

Tourism Policy Analysis on an Eco-tour Guide Certification System at a UNESCO World Heritage Site: The Shirakami Mountain Range in Japan

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Introduction

In the Shirakami Mountain Range, the idea of ecotourism was embraced as part of the national tourism policy. The majority of its tour guides work as ecotour guides, but there is no single unified organization in the Shirakami Mountain Range. Since there is no guide certification system, the tour guides voluntarily take part in on-the-job training to enhance their capabilities. This study conducted a survey of tour guides' activities and their attitudes toward a possible introduction of a guide certification system in the Shirakami Mountain Range. UNESCO describes its location as "located along the Sea of Japan in northern Honshu at an altitude ranging from 100 to 1,243 m above sea level. It is the remnant of the cool-temperate beech forests that have covered the hills and mountain slopes of northern Japan since eight to twelve thousand years ago." (UNESCO, 2014)

The Shirakami Mountain Range was not originally registered as a National Park like the other World Heritage Sites in Japan and it had not been a well-known sightseeing area. However, after its registration as a World Heritage Site in 1993, the uncanny beauty of its beech forest became better known throughout the country and the number of tourists rapidly and significantly increased. The Shirakami Mountain Range, which had not been registered as a natural reserve, had experienced problems. Following its registration as a World Heritage Site, policy concerning the beech forest shifted drastically from one of utilization to one of conservation. At the time of registration, the Forestry Agency abruptly placed a sign designating the core area of the Shirakami Mountain Range off-limits (Sakuraba, 2008). The unilateral off-limits declaration of the core beech forest area led to confusion among local people and caused serious arguments over the legitimacy of the decision.

In 2004, the Ministry of the Environment launched an ecotourism promotion project emphasizing "coexistence between human beings and beech forests," which called on the local community to act cohesively as one and charged local tour guides to play a pivotal role in implementing ecotourism (Ministry of the Environment, 2007). Before this, travel companies and local guide associations had independently claimed to have adopted ecotourism without formal definitions.

This pointed to the necessity of introducing a guide certification system in the Shirakami Mountain Range. Several meetings confirmed that the introduction of a guide certification system was the best way to enhance tour guides' skills. However, the topic of a guide certification system was not discussed at any meeting of the ecotourism promotion project since the introduction was deemed too challenging to be implemented, requiring tough negotiations among stakeholders to reach any consensus. The Ministry of the Environment worried that the local people might feel

alienated again as they were by the unilateral off-limits declaration. Though the introduction of a guide certification system has been discussed in other World Heritage Sites in Japan, it has not been discussed in the Shirakami Mountain Range.

This study discusses the role of the tour guide in the ecotourism industry of the Shirakami Mountain Range, as well as explores the possible standardization of tour guide activities and the introduction of a guide certification system through a questionnaire. In order to clarify the point, this study examines the similarities and differences in tourist activities and perception about a guide certification system between the full-time guides and part-time guides. Therefore, the research question of this study is whether or not full-time guides and part-time guides have differing views about tourism activities and guide certification.

This study intends to address the shortcomings left by the previous governmental study in the area of comprehensiveness of the region. This study may help local policymakers determine the direction of tour guides' activities and provide an example of a guide certification system.

Role of the Ecotour Guide

Many of the definitions concerning ecotourism in previous studies conform to the perception that the nature experience is the most critical factor in ecotourism. It appears that putting ecotourism into practice presupposes not only protection of natural resources and biological diversity, but also the offer of funds for conservation, contribution to the local economy, and the education of tourists and local community residents. It means that even if there is no standard and comprehensive method of evaluating the achievements of the area employing ecotourism, ecotourism must be regarded as tourism centered on nature to achieve the objective of resource conservation and local development concurrently. Because of this, tour guides' explanations of the natural environment play a critical role in achieving the objective of ecotourism in its management.

