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Research on the folk assessment indicator system of the surviving environment of pastoral area-taking Damao banner as an example

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Key words: desertification monitoring, surviving environment evaluation indicator system, folk assessment, Arid region

Introduction At present, the monitoring and assessment indicator on grass ecological environment have formed a relatively ripe system. In this paper, all kinds of monitoring and assessment indicator are excavated and reorganized, and a new system is formed in view of the folk community, from which the herdsmen can judge the property and degree of grass surviving environment they face.

Study method According to conducting on-the-spot interview to the herdsmen of the central and western pastoral areas of Inner Mongolia, the method of questionnaire survey is taken to collect and organize the monitoring and assessment indicator existed among the folk and community's surviving environment. The indicator is then chosen and sorted out according to the principle of assessment indicator of ecological environment. The indicator system chosen firstly is taken to operate on the spot to further check and correct, and then a new system of monitoring assessment indicator is put forward on the basis of surviving environment of the community between pastoral areas. An evaluation on ecological environment is carried by the assessment indicator system of both folk and academia, the result of which is compared to confirm the feasibility, serviceability, and representation of this system.

Analysis of result Taking the Damao banner Pastoral Area of Inner Mongolia as an example, from the investigation of the herdsmen of this area, they mainly judge and evaluate the ecological environment by the condition of grass variety, livestock reproductive ability and body weight stable and hydrology river system variety. According to the definite principle of the ecological environment of pastoral area and the character of the plant, hydrology indicator, domestic animal indicator, etc, is defined as the first level indicator; at the same time, the second level indicator is chosen in view of integrity, scientific nature, independence, simple and qualification.

Conclusions Through the research of questionnaire survey to the herdsmen of pastoral area, the combination of the monitoring and assessment indicator system is proposed in view of the folk survival environment of the pastoral area^[2]. On the Damao banner grassland of the western Inner Mongolia, the ecological environment assessment is carried according to this new assessment system and the traditional one, compared with the similar reason, the feasibility, operation, and representation are confirmed then.

Table 1 The monitoring and assessment indicator system.

Evaluation indicator	Concrete indicator	Rank division and classification		
		mild	moderate	germinates
Plant indicator	Vegetation coverage after the rain time (vegetation coverage area per area) (%)	≥40	40~25	25~10
	Quality and growth of fine grass type after budding in spring (drop/reduction) (%)	≤10	10~30	≥30
	The height of plant stopping growth in autumn (being eaten) (cm)	≥5	5~2	≤2
Hydrology indicator	Drop scope the subsoil water level in the well (m)	≤2	2~3	≥3
	The rainfall time of the time of rain coming and fit grass growth in the season (compared with average level A" in the five years) (reduction or drop) (%)	≤20	20~50	≥50
	Variety of peripheral river system (reduction of basin area) (%)	≤30	20~60	≥60
domestic indicator	The day-increasing weight of the season of lamb reproduction (kg/day)	≥0.35	0.35~0.25	≤0.25
	The increasing scope of domestic animals' weight in autumn(A" compared) (reduction or drop) (%)	≤20	20~50	≥50
	The rate of animals possessing per grass area (sheep/hm ² /half year)	1.45	2.63	5.26

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