## Visitors' attitudes toward introducing a new visitor management program into a brown bear habitat in Japan

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In order to balance tourism activities and resource protection, managers have considered the implementation of some restrictive management actions in protected areas. These actions include limiting visitor numbers, limiting the length of stay, using designated accommodation, restricting specific activities, and visitor education (Hammitt and Cole 1998). The effectiveness of such management actions has been evaluated by the effects on natural resources (Reid and Marion 2005), and by visitor evaluations (Vorkinn 1998; Daniels and Marion 2006). To be successful, these management actions need the support of stakeholders and the acceptance of visitors.

Shiretoko National Park, in northern Japan, is known as one of the highest density brown bear habitats, and was registered as a World Natural Heritage site in 2007. In particular, the Shiretoko-goko Lakes hiking trail has frequently been closed by the appearance of brown bears in summer, because the wetland plants they prefer grow there. The season in which brown bears are frequently observed overlaps with the tourist season, and there are concerns about the possible risk of encounters between brown bears and visitors. Tour operators and tourists have complained about the frequent closure of the trail, and demands have been made to determine ways to avoid inadvertent contact between visitors and brown bears. After two years of stakeholder discussion, the park administrator decided to introduce a new system to restrict the number of visitors and their behaviors from the spring of 2011. During the period in which brown bears are active in early summer (May 10 to July 31), visitors may only participate in guided tours with licensed guides. Guided tour numbers are limited to 300 a day. From summer to fall (August 1 to November 10), the visitors must attend a 10-minute lecture before hiking, and hiker numbers are limited to 3,000 a day. In both cases, visitors are required to pay for the service. In June 2010, experimental tours were carried out to examine the feasibility of the new management program.

The purpose of this study was to compare the knowledge, acceptance, and satisfaction of visitors with the guided tours, preliminary lecture, and hiking restrictions in the Shiretoko-goko Lakes hiking trail before and after implementation of the new management program.

## Methods

Questionnaire surveys were carried out to investigate visitors' attitudes before and after the introduction of the new program. There were several types of visitors: visitors who attended the guided tours (1,005 in 2010 and 652 in 2011), visitors who did not attend the tours in the bear active season (540 in 2010 and 404 in 2011), and visitors who visited in summer and fall (529 in 2010 and 393 in 2011). About half the summer and fall visitors attended the lecture and hiked the trail by themselves. Every visitor was handed the questionnaire sheets after the tour or their hike, and asked to mail it back. Questionnaire items included their motivation to visit Shiretoko-goko Lakes, previous knowledge about the new limitations on use, their information source, their acceptance of the new program, crowding perception, and their overall satisfaction. Guided tour attendees and visitors who took the preliminary lecture were asked to evaluate their satisfaction with the registration process, content of the lecture, and the guides. They were also asked to evaluate their sense of safety regarding the brown bears before and after their hikes.

About 60% of respondents were female, half were more than 50 years old, and about 70% were from outside Hokkaido.

## Results

Visitors were most frequently motivated by the opportunity to "experience the wilderness landscape". Figure 1 displays the comparison of visitors' acceptance of the new management program. Around 90% of guided tour participants and those who attended the preliminary lecture accepted the new management program positively. The acceptance of visitors who did not attend the guided tours or preliminary lectures was slightly lower. The satisfaction of tour and lecture attendees was higher than the satisfaction of other visitors. Satisfaction and acceptance of the new program were correlated.

## Conclusions

There were several differences in visitor perceptions before and after the implementation of the new management program in Shiretoko-goko Lakes. Guided tour and preliminary lecture attendees showed greater acceptance of the use limit and greater satisfaction in their travel than other visitors. The results indicate the importance of the tour guides and lecture staff. Their direct communication seems to increase visitors' understanding of the management actions.



Figure 1. Visitors' acceptance of the use limits in Shiretoko-goko

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