It is essential that tour guides offer sufficient sightseeing education as tourists are exposed to a nature reserve. Nakajima (2009) says that ecotour guides with abundant experience and knowledge can provide higher quality ecotourism to tourists.

The ecotour guide's offering of sufficient sightseeing education and nature experiences for tourists is an element in the guided tour and the role of tour guide is tremendously indispensable. Land managers also utilize the knowledge of tour guides in grasping the impact on the natural environment.

Cohen (1985) and Pond (1993) point out that tour guides' offering of high quality services not only results in the maximum satisfaction of tourists, but also increases the benefit provided. For this reason, tour guides need to offer high quality explanations of natural resources to visiting tourists. They must also ensure the safety and health of the tourists throughout their trip.

Furthermore, they need to possess the knowledge required to explain the cultural background of a natural reserve. The role of guides in sightseeing relates to all factors, including the tour objectives, preparation, tourists' initiative, and experience.

According to Geva and Godman (1991), the actions and professional knowledge of guides associating with tour participants are the most crucial factors in determining the tourist's degree of satisfaction. The fundamental principle of supporting this approach expands the positive effect on tourism in both the short-term and the long-term, and diminishes negative effects by offering accurate and persuasive explanations of nature and the characteristics of the natural reserve, monitoring environmental and cultural concerns, and becoming exemplary standards. Sweeting, et al. (1999) propose that offering high quality explanations of nature boosts tourists' quality, increases repeat visits, offers unique marketing opportunities and encourages higher hotel charges. Hughes (1991) concludes that a guide's ability to communicate effectively with tourist groups is the most critical element of this role. Ecotourism must foster guides who can offer high-quality explanations of nature as a means of achieving these high ideals.

Weiler and Ham (2002) suggest that the role of tour guide includes securing the safety, health and comfort of clients, answering the needs and expectations of tourists from different cultural traditions, offering highly cost-effective tours and responding to legal duties, moral responsibilities, expectations of landowners, major communities and clients.

From previous studies, it becomes clear that the quality of tour guides determines the tourists' degree of satisfaction.

Ecotour Guide Certification System

According to Bustam, Buta, & Stein (2012), interpretation is regarded as a key component of ecotourism. The professional knowledge of tour guides affects their perceived quality. Because ecotours utilize natural areas, it's important that tour guides be mindful of tourist safety and health. However, the tourism industry shows little interest in tour guides' qualities and abilities, and in some areas, no common guidelines exist. Tour costs also differ among tour guides. In these instances, tour costs do not necessarily reflect the guides' qualities (Yokota, 2000). Honey and Stewart (2002) point out that a guide certification system can satisfy demand and benefit the interested parties.

A guide certification system has been introduced in several countries since the 1990s. The Nature and Ecotourism Accreditation Program (NEAP), the first national certification program for ecotourism in the world, was established in Australia in 1996. This was renamed EcoCertification in 2000 and 2003. Its website began accepting applications for eco-guide certification in 2006. The EcoGuide Program was developed to promote quality standards in ecotourism through recognition and benefits. The objective of this program is to reward guides

who have achieved abilities and standards by providing them with a certification of their qualifications (Black and Ham, 2005).

Green Globe 21, known as the international tourism certification program developed by Agenda 21, applies the principles of sustainable development. The main objective of Green Globe 21 is to promote environmentally sustainable ecotourism. Its international standards are the combination of the evaluation standards stipulated uniquely in the Australian Nature Ecotourism Certification Program and Green Globe 21. The Green Globe Certification Program is compatible with a wide variety of tourism types and industries with the flexibility to consider requirements in different divisions. In 2002, it established international ecotourism standards, enabling the provision of unique programs fitting the definition of ecotourism for business managers (Parson and Grant, 2007).

