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## Study on Technical Method of Remote Sensing Monitoring for Grassland Degradation

Wa Gao

*Inner Mongolia Academy of Rangeland Survey and Design, China*

Muse Ji

*Inner Mongolia Academy of Rangeland Survey and Design, China*

Xinqiao Duan

*Inner Mongolia Administration Station of Grassland, China*

Caixia Jin

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## Study on technical method of remote sensing Monitoring for grassland degradation

Go Wa<sup>1</sup> JI Muse<sup>1</sup>, DUAN Xinqiao<sup>2</sup>, JIN Caixia<sup>3</sup>

<sup>1</sup> Inner Mongolia Academy of Rangeland Survey and Design, Huhhot 010051. <sup>2</sup> Xilin Gol Meng of Inner Mongolia Administration Station of Grassland, Xilinhot, E-mail nmckygw@163.com

**Keywords :** rangeland degradation, remote sensing (RS), mapping

**Introduction** Yun Shipeng (2001) and others have analyzed grassland degradation of the landscape and rangeland ecology in Inner Mongolia by using remote sensing methodologies XU Peng et al. (1988) also utilized remote sensing images to classify rangeland types.

**Materials and methods** Using field observations and remote sensing images, several characteristics were specified including dominant species, production and percent cover, as well as changes in the proportion of indicator plants. Additional important information has been gained using Geographical Information System (GIS), global positioning system (GPS), and remote sensing (RS) technologies.

**Results and discussion** Rangeland degradation status has been determined based on RS, GIS, and GPS technologies. Figure 1 provides data on changes in degradation status and extent since 1980. Figure 2 indicates the reason for the degradation and extent of changes since 1949.

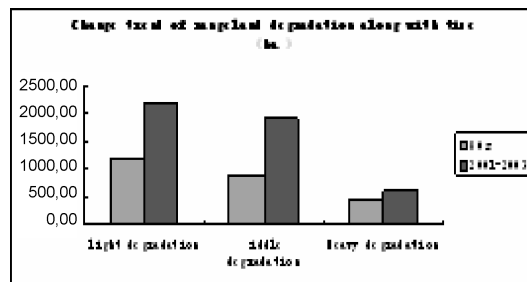


Figure 1 Descriptive text (use text box or figure caption).

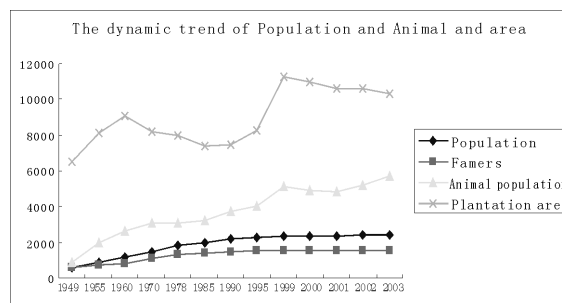


Figure 2 Descriptive text.

**Conclusions** As a result of this study, we find that rangeland degradation on a large scale may be characterized and mapped using RS, GIS, and GPS technologies. In addition, monitoring dynamic changes of four key factors (dominant species, production, percent cover, and change in the ratio of indicator plants) can be as useful determinants in mapping and monitoring rangeland degradation.

### References

Not formatted according to <http://www.igc-irc2008.org/papersubmit.html>

Yun Shipeng. (2001). Analysis about breakage situation of the landscape and ecology of rangeland in Inner Mongolia by RS. Need volume number: 35-38.

Xu Peng, Zhu Jinzhong need all authors listed in reference. (1988). A study about extracting rangeland typed based on RS. Chinese Grassland 6: 61-66.