



MPC Anti-Poaching Pilot Project Tourist Survey Results

Summary

- The Eco-Guards of Ifrane National Park asked tourists to answer surveys to understand their knowledge, opinions, and behaviour; presented are results from 658 surveys
- Most tourists were Moroccan (58%), French (17%) or Spanish (8%)
- 63% of tourists came to NPI specifically to see the monkeys, showing the monkeys are an important draw for tourism to the area, but only 30% of people knew the monkeys are Endangered
- 44% of people said they did or would feed the monkeys, 31% said they might, and only 25% said they wouldn't feed the monkeys
- 67% of people said that monkeys touching people and jumping on people is something positive and should be encouraged; only 32% of people were aware of at least one of the dangers associated with physical contact with monkeys or feeding them, 37% of people thought feeding monkeys is good for them, and 31% of people thought there were no problems
- Most visitors rated their visit to NPI and the safety of NPI positively, but park cleanliness was rated negatively. After MPC and the Eco-Gard Team implemented regular park cleaning events, ratings of park cleanliness increased and so did ratings of park enjoyment



Figure 1: The Eco-Guards of Ifrane National Park asked tourists to answer surveys using handheld tablets. These served to engage the tourists in discussion and allow tourists to ask questions to the guards, while collecting information from tourists to better understand their knowledge and opinion in order to better focus conservation efforts and enhance visitor experience.

Introduction

As part of the Anti-Poaching and Education Pilot Project by the Moroccan Primate Conservation Foundation, in collaboration with Ifrane National Park, HCEFLCD, and AAP Sanctuary, the Eco-Guards of Ifrane National Park interacted with tourists throughout the park in order to:

1. Provide education regarding the monkeys, the national park, and the forest
2. Manage tourist behaviour to increase safety of tourists and wildlife
3. Gather information from tourists in the form of surveys

These tourist surveys provided valuable information in order to:

- 1) Understand tourist knowledge, opinions, and behaviour
- 2) Target areas where further tourist education is most needed
- 3) Enhance visitor experience to NPI
- 4) Monitor effectiveness of tourist education efforts over time
- 5) Initiate discussion between tourists and Eco-Guards

After the survey was completed, the tourists and Eco-Guard could discuss the questions and the Eco-Guards would provide education and information.

Eco-Guards used handheld tablets to administer the surveys. All questions were pre-approved by M. Derrou and M. Oukannou of NPI, and the questions are as follows:

1. Country of origin
2. Age
3. Is this your first time visiting NPI
4. Who did you come to NPI with today
5. Why did you come to NPI today
6. Do you think these monkeys are Endangered
7. Are there any problems with feeding monkeys
8. Did you or will you feed the monkeys today
9. How do you feel about monkeys jumping on people and touching people
10. How would you rate the cleanliness of the park
11. How would you rate the safety of the park
12. How would you rate your overall experience at NPI

The following report includes the results from **658 surveys** collected from July 1st 2015 to December 31st 2015.

Tourist demographics and why they came to Ifrane National Park

The majority (58%) of respondents were Moroccan, with the next largest groups being French (17%) and Spanish (8%). Different age groups visit the park and were sampled somewhat evenly, although few people under 18 or over 60 answered the survey, with the largest age group being 26-40 (38%) (Figure 2).

Approximately half the respondents had been to Ifrane National Park before and about half had not (Figure 3a). Most Moroccan tourists had been there previously (63%) while most international tourists were there for the first time (74%). Most people answered that they came to the park with family (41%) and friends (25%). Tour groups also made up a large proportion (17%) (Figure 3b).

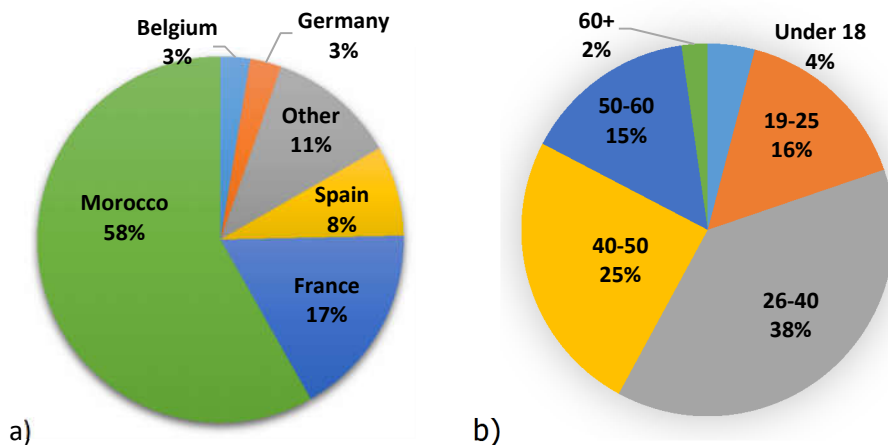


Figure 2: Country of origin (a) and age (b) of tourist survey respondents.