Font, Sanabria, and Skinner (2003) suggest that introducing a guide certification system would reduce negative environmental and social impacts of tourism. Therefore, the ecotourism certification system can be regarded as a means of offering alternatives for interested parties, including tourists, local communities and reserve area managers. It can be utilized by the local community to assemble various activities that maximize the benefits and minimize the negative impacts of ecotourism, and construct the standards of successful implementation. For the sake of improving the quality of guides in the Shirakami Mountain Range, we need to investigate the main constituents' attitudes toward establishing a guide certification system.

Natural Resource Management and the Ecotourism Trend in the Shirakami Mountain Range

The Shirakami Mountain Range was designated as a forest ecological conservation area in 1990 and people were prohibited from entering the core area, except for academic research purposes. However, upon the introduction of a management program, the issue of prohibiting entry reemerged. The Shirakami Mountain Range was registered as a World Heritage Site in 1993 and the Forestry Agency abruptly posted "No Admission" signs in 1994. This became the biggest point of discussion and still remains unresolved.

The outline proposal of the "Shirakami Mountain Range World Heritage Site Management Plan," compiled in September 1995, relegated the core area to management with strict control left to the natural processes principally without human hands except for the special cases of academic research, etc. Inoue (1997) criticized the plan's proposed prohibition of entry, stating that it lacks the viewpoint of conserving and utilizing the surrounding areas to conserve the ecology of the World Heritage Site and that the main portion of the outline lacks a positive attitude toward reflecting the opinions of the local community. Later in 2003, Aomori Prefecture shifted to a

system of registration for use in mountaineering, so the prohibition issue showed signs of becoming less restrictive (Aoki, 2005). However, due to this, more arguments concerning the utilization of the Shirakami Mountain Range have taken place in recent years. Both Aomori and Akita Prefectures have offered proposals for the utilization of surrounding areas of the Shirakami Mountain Range.

Makita (2002) states that the ecology of the Shirakami Mountain Range is high in locality, scarce in individual natural resources, small in biological production due to low temperatures and susceptible to erosive damage due to its steep slope. Therefore, he proposed that the most precise utilization method is tourism and that it would be desirable to base the utilization process within a cooperative structure comprised of private, government and academic sectors. Matsushita (2005) also states that considering its severe location conditions and status as a World Heritage Site, the Shirakami Mountain Range would better link local vitalization with ecotourism utilization as opposed to mass tourism.

The Ministry of the Environment executed its “Shirakami Mountain Range Area Environment Conservation Measure Survey” over the course of six years from 1998 through 2003 to identify suitable conservation and management options for the Shirakami Mountain Range. While describing the survey results, the report touched on the need to introduce ecotourism and concluded that the promotion of ecotourism would be the most effective means for vitalization of the area. The Ministry of the Environment then executed the “Shirakami Mountain Range Ecotourism Promotion Project” for six years from 2004 through 2009, based on the “Shirakami Mountain Range Area Environment Conservation Survey Report.” Nishimeya Village in Aomori Prefecture and Fujisato Town in Akita Prefecture, both in the Shirakami Mountain Range, were designated as the model areas.

During the project, the Ministry of the Environment identified a number of guide-related problems and lack of skills among tour guides in the Shirakami Mountain Range. Therefore, the ideal guide image in this area has not been established. The basic framework for a guide certification system for ecotourism promotion was proposed in a conference attended by those concerned with the areas. The Ministry of the Environment confirmed the necessity of a guide certification system for guides, but it did not reach the discussion stage concerning its introduction across the total area of the Shirakami Mountain Range. Moreover, the project asserted that the tour guides working in the Shirakami Mountain Range were “mostly part-time guides, aging and deficient in their skills.”

Even though previous studies point out the importance of a tour guide and a guide certification system, the project failed to investigate the attitudes of tour guides working in the area surrounding the Shirakami Mountain Range regarding the introduction of a guide certification system. Therefore, there is little academic research focused on perception of tour

guides about a guide certification system in the Shirakami Mountain Range.

