

北海道中央ユーラシア研究会 第110回例会

## **Grazing activities and its influential factor in the Alai valley, Kyrgyzstan**

**Jie Liu**

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Day&Time: Sat., September 3, 2013 16:00-18:30  
Place: Hokkaido University, Slavic Research Center, Room 401  
Discussant: Hiroyoshi Karashima 辛嶋博善 (Research Fellow, Slavic Research Center)  
Chairperson: Tomohiko Uyama 宇山智彦 (Professor, Slavic Research Center)  
Attendance: 12 people

### **Abstract**

This research assessed the grazing intensity in the Alai Valley, the southern Kyrgyzstan by the grazing model (Howard and Higgins 1987) and vegetation-covered area. The basins in the study area are classified into 3 types by the using period: spring & autumn pastures (N=3); summer pastures (N=5); all seasonal pastures (N=3). Totally 173 slopes were measured in the three different types of pastures. They have been classified into: (1) slopes without terraces made by livestock with vegetation cover  $\leq 40\%$ , (2) slopes without terraces made by livestock with vegetation cover  $> 40\%$ , (3) slopes that can accept more livestock with vegetation cover  $\leq 40\%$ , (4) slopes that can accept more livestock with vegetation cover  $> 40\%$ , (5) overgrazed slopes with vegetation cover  $\leq 40\%$ , (6) overgrazed slope with vegetation cover  $> 40\%$ . Except slopes without terraces with vegetation cover  $> 40\%$  and slopes that can accept more livestock with vegetation cover  $> 40\%$  are regarded as slopes in good status while the rest of 4 types are regarded as in poor status. The results show that 43.4% are overgrazed and 39.4% are evaluated as slopes in good status. More slopes were overgrazed in summer pastures (53.9%) and all season pastures (50.0%) than in spring & autumn pastures (29.5%). The higher stocking rate (ha/head), which means heavier grazing activity, is more likely to result in more slopes in poor status. Moreover, the grazing intensity is heavier in the vicinity of the river and that the slope status becomes better with increased distance from water. This can be explained by the



results of previous research (Valentine 1947, Ludwig 2000, Pringle and Landsberg 2004) that the physiological dependence of livestock on water results in the grazing activities concentrate on the vicinity of water resource. (Liu)

### **Attendee's comments**

Liu's well-crafted informative talk was followed by the comments of Dr. KARASHIMA Hiroyoshi, Research Fellow at the Slavic Research Center. Due to his expertise in cultural anthropology and extensive fieldwork experience in Mongolia, Dr. Karashima considered the issue of grazing activities in the Alai Pamirs from a broader range of perspectives – not only from the point of view of environmental management but also anthropology – which served as the trigger for further discussions.

Dr. Karashima pointed to the need to specify the species of plants (flora) in the studied area. Moreover, he was curious about whether Liu's methodology that considers the relationship between grazing intensity and the vegetation cover – in particular, the slope measurement in the grazing model analysis (i.e. the terraced slopes and the slopes without grazing terraces) – was used before in a given region. Liu pointed out that the method was developed and first used in the U.S. (California), and later adopted by other countries (for instance, Nepal).

The second set of questions considered the present situation of pastoralists in Alai valley as well as some details of their grazing activities. The discussant asked about the average number of people as well as livestock per household and whether there is a labor shortage problem and so on. In addition, Dr. Karashima compared the Alai valley case with the current situation in Mongolia.

The other important observation made by the discussant was focused on the role of formal and informal institutions in regulating the pasture use. To Dr. Karashima's questions concerning the regulation of the pasture use, the speaker answered that the pasture governance is under the control of local municipalities. For instance, local government has defined the areas for local and nonlocal pastoralists.

Finally, Dr. Karashima, while highlighting the points examined in Liu's paper concerning the water resources, pointed to the problem of a long-term use and maintenance of water points. He also questioned pastoralists' willingness to move to a new place in search of a better water supply.

Several issues were raised in further discussions with the audience, which stimulated a lively debate on the subject. I believe that the discussions have not only made the session informative and insightful but also helped to generate new interesting ideas for the further exploration in the field.

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