



University of Kentucky
UKnowledge

International Grassland Congress Proceedings

XX International Grassland Congress

Optimization of the Pasture Resource in Boundary Environments as a Basis for Regional Nature Management

M. V. Rogova

Institute of Geography SB RAS, Russia

Follow this and additional works at: <https://uknowledge.uky.edu/igc>



Part of the [Agricultural Science Commons](#), [Agronomy and Crop Sciences Commons](#), [Plant Biology Commons](#), [Plant Pathology Commons](#), [Soil Science Commons](#), and the [Weed Science Commons](#)

This document is available at <https://uknowledge.uky.edu/igc/20/satellitesymposium3/63>

The XX International Grassland Congress took place in Ireland and the UK in June-July 2005.

The main congress took place in Dublin from 26 June to 1 July and was followed by post congress satellite workshops in Aberystwyth, Belfast, Cork, Glasgow and Oxford. The meeting was hosted by the Irish Grassland Association and the British Grassland Society.

Proceedings Editor: D. A. McGilloway

Publisher: Wageningen Academic Publishers, The Netherlands

© Wageningen Academic Publishers, The Netherlands, 2005

The copyright holder has granted the permission for posting the proceedings here.

This Event is brought to you for free and open access by the Plant and Soil Sciences at UKnowledge. It has been accepted for inclusion in International Grassland Congress Proceedings by an authorized administrator of UKnowledge. For more information, please contact UKnowledge@lsv.uky.edu.

Optimization of the pasture resource in boundary environments as a basis for regional nature management

M.V. Rogova

Institute of Geography SB RAS, Ulan-Batorskaya St House 1, Office 410, Irkutsk 66403, Russia, E-mail: traveller-irk@yandex.ru

Keywords: grazing capacity, optimal nature management, boundary landscapes

Introduction In spite of the globalization processes encompassing all spheres of human life and activity, land remains the main resource and provides the feeding source for population and the fodder base for livestock rearing. On the other hand, the activity of local communities can have important global consequences. The study area that includes Lake Baikal's western shore (East Siberia) and the lake's largest island exemplifies the traditional type of nature management, namely, grazing management which was originated by an indigenous population within the context of suitable natural climatic conditions. This investigation furnished an opportunity to make an assessment of the status of this sector and of the district's ecological situation, as well as to propose an optimal nature management scheme.

Materials and methods The work reported here was done using field investigations, documentary and archival materials from the local district administration, photographic and cartographic data of long-term ecological monitoring, as well as the data from case interviews with specialists and representatives of local residents. A method of comparing the above-mentioned materials was used to analyze the district's nature management process and to predict pasture management changes. Based on the traditional regional land use as well as on a careful study of the natural-climatic component, recommendations were formulated with regards to the scheme of eco-friendly nature management practices.

Contact zones of several types of landscapes make for sustainability of the territory's nature management by providing resources of different types. The study district combines steppe, forest and transitional communities (Ryabtsev, 2003). Geographical location determines the main, historically established, types of nature management, fishery, grazing animal husbandry, hunting and forest utilization. Thus the combination of these resources constitutes the district's ethos as discussed by Ragulina (2004). Not only did the nomads and cattle-breeders determine the culture and traditional types of economic relation but they were also responsible for the state of environment..

Results Investigations revealed that the years of human presence in the Prebaikalia have seen an intensification of the processes of steppe formation. However, the highest index of anthropogenic stress took place in the 20th century when in the 15,900 km² of the district, the number of livestock reaches 60,000 or more (Kuznetsov *et al.*, 2003). The intervening time period has shown that the neglect of the natural climatic factor has led to regression of pastoral lands and to a disturbance of plant communities and soil cover integrity.

Conclusions The above-stated challenges, together with the economic crisis that emerged in the 1990s, have dictated the need to search for concepts of optimal nature management for the territory of Baikal's western shore area. The above-mentioned geographical, historical and ecological factors of influence on boundary landscapes should be taken into account when devising a relevant concept. A key objective of this study was to carry out a detailed calculation of the grazing capacity for this territory and, as the result of the investigation, withdrawing the particular pastoral areas from exploitation for 10-15 years. Such a time-span is required for the re-establishment of soil and vegetation cover under Southern Siberia conditions.

References

- Ryabtsev, V.V. (2003). Vascular Plants of the Pribaikalsky National Park. Collection of Scientific Papers, Irkutsk: Izd-vo «Oblmashinform», 112 pp. (in Russian)
- Ragulina M.V. (2004). Cultural geography: theory, methods and regional synthesis. IG RAS SB Publishers, Irkutsk. 172 pp. (in Russian)
- Kuznetsov M.A., A. P. Suhodolov, N.M. Sysoeva and D.U. Fedotov (2003). The scheme of development and location of the Irkutsk region's productive forces into the year 2005, Irkutsk,, pp. 178-186. (in Russian)