Methodology

The “Shirakami Mountain Range Ecotourism Promotion Project,” run by the Ministry of the Environment, was limited to the Fujisato Town in Akita Prefecture and Nishimeya Village in Aomori Prefecture. An overall ecotourism system that encompasses the surrounding areas of the Shirakami Mountain Range, known to consist of seven different municipalities, is yet to be seen.

This study expands the scope to guides working in a total of seven surrounding areas of the Shirakami Mountain Range: Nishimeya Village, Ajigasawa Town, Fukaura Town, Hirosaki City in Aomori Prefecture, Fujisato Town, Happo Town and Noshiro City in Akita Prefecture. Through the use of a questionnaire, this study fills the void by investigating how tour guides in the Shirakami Mountain Range carry out their work and their views on a guide certification system.

The questionnaire had a total of 48 questions, which consisted of 46 multiple choice questions and two open-ended questions. Of 48 questions, 12 ask about an eco-tour certification system, 23 questions ask about their activities as guides and 11 gather their demographic information. The majority of the 46 total questions were on a Likert scale with four choices, encouraging respondents to take either side on the issue instead of choosing moderate answers, while the rest of the questions offered binary choices. Since we needed to abide by local Japanese culture which called for greater respect show to senior members, we offered to show or read the questions and set of choices to respondents, as well as write down their replies. We believe this respectful approach to considering local culture discouraged the guides we approached from refusing to participate.

The survey was conducted over five different trips during five months from May to September 2010, yielding responses from 106 guides. Of these, we considered 101 complete answers (all questions answered) as qualified reliable data. In terms of the gender of respondents, there were 82 males and 19 females. While this distribution may appear to pose an imbalance in the eyes of Westerners, this is in line with local customs and cultures in which equal rights of women did not exist until the Meiji Evolution in 1868, when only 145 years had passed amid the continuous reign of the same Imperial regime started in 660 B.C. for 2,673 years. The Shirakami Mountain Range is also known for for a 500-year-old tradition of hereditary bear hunters, called “matagi,” to which no females have been allowed.

Early matagi practice is documented from about 500 years ago and is known for its complex rituals, taboos, ceremonies and use of specific languages. As a group of eight or so individuals, matagi enter the mountain in search of black bears (at the end of winter when the hibernation season ends), mountain vegetables in the spring, river fish in the summer,

and rabbits and firewood in the winter, spending about 1–3 months at a time. Only two people are recognized as the region's matagi and approximately 200 are left in Japan. Today, their main sources of income are farming and tourism (e.g. guest houses, mountain guides) (Kato, 2006).

The largest estimate of the total numbers of guides in the Shirakami Mountain Range is approximately 400, which includes freelance volunteer guides without official registration to any of the 11 Guide Associations. We were warned, however, that many of them are no longer active or available. Thus, the actual number of guides who are active had been estimated at around 250. To put our sample in perspective, we believe we collected about 40% of the population, which are active, available and registered guides in the region.

This study employs binary logistic regression to clarify the similarities and differences in tourist activities and perceptions about a guide certification system between the full-time guides and part-time guides. Then it investigates possibilities for establishing unified guide activities in the Shirakami Mountain Range and the introduction of a guide certification system.

Logistic binary regression is used for two value response (Tamhane and Dunlop, 2000). This model is utilized in the case of a situation where mainly two possible results are expected. In this study, we are interested in whether there would be any variables showing significant differences in attitudes between full-time and part-time guides.

Results

We conducted two main analyses based on the completed survey results. First, we investigated if there are any differences in the activities of full-time and part-time guides. Second, we asked their attitudes and perceptions toward a guide certification system.

Table 1 shows the results of the activities performed by tour guides. The logistic binary regression analyses show similarities and differences in their attitudes toward sets of questions presented to the full-time and part-time guides.

(Table 1 to be around here)

The results revealed that there were more similarities in their attitudes toward various issues and there were six issues out of 23 where they showed significant differences in their attitudes.