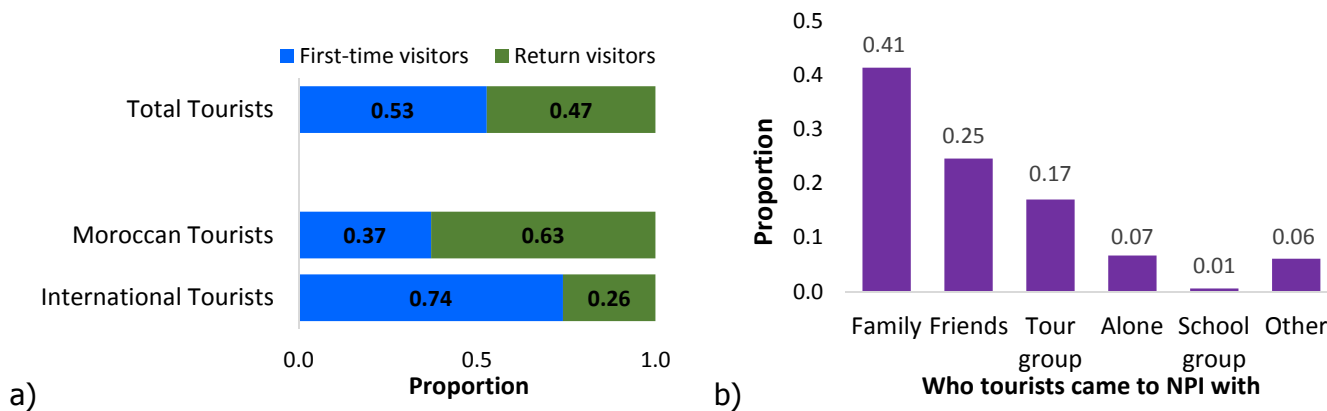


Figure 3: (a) Percentage of total tourists, Moroccan tourists, and international tourists visiting NPI for their first time and returning, and (b) who they came to NPI with.

Figure 4 shows the reasons why people came to Ifrane National Park. The majority of people (63% overall) answered that the reason they came was to see the monkeys, and especially Moroccan tourists answered that they came to see the monkeys (70%). Only a small proportion of people overall said they came to feed the monkeys (7%), but a larger proportion of Moroccan tourists said they came specifically to feed the monkeys (10%) while a smaller proportion of international tourists came to feed the monkeys (4%). The second-most popular reason for coming to the park was to enjoy nature (26% overall). A larger proportion of international tourists came to buy fossils (6%) than Moroccan tourists (1%).

The fact that most people came to the national park to see the monkeys, including both national and international tourists, shows that the monkeys are vital for tourism in the park and the region, and thus their protection is necessary for the benefit of the local tourist industry and economy.

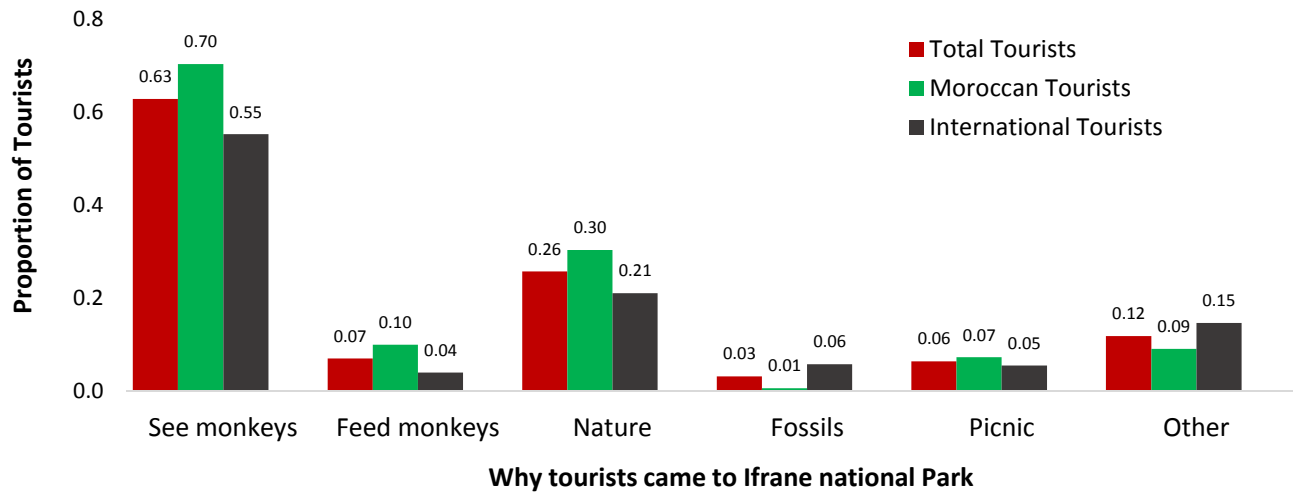


Figure 4: Reasons why tourists (total tourists, Moroccan tourists, and international tourists) came to NPI.

