

## Geovisualizations for Adaptation Strategy Formulation at Western Mongolia

Balt Suvdantsetseg (1), Bolor Kherlenbayar (2), Myagmarsurem Altanbagana (2), Khurel Nominbolor (3)

<sup>1</sup> Sustainable development institute for western region of Mongolia., 13 khoroo, Bayanzurkh district, Ulaanbaatar, Mongolia

<sup>2</sup> Institute of Geography and Geoecology, MAS., 14 khoroo, Baruun selbe 15, Chingeltei district, Ulaanbaatar, Mongolia

<sup>3</sup> Institute for Strategic Studies., government office 11, Sambuu street-11, Chingeltei district, Ulaanbaatar 15141, Mongolia

Email: [suvdantsetseg@mas.ac.mn](mailto:suvdantsetseg@mas.ac.mn); [bkherlenbayar@gmail.com](mailto:bkherlenbayar@gmail.com)

**Abstract:** The collaborative project has enabled a collaborative development of geovisualizations on adaptation and sustainability, working with several regional and local governments, and multiple academic teams. The main objective of this research is to develop an effective adaptation strategies for pasture management using advanced geospatial techniques merging with scientific data and community knowledge at different spatial scales in Mongolia and China. The description of geovisualizations in this project is used the multiple participation on the fields of integrated assessment, policy review assessment, and sustainability scenario development, as well as Participatory Geographic Information Systems (PGIS). Project strengths have been the application of geospatial tools to climate change within collaborative processes on vulnerability assessment of pasture, effectiveness assessment for socio-economics of pasture society, evaluation of policy documents and policy formulation made through the active participation of researchers and local communities. The research project is implemented at three vulnerable provinces in two countries, covering various geo-climatic and ecological zones and different management policies.

The project activities have been educated young scientists and local communities of herders, practitioners and governors through climate change impact, its risk, pasture vulnerabilities, and the local development scenarios tied to regional and national issues, and application of spatial planning tools. The flexibility of the local pastoral adaptation strategy process has allowed the application of geovisualizations in place-based problem solving and decision-making process in specific socio-political context of municipal and regional governments.

**Keywords:** geovisualizations, socio-political context, pasture vulnerability