The full-time guides had more positive opinions than the part-time guides on three items:

- Question 5, “guiding tourists about appropriate actions at the place without toilet.”
- Question 10, “explaining the World Heritage Convention and various legal systems of the Shirakami Mountain Range.”

- Question 23, “sharing of knowledge and experience, and enhancing skills in collaboration with the related government institutions and related organizations.”

On question 5, “guiding tourists about appropriate actions at the place without toilet,” the P value is 0.03, showing a significant difference in the attitudes of full-time guides and part-time guides. The full-time guides are, in more than 95% probability, positively inclined to instruct tourists to avoid water pools and streams to protect the natural environment. On question 10, “explaining the World Heritage Convention and various legal systems of the Shirakami Mountain Range,” the P value is 0.009, showing that full-time guides are, in more than 95% probability, positively inclined to explain the World Heritage Convention and various legal systems of the Shirakami Mountain Range. On question 23, the corresponding P value is 0.01, showing that full-time guides are, in more than 95% probability, positively inclined both to promote sharing knowledge and to enhance skills in collaboration with related government organizations.

While the results show significant differences in attitudes toward certain items, the part-time guides had more positive opinions than the full-time guides on three items:

- Question 1, “informing preparatory knowledge about study sites, limited facility usage, things to carry and clothing.”
- Question 9, “explanation of the traditional culture (traditional events, traditional arts, folklore, etc.).”
- Question 22, “cooperating with the related government institutions and related organizations by giving information, etc.”

On question 1, the P value is 0.05, showing that part-time guides are, in more than 95% probability, positively inclined to inform preparatory knowledge about study sites, limited facility usage, things to carry and clothing. On question 9, the P value is 0.018, showing that part-time guides are, in more than 95% probability, positively inclined to explain the traditional culture (traditional events, traditional arts, folklore, etc.). On question 22, “the P value is 0.018, showing that part-time guides are, in more than 95% probability, positively inclined to cooperate with related government institutions and organizations by giving information, etc.

We did not observe significant differences of opinions on the other 15 items between full-time or part-time guides, indicating similarities in their attitudes toward various issues.

(Table 2 to be around here)

Table 2 shows the similarities and differences in perceptions about a guide certification system between the two groups. The full-time guides had more positive opinions than the part-time guides on two items:

- Question 5, “giving prestigious treatment to the certified experienced tour guides,”

and

- Question 6, “business efficacy by acquiring the qualification in the case of introduction of the guide certification system.”

On question 5, the P value is 0.015, showing that full-time guides have, in more than 95% probability, a more affirmative opinion for the establishment of preferential treatment for the certification of experienced tour guides. On question 10, the P value is 0.013, showing that full-time guides have, in more than 95% probability, a more affirmative opinion on the business efficacy of acquiring qualification in the case of introduction of the guide certification system.

While the results showed significant differences in attitudes toward certain items, the part-time guides had more positive opinions than the full-time guides on one item:

- Question 12, “introduction of the guide certification system in the Shirakami Mountain Range.”

On question 12, the P value is 0.008, showing that part-time guides have, in more than 95% probability, a more affirmative opinion on the introduction of the guide certification system in the Shirakami Mountain Range.

We did not observe significant differences of opinions on the other nine items between full-time or part-time guides, indicating similarities in their attitudes toward various issues.

Discussion

In this section, we first divided the participants’ responses into full-time guides and part-time guides, analyzed their answers by logistic binary regression analyses to identify differences in their guiding activities and perceptions about a guide certification system, and investigated the results.

The “Shirakami Mountain Range Ecotourism Promotion Project” run by the Ministry of the Environment often asserted that the guides working in the Shirakami Mountain Range were “mostly part-time guides, aging, and deficient in their skills.” There were 43 full-time guides and 58 part-time guides. Full-time guides comprise 43% of the total number of guides while part-time guides comprise 57%, so there is not a significant majority of part-time guides as the Ministry of the Environment project suggested.

