Eco-Compensation in Xilingol Grassland of Inner Mongolia, P.R. China

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1 Brief introduction of Xilingol Grassland

Xilingol grassland owns complete grassland types and natural grassland vegetations, which make it a unique treasury of grassland biodiversity. It is an important ecological functional region in China. But due to years of overuse and natural disasters, sixty-four percent of usable grassland has degraded or sanded, which has been the main source of flying dust and sand storm for Beijing and Tianjin area. Although Xilingol grassland is of important ecological significance, it is lack of investment for protection and restoration.

Eco-compensation is a type of institutional arrangement to protect and sustainable use of ecosystem services, and to adjust the distribution of costs and benefits between different actors and stakeholders, mainly through economic measures. (Li Wenhua, et al. 2006). It has been a current hot topic in the Chinese society.

2 Determination of eco-compensation standard for seasonal grazing (SG) policy

SG policy is to close livestock in stall without grazing for 40 - 60 days in spring when pastures turning into green, so as not to have grass sprout gnawed and to increase the yield of pasture. It has been put into practice since 2002 in Xilingol. Till 2005, SG policy has covered a area of 18,234,000 ha, including 104,503 households, 5,790,000 herds, accounting for 92.5 percent of usable grassland.

Fig.1 Location and size of the respondents

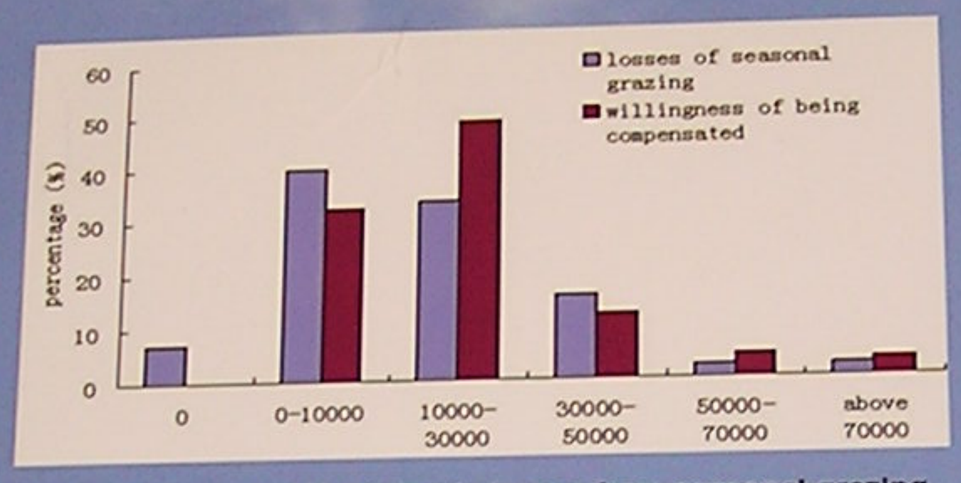

Fig.2 Distribution of Herdsmen's losses from seasonal-grazing and their willingness to accept compensation

Photo 1. Household survey

A function of Willingness To Accept compensation is formed by estimation of econometric model depending on data collected from 300 household questionnaires (Fig. 1; Fig. 2.). Results showed that herdsman's WTA is positively correlated with annual household expenditure. In order to determine the cost caused by SG, Xilinhot, the middle region of Xilingol grassland area, has been selected for further analysis. The expenditure and income of 280 households before and after seasonal grazing policy have been compared. Compensation standard of herdsmen is put forward with consideration of herdsmen's WTA and their protection cost (Table 1).

Table 1 Herdsman's compensation standard in the main animal husbandry region (unit: US$)

	Xilinhot City	Abga Qi	Sonid Zuoqi	Sonid Youqi	Donguji mqinQi	Xiujim qinQi	Xiang huangQi	Zhengxiang baiQi	Zheng lanQi
per household	2092.9	2088.7	1884.6	1924.3	2103.2	1919.8	1835.6	1976.7	1694.0
per person	681.7	629.1	564.3	633.0	592.5	524.5	579.1	595.4	491.0
per ha	5.37	4.22	3.02	5.31	5.10	11.13	18.93	28.44	21.29

5 The fund sources for ecological compensation

1)**Government** According to the investigation of local institutions and grassland related-companies and theoretical analysis, the compensation fund offered by the government should account for 70% of the total funds.

)**Beneficial area** the proportion of compensation fund for beneficial area is recommended as 10%-15% of the total amount.

)**Local beneficial companies** By investigating 50 companies in Xilinhot, 79% ompanies are willing to pay eco-taxes on grassland restoration. The average Villingness To Pay for grassland restoration per company is 9,480 RMB each year.

Tourist By investigation of tourists in Xilinhot and Xiujimqin for their Villingness To Pay for the restoration and protection of the grassland. According to timation function, the average Max_{WTP} is 328 RMB each person.

Photo2. Company survey

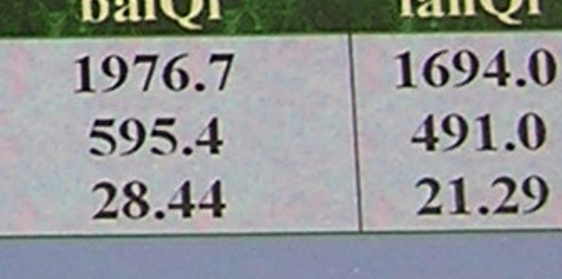

Photo3. Tourist survey