

Understanding China's Desertification from the Interactions of Natural, Human Factors

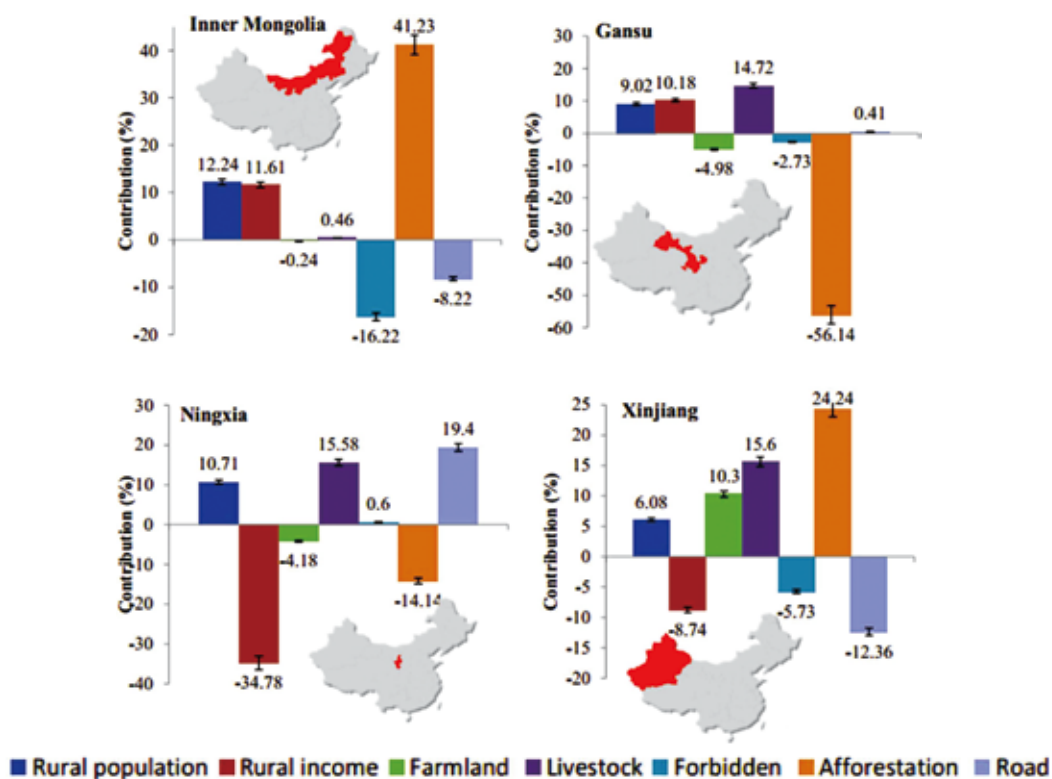
About 41% of the world's land surface is dry. These dry areas are readily affected by natural factors such as climate change and human factors such as excess agricultural and livestock activities and deforestation. In arid, semi-arid and semi-

humid regions, land degradation that results in a loss of vegetation cover is caused by several factors, including climate change and human activities, and has been defined as desertification.

In recent years, more and more sandstorms from desert areas swept

over modern cities in northwestern China, Africa, American west and Australia. Due to the expansion of desert areas, desertification has been a crucial environmental issue on a global scale, and has begun affect human's subsistence and development. Negatively

Contributions (%) of the driving factors to changes in the area of desertification based on the results of regression analysis.



affected areas are then prone to desertification. About 35% of the world's population live in drylands and encounter problems such as drought, food and water shortage, disease, and poverty. As a major ecological problem, desertification also increasingly limits the local economic development in northwestern China.

Recently, scientists from the Cold and Arid Regions Environmental and Engineering Research Institute (CAREERI),

Chinese Academy of Sciences obtained China's desertification monitoring data and established the pooled regression model to analyze the influence factors of desertification in China.

Their study showed that both climate change and human activities play important roles in the process of desertification, which is complicated and includes complex interactions between human and natural factors. Due to this complexity, previous research was generally focused

on either simple climate factors or on human activities rather than trying to account for both factors simultaneously.

Their research also demonstrated that social economic factor is the main factor that affecting desertification, accounting for 79.5%. Therefore, it is necessary to consider the integrate effects of social economy and natural factor.

This research was published in *Nature: Scientific Reports* (DOI: 10.1038/srep15998).

Reclamation of desertified, sandified land on either side of the Sudu desert road in Wengniute County, China, is well under way.
Credit: Manipadma Jena/IPS.