The gender and age data of full-time and part-time guides shows that the higher the age, the greater the number of full-time guides. It also shows that many females are included among the full-time guides. From these data, there is a high possibility that full-time guides working in the Shirakami Mountain Range are mainly retirees and, in the case of the female guides, full-time housewives. By dividing the data based on full-time and part-time status of the respondents, we analyzed the differences of these groups’ activities and perceptions toward the introduction of a guide certification system.

First we investigated “the content of activities of ecotour guides,” then proceeded to “the guide certification system.” According to logistic binary regression analyses, eight of 35 questions showed statistically significant differences between the full-time guides and the part-time guides. Regarding “the content of activities of ecotour guides,” the full-time guides responded more positively than the part-time guides on three items: “dealing with tourists at the place without toilet,” “explaining the World Heritage Convention and various legal systems of the Shirakami Mountain Range,” and “sharing of knowledge and experience and enhancing skills in collaboration with the related government institutions and related organizations.” On the other hand, part-time guides responded more positively on three items: “informing preparatory knowledge about study sites, limited facility usage, things to carry and clothing,” “explanation of the traditional culture (traditional events, traditional arts, folklore, etc.),” and “cooperating with related government institutions and organizations by giving information, etc.”

To summarize, in the case of the survey questionnaire on “the contents of tour guide activities in the Shirakami Mountain Range,” full-time guides are inclined to explain and provide direction on various legal systems and natural environment conservation. Part-time guides are inclined to give cautionary advice related to safety, to provide information about not only the Shirakami Mountain Range, but also local cultures. Both groups showed differences regarding cooperative relations with related government institutions and other organizations: full-time guides feel positively about sharing information with them in equal status through study meetings, etc., while part-time guides feel positively about sharing information with them in a supporting role. This is presumably because full-time guides are able to spend more time attending conferences and meetings. However, this does not mean that part-time guides are less enthusiastic about their guiding activities and nature conservation. Part-time guides showed positive attitudes in offering information and are cooperative.

Regarding “a guide certification system,” part-time guides have more affirmative opinions on the “introduction of a guide certification system in the Shirakami Mountain Range.”

Among the survey participants, many of the full-time guides are older than the part-time guides and have longer careers as tour guides. Consequently, many of the full-time guides think that there should be prestigious treatment given to experienced guides when certified in case of the introduction of a guide certification system in the Shirakami Mountain Range. It would be reasonable for us to assume that former and current hereditary bear hunters of the *matagi* may fit a typical person in this group, which may call for preferential treatment with respect. Among guides in the Shirakami Mountain Range, there are active guides who acted against the construction of the forestry roads as nature conservationists when the issue of construction of the Trans-Aomori-Akita forestry roads arose in 1980. They consider that there could be problems if the same guide certification process were used for two different groups: those who had been

working as guides before the registration of the Shirakami Mountain Range as a World Heritage Site and those who became guides afterward.

Full-time guides consider if a guide certification system for the Shirakami Mountain Range were in place, obtaining the qualification would make their business more effective. Full-time guides evaluate more than part-time guides the advertising efficacy of the qualification by a guide certification system. Meanwhile, part-time guides are more positive than full-time guides concerning the qualification by a guide certification system. They seem to be positively inclined because they are comparatively young and physically confident that they would be successful in acquiring the qualification.

It became clear that full-time guides have an interest in the business efficacy arising from their certified qualification, though they display a negative attitude toward the possibility of acquiring certified qualification. On the other hand, part-time guides showed less interest in the business efficacy of acquiring certified qualification in case of the introduction of the guide certification system. While they have less interest than full-time guides in the possible business efficacy of a guide certification system, they want to think about getting the certified qualification in the event it is introduced. Part-time guides seem to be interested in improving their skills as guides without attachment to income because of their non-tourism income. It is noteworthy that there are more similarities than differences between the two groups except the differences we analyzed.

