2010, the access to adequate basic infrastructure ranged from 21.3 per cent in one Ulaanbaatar district to 74.2 per cent in one of the poorer districts (ibid., 122).

¹⁰ People living in *ger* districts rely on coal-burning stoves to heat their homes throughout the winter months (October–March), when temperatures drop as low as -40 degrees Celsius (UNICEF, 2016b:8).



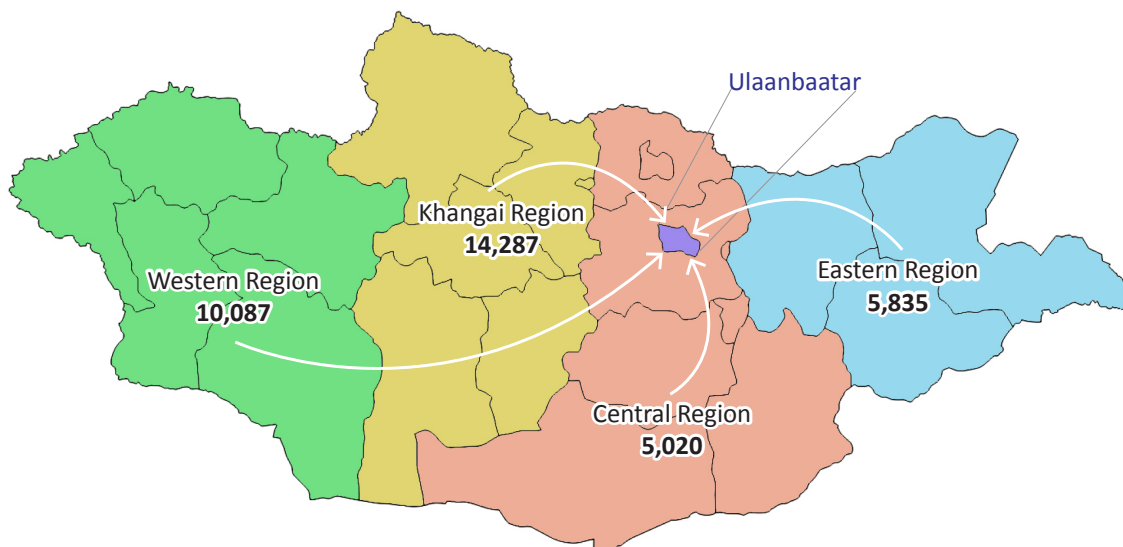
Ger district. © IOM 2016

Development Bank (ADB) and World Bank, 2006:37). Poverty and lack of livelihood opportunities can increase the risk of human trafficking or migrants being co-opted into informal mining activities (IOM, 2010:23).

In order to minimize the extent of forced migration and protect the rights of exposed populations, it is important to focus on expanding freedom of choice and providing opportunities for source populations of herders to stay in their place of origin. This may involve reducing

social vulnerabilities and improving resilience to natural disasters. Programmes aimed at supporting climate-sensitive agricultural practices, alternative livelihood opportunities, and improved social services in regional areas may reduce the incidence of forced migration and improve the ability of non-urban populations to stay in their place of origin.

Map 1: Net migration to Ulaanbaatar from Mongolia's regions within one year to the date of the 2010 census



Note: Numbers represent net migration (immigration minus emigration), of the resident population from each region, to Ulaanbaatar within one year to the date of the 2010 census.

Source: NSO, 2011.

5. Policy analysis

The Government of Mongolia has made commitments related to the protection of human rights and adopted policies related to sustainable development. Although these policies do not specifically address migration

in relation to natural disasters or climate change, several policies or programmes touch upon climate change adaptation, disaster preparedness, regional development and improving conditions for migrants in urban settlements. Table 1, a non-exhaustive list, summarizes some of the main policies and programmes that are currently in place.

Table 1: Key policies and programmes

Policy area	Key policies and programmes
Internal migration	<p>The Mongolian Constitution allows “freedom of movement within the country and freedom to choose the place of one’s residence” (The State Great Khurul of the Mongolian People’s Republic, 1992: art. 6).</p> <p>Under the Law of Mongolia on Land (2002), pastureland can only be possessed collectively. The law defines responsibilities of local authorities in the preservation and use of pastureland (The State Great Khurul of the Mongolian People’s Republic, 2002: art. 54).</p> <p>In 2010, the Mongolian Parliament prepared a proposal for a new legislation on pastureland uses. Concerns have been raised on this legislation, which is still in draft (Food and Agriculture Organization of the United Nations (FAO), 2017a).</p>
Climate change	<p>As a party to the United Nations Framework Convention on Climate Change and the Paris Agreement, Mongolia has adopted a nationally determined contribution with climate change mitigation and adaptation components. Migration is not explicitly referenced (Government of Mongolia, 2015b).</p> <p>The Government of Mongolia supports sustainable development, in particular through the adoption of Mongolia’s Sustainable Development Vision – 2030. It includes an objective to “establish national capacity to cope with climate change, and strengthen the system to prevent from meteorological hazard and natural disaster risks” (2016:22).</p> <p>The Government of Mongolia’s Green Development Policy and its Action Plan, approved in 2016, includes an objective to “develop and implement a population settlement plan in accordance with climate change, while considering the availability of natural resources and the resilience of regions” (2015a:4).</p>
Development support to pastoralists and rural populations	<p>The FAO is implementing a project aimed at promoting quality employment focusing on the livestock and agricultural sector: “Support to employment creation in Mongolia (SECiM): Piloting quality private sector work in selected livestock and vegetable value chains (2016–2019)” (FAO, 2017b).</p> <p>The Government of Mongolia and the World Bank have worked together since 2002 on sustainable livelihood projects in Mongolia, to increase the flow of public and private investment to herder communities. The current project is titled the Third Sustainable Livelihoods Project for Mongolia (2013–2018) (World Bank, 2017).</p> <p>The UNDP’s climate change adaptation programme in the Altai Mountain/Great Lakes Basin and the Eastern Steppe in Mongolia contributes to building the resilience of rural populations (UNDP, 2016a).</p> <p>The Government’s Good Herder Program includes low interest loans for herder families. As part of the programme, the Government also aims to improve competitiveness of agriculture products by increasing efficiency and export (UB Post, 2016).</p> <p>ADB and UNICEF are also working to improve water, sanitation and hygiene in schools in western regions of Mongolia (UNICEF, 2016a).</p>

