

## CLIMATE CHANGE IMPACT ON SOCIAL AND ECONOMIC SECTORS IN MONGOLIA



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**Abstract:** Nomadic pastoralism is a herder-pastoral-livestock system. These components are interlinked to sustain each other and each contains some level of adaptive and resilience capacity. Thus, it is necessary to consider all components of pastoralism in a systematic manner. As a result of climate change, intensity and frequency of droughts and dzud are increasing and they have negative impacts on the socio-economic development. The purpose of this study is to describe how climate change is affecting herder's livelihood, livestock loss, GDP growth in agriculture sector and migration in Mongolia. Number of herders and households, rural poverty, migration to urban areas from rural areas, production of agricultural sector, annual GDP growth of agricultural sector, livestock numbers and losses, drought and dzud indexes were used to analyze the impact of climate change on herder-pastoral-livestock system.

In 2000-2003, drought-dzud disaster affected over 90 percent of Mongolian territory and caused 11.17 million livestock loss. In 2009-2010, 80 percent of territory was affected and 10.32 million livestock were lost. The number of herder households decreased by 22.5 thousand and 24 thousand during 1999-2002 and 2009-2010 dzud respectively. After the occurrence of two times dzud, the production of agricultural sector in total GDP decreased by 44 percent in 2002 and 35 percent in 2010. The unemployment rate reached 4.6 percent in 2001 and poverty in rural area reached 43.4% in 2003. It was 33 percent increase compared to 1998. In 2003-2015, 122.1 thousand people migrated to Ulaanbaatar city due to the 1999-2002 and 2009-2010 dzuds. This is 26 percent of the total migrants and can be defined as "climate refugees". In Mongolia, there is a strong connection between "climate change-poverty" and "climate change-migration" because of their unique life style, settlement, economic and ecosystem characteristics.

**Keywords:** Climate change, Drought-dzud impact, Livestock loss, Poverty, Migration.