Conclusion

The Shirakami Mountain Range Ecotourism Promotion Project run by the Ministry of the Environment asserted that most guides were part-time with aging and insufficient skill problems, but this survey covering seven surrounding areas in both Akita and Aomori Prefectures fails to show such significant differences as the percentage of part-time guides is 57% and full-time guides is 43%. Also, older guides with more experience do not feel their skills are inferior.

From the binary logistic regression analyses, we were unable to verify that part-time guides are inferior to full-time guides in their professional consciousness. Therefore, as tour guides get older and mentor younger guides, it is necessary to talk about how to foster comparatively young part-time guides. Recruiting female guides is one effective strategy for training full-time guides. Survey respondents were comprised of 82 males and 19 females, showing relative scarcity of female guides because of traditional Japanese customs which used to keep the range off limits except to male hunters. Most of the female guides, who are not engaged in other full-time jobs, seem to be more flexible in adjusting their schedules than the male part-time guides who tend to have other jobs. For the rapidly aging society of Japan, planning ecotourism programs in which female guides can participate can help meet growing demand from older ecotourists. Since Japan

is one of the fastest aging societies among the developed nations, they can plan to utilize more female guides to accommodate an increase in tourists.

Most forestry roads leading to the Shirakami Mountain Range are closed in the winter season. Thus, tourists visit the Shirakami Mountain Range mainly from the consecutive spring holidays called Golden Week in May through the Red Leaves Season in mid-November. As the number of tourists visiting the Shirakami Mountain Range has been stable in recent years, it has been challenging to increase the number of guides. The study underscores the feasibility of introducing a certification system despite the assertion of obstacles in the previous study. Results of this study lead to several policy recommendations, including hosting workshops to improve the quality of guides during the half-year long off-season, putting more resources toward fostering female guides who were not traditionally in the local labor force, planning ecotourism programs acceptable to people with physical limitations and effectively marketing ecotourism in the Shirakami Mountain Range to target segments through collaboration of local destination marketing organizations in different towns and prefectures.

The results of this analysis shows that due to similarities in the perceptions of full-time and part-time guides, the introduction of an ecotourism certification system appears more feasible than any previous studies had evaluated and that the introduction of some preferential treatment of full-time guides would mitigate their concerns to accept such a new system. Our research verified that part-time guides would most likely embrace the new certification system, so the discovery that some preferential treatment for full-time guides would mitigate their objections should increase the likelihood of historic consensus among all guides. Tourism policymakers can capitalize on the momentum by introducing training sessions for those who wish to prepare for the certificate during the six-month off-season, which could enhance collegiality among various tour guides.

Limitations and Future Research

The study was not without limitations. First, it was based on samples of local tour guides who agreed to complete the survey, but no written materials exist as to an exact number of tour guides in the region. We collected 101 usable responses relative to an estimated total of 250 active guides, but there are inherent risks associated with the method of rather convenient sampling of full-intercept survey. We did not have enough resources to conduct a full population survey, which might have caused sampling errors.

The oral estimates made by officers from the Ministry of the Environment, however, are in the range of three hundreds to four hundreds, due to a lack of commonly established criteria to identify tour guides. The opinions of those who responded are based on a forthcoming proposal for the guide certification system, which did not yet exist and without actual presentation of the

proposed contents, there could be different interpretations of the guide certification system among respondents. We recommend researchers consider the external validity of the findings compared to a different UNESCO World Heritage Site, which are unique in features, characteristics, nature and availability of regional human resources. In 2010, the “Shirakami-rim Ecotourism Promotion Liaison Conference” was held to share issues of social situations, tourism development and ecotourism promotion in the areas surrounding the Shirakami Mountain Range.

We should be aware of technical issues that our statistical analysis used discretionary cut-off lines for judging significance of variables, such as 99% or 95% of likelihood, and that failure to negate variable’s significance at certain levels would not mean its entire insignificance shown in two tables.