Policy area	Key policies and programmes
Disaster preparedness	<p>The Mongolian National Emergency Management Agency has engaged in disaster preparedness and disaster risk reduction programmes along with national and international partners including the Red Cross and the UN (see for example UNDP, 2016c).</p> <p>The Mongolian Ministry responsible for agriculture, in collaboration with Mercy Corps, the World Bank Group and others, developed a livestock early warning system to strengthen local and national capacity to respond to early warning and mitigate risk (World Bank, 2012).</p> <p>The World Bank and the Government of Mongolia also introduced an index-based livestock insurance scheme, which is helping herders manage climate-related risks (World Bank, 2009).</p>
Actions to improve planning and services in <i>ger</i> district areas	<p>Actions have been taken to promote better conditions and better access to basic services in the <i>ger</i> districts of Ulaanbaatar. In complement to efforts by the Government of Mongolia, international partners such as UNICEF and UNDP, and non-governmental organizations have played an important role.</p> <p>The Government is conducting a 10-year term <i>Ger</i> District Development and Investment Support Program (2014–2023) with the cooperation of ADB. The project focuses on Ulaanbaatar City and involves sub-centre or urban corridor redevelopment activities in <i>ger</i> areas and activities aiming to improve urban services performance and delivery (ADB, 2015).</p> <p>UNICEF established a memorandum of understanding with the Ulaanbaatar City Governor's Office in 2015 to improve the well-being of children living in the capital and to reduce urban disparities in children's access and utilization of basic social services (UNICEF, 2016c:5).</p>



Neighbourhood in Zuragt, Bayangol district, Ulaanbaatar. A typical neighbourhood of residence for urban migrants.

© 2015 (Photo: Sumiya Bilegsaikhan)

Addressing the challenge will require a coordinated approach among actors involved in urban planning, development, service provision, disaster risk reduction and climate change adaptation planning. Policy interventions in Mongolia should aim to support communities to build resilience and adapt to climate change, encourage planning for future migration and provide alternatives to migration through rights-based regional development policies. More reliable empirical data would help to identify specific governance needs and options.

6. Conclusions and recommendations

Natural disasters and climate change are exacerbating the challenge of a rapid rural-to-urban migration in Mongolia. This policy brief has highlighted that decisions on whether or not to migrate following natural disasters depend on many factors including social vulnerabilities, perceptions of risk and access to opportunities. Despite the various programmes and policies in place, adaptation options in rural areas remain hindered by geographic isolation and limited economic development (UNDP, 2016b:38). Moreover, many migrants who move to urban areas still live below the national poverty line with limited access to basic services. In order to address these challenges, a coordinated approach focusing on regional development, as well as proactive urban planning will be required.

Based on the analysis above, recommendations for specific targeted interventions are outlined below.

(a) Further research to enable evidence-based policies and planning

- (i) Improve the accessibility and availability of existing statistical information.
- (ii) Conduct further research, including data collection and mapping on internal migration and the influence of climate change and natural disasters.
- (iii) Conduct further research on the needs and vulnerabilities of migrants, the impacts of outmigration on rural communities, and the impacts of in-migration on destination communities, including gender and minority issues.

- (iv) Develop evidence-based projections of future migration trends.
- (v) Promote further research and greater awareness on the issues of nomadism, loss of livelihood and rural-to-urban migration in the context of climate change.

(b) Support regional development and adaptation to climate change in places of origin

- (i) Promote development policies that support the livelihood and welfare of herders and non-urban populations, including through land tenure regulations sensitive to the context of nomadic herders.
- (ii) Provide support to rural populations to build resilience to natural disasters and adapt to climate change.
- (iii) Facilitate improved coordination between all actors, including subnational, national and international organizations, and across ministries, to ensure all affected regional communities are protected.

(c) Plan proactively for future migration in places of destination

- (i) Protect the rights of migrants and enable communities to migrate with dignity.
- (ii) Improve coordination and proactive planning, which includes consideration of future migration trends, including urban planning and development, social service planning, and climate change adaptation planning.
- (iii) Make further efforts to improve services in urban settlements and consider ways of creating safe employment opportunities for migrants in destination areas, including through occupational training.
- (iv) For migrants wishing to return to their places of origin, consider providing return and reintegration assistance.

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Sumiya Bilegsaikhan has a master's degree in Environmental Planning from Seoul National University. Her master's thesis in 2015 explored the effects of climate change on livelihoods and migration decisions among recent urban migrants in Ulaanbaatar. As an independent researcher, her present work continues to focus on urban migration, local experiences of climate and environmental change/risk in context of urban centres in Asia.



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This publication has been produced with the financial assistance of the European Union. The views expressed in this publication can in no way be taken to reflect the views of the European Union or of IOM.

