# Research Proposal

## Pastoralist movement and land use within the Eg River region, Northern Mongolia: Implications for community adaptability

### INTRODUCTION

A primary feature of adaptation to life in Mongolia, semi-nomadic pastoralism composes nearly 20% of Mongolia's GDP (Rhodes, 2013). This culturally valuable practice encompasses a variety of land and livestock management systems. Land use strategies reveal patterns of human-environment interaction (Rhodes, 2013). These systems also have broader implications for human wellbeing in Mongolia. Community based resource management of herds has been shown to increase adaptability, especially during extreme weather events. Mobility is a primary factor in mitigating human and livestock morbidity and mortality during these events (Fernandez-Gimenez et al., 2015). However, mobility has been shown to negatively impact other features of pastoralist livelihood. Mocellin and Foggin (2007) concluded that pastoralist mobility in Mongolia may reduce accessibility to health care and expose individuals to communicable diseases when traveling to more densely populated areas. Movement and land use are pillars of pastoralist society with complex implications for human wellbeing. Interactions of these societal features must be assessed within a localized context to understand human-environment interactions.

The Egiin Gol dam, if constructed, would displace several hundred pastoralists and interfere with traditional land use practices. How affected populations currently move and utilize their land may have implications for land use adaptations in the event of displacement. Understanding pastoral land use and movement will facilitate assessment of the cultural impacts of dam construction and will also elucidate current livelihood structures within vulnerable populations.

### STUDY PURPOSE AND RESEARCH QUESTIONS

The purpose of the proposed study is to determine human and livestock movement patterns by mapping the spatial-temporal locations of important grazing and watering resources utilized by pastoralists. Identifying these locations will reveal areas of importance to the herders, as well as projecting the potential impacts of displacement on communities. The study will build upon previous research describing local response to dam construction, as well as adaptive patterns that may be implemented if communities are displaced.

<u>Research Questions:</u>

What specific locations are utilized for grazing and watering by pastoralists in the Eg River region? How does land use vary by season?

In what ways has pastoralist movement changed from past years?

What aspects of land use and livestock management may mitigate the negative impacts of an ecological disturbance?

In the event of a disturbance (e.g., dam construction), what other land resources are available to pastoralists?

## Methods

A translator who speaks local languages will be needed to conduct various community surveys on land use and management practices. Pastoralist mobility mapping will be conducted by implementing community mapping strategies. Herders will be gathered and asked about locations where herds are brought for grazing and watering. Interviews will be conducted individually or in small groups, depending on the preference of the herders. Herders will also be asked about the seasonal variation in grazing patterns and frequency of movement. While providing information on geographic locations, participants will also be asked relevant information about the size of their herds and herding practices. Based on these semi-structured interviews, the researchers will then rely on snowball sampling to identify other households or communities to be contacted. These data will reveal individual and collective patterns in land use and livestock management.

Focus group discussions will be held to identify regions used in the past by pastoralists in order to compare to the areas currently cited as important grazing land. This will elucidate the shift, if any, in movement and land use in the past decades. Elders should be sought out for participation due to their greater experience with land use change.

A translator will be required for transcribing the audio data. The researcher will then code data to analyze themes and patterns in responses. Data related to movement patterns, land use change, and resource availability will reveal current practices that increase the understanding of traditional pastoralist movement. The data will also expound upon the potential social impacts of dam construction. This information can serve as baseline data for future projects that explore environmental change and land use variability in the region.

## Materials

This qualitative survey will require materials for recording and translation. Funding for materials is requested for:

- A voice recorder for use during interviews and focus group discussions

Materials to be provided by the researcher include:

- A laptop for data storage and analysis
- Additional hard drives for backup data storage
- Journals for handwritten observational notes

SOURCES

Fernández-Giménez, M. E., Batkhishig, B., Batbuyan, B., & Ulambayar, T. (2015). Lessons from the Dzud: Community-Based Rangeland Management Increases the Adaptive Capacity of Mongolian Herders to Winter Disasters. *World Development*, *68*, 48–65.

Mocellin, J., & Foggin, P. (2008). Health status and geographic mobility among semi-nomadic pastoralists in Mongolia. *Health & Place*, *14*(2), 228–242.

Rhodes, L. (2013). Civilizational and Environmental Effects of Mongolia's Transition from a Pastoral to a Market-Driven Economy. *Comparative Civilizations Review; Manassas*, (69), 33–44.