This study presents evidence that there could be higher feasibility of an introduction of a standardized guide certification system across tour guides in the region than previously estimated due to a fear of perceived minor differences in their attitudes toward certain issues. The Ministry of the Environment, together with local governments, needs to explore ways to maximize the use of tour guides through the introduction of a standardized guide certification system to improve the overall quality of ecotour guides.

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Table 1: Difference between Full-time and Part-time Guides: Types of activities performed by Eco-tour guides

Predictor	Coef	SE Coef	Z	P	Odds
Constant	-1.81429	4.29206	-0.42	0.673	
Q1. Pre-explanation	1.47656	0.754794	1.96	0.05	4.38
Q2. Health	0.326608	0.880800	0.37	0.711	1.39
Q3. a small group	-0.47697	0.791515	-0.6	0.547	0.62
Q4. Morale	1.49375	1.03485	1.44	0.149	4.45
Q5. Toilet guidance	-1.75804	0.812193	-2.16	0.03	0.17
Q6. Nature explanations	-0.804944	1.03924	-0.77	0.439	0.45
Q7. Geography	0.568633	0.724647	0.78	0.433	1.77
Q8. History	-1.68880	0.982250	-1.72	0.086	0.18
Q9. Folklore	2.25579	0.933576	2.42	0.016	9.54
Q10. Code and ordinance	-2.46738	0.948444	-2.6	0.009	0.08
Q11. Preservation	0.0610173	0.675404	0.09	0.928	1.06
Q12. Etiquette to others	0.306294	0.772235	0.4	0.692	1.35
Q13. Local gifts	0.0979875	0.546336	0.18	0.858	1.1
Q14. Pay attention to needs	0.236631	0.793491	0.3	0.766	1.27
Q15. Survey often	0.403978	0.652757	0.62	0.536	1.5
Q16. a clear pricing	0.736806	0.476120	1.55	0.122	2.09
Q17. First-aid	-0.0115145	0.825733	-0.01	0.989	0.99
Q18. Leadership to preserve	-0.0642265	0.729946	-0.09	0.93	0.94
Q19. Nature restoration	0.0579024	0.740182	0.08	0.938	1.06
Q20. Set rules	-0.189814	0.657323	-0.29	0.773	0.83
Q21. Seminars to share	0.324398	0.831121	0.39	0.696	1.38
Q22. Provide info to municipal	2.87887	1.21344	2.37	0.018	17.79
Q23. Seminar to municipal	-3.41595	1.31926	-2.59	0.01	0.03

Table 2: Difference between Full-time and Part-time Guides: Perceptions of eco-tour guides toward the introduction of a guide certification system

Predictor	Coef	SE Coef	Z	P	Odds
Constant	-1.81429	4.29206	-0.42	0.673	
Q1. Need to certify eco-guide	-0.191706	0.861624	-0.22	0.824	0.83
Q2. National eco guide interest	-0.189288	0.831749	-0.23	0.82	0.83
Q3. National eco seminar	0.558343	0.730110	0.76	0.444	1.75
Q4. Eco certification improve guide	1.60873	1.07463	1.5	0.134	5
Q5. Incentive for former guides	-2.05071	0.841306	-2.44	0.015	0.13
Q6. Certificate business	-2.91218	1.16832	-2.49	0.013	0.05
Q7. Ecoguide improves perception	0.0719639	0.994178	0.07	0.942	1.07
Q8. Satisfaction higher with eco	0.0957870	0.954884	0.1	0.92	1.1
Q9. Certification helps child education	0.649245	1.05882	0.61	0.54	1.91
Q10. Need to set up common evaluation	1.15997	0.814212	1.42	0.154	3.19
Q11. Certification market us better	-1.52694	1.03049	-1.48	0.138	0.22
Q12. Interested in taking a certification	3.01744	1.13369	2.66	0.008	20.44



Figure 1: Location of the Shirakami Mountain Range

Source: Interactive Map, at United Nations Educational, Scientific and Cultural Organization <http://whc.unesco.org/en/interactive-map/>