Tourists' knowledge and opinions about the monkeys

When tourists were asked whether they thought the monkeys are endangered, the majority of people answered they didn't know (46%). 25% of people incorrectly said no, and only 30% of people overall correctly answered yes. A higher proportion of Moroccan tourists correctly answered yes (35%), while a higher proportion of international tourists did not know (51%) (Figure 5). Overall awareness regarding the status of Barbary macaques is therefore low, and particularly among international tourists.

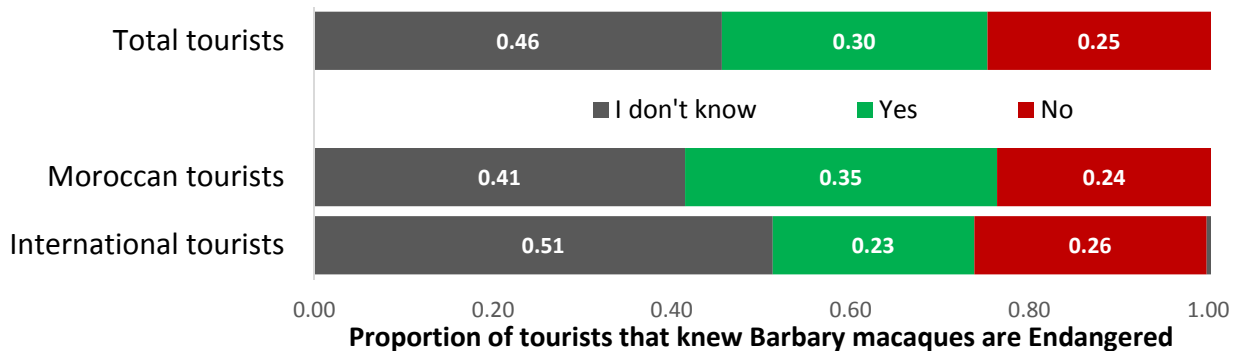


Figure 5: Proportion of tourists (total, Moroccan, and international) responding to the question as to whether the monkeys were Endangered with either a correct yes, an incorrect no, or that they did not know.

When asked whether there were any problems associated with feeding monkeys, only 32% of people could identify at least one problem. 31% of people responded that there are no problems associated with feeding monkeys, while the majority of people (37%) of people thought that feeding monkeys is good for them (Figure 6a). Very few problems associated with feeding monkeys were known (Figure 6b). The most commonly identified problem (18% of people) included health problems for the monkeys, such as obesity, indigestion, and heart disease. The next most commonly identified problem was that it can increase poaching (12%) and that it could be

dangerous for people due to disease transmission or aggression from monkeys (10%). Few people were aware that feeding monkeys increases road injuries and death (5%) or that it disrupts the normal behaviour of monkeys by increasing aggression, changing their activity budget, and decreasing prosocial behaviours (3%).

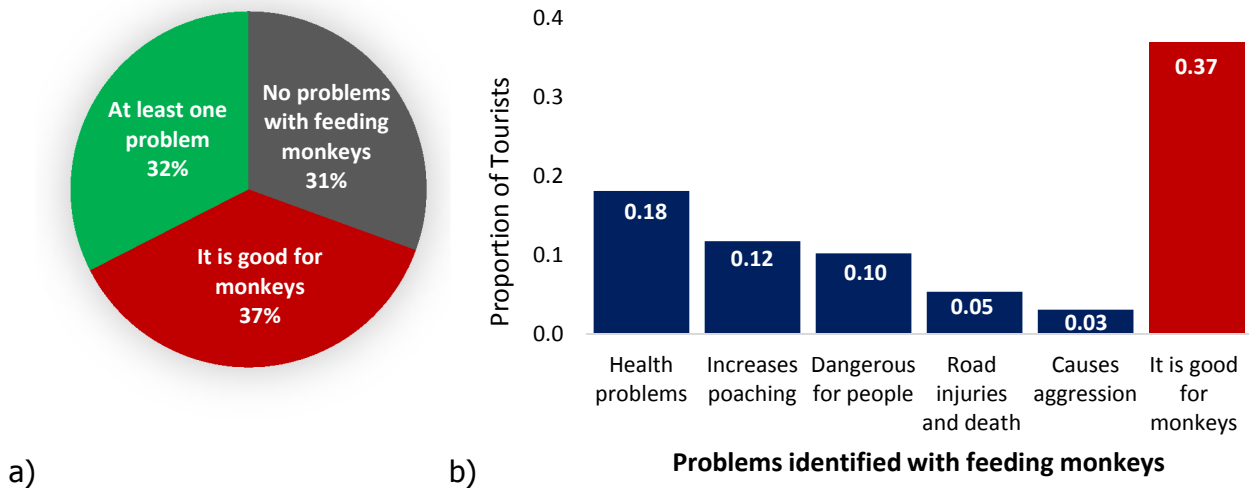


Figure 6: a) Percentage of people that could identify at least one problem with feeding monkeys, thought there were no problems, or thought it was good for monkeys, and b) proportion of people that could identify particular problems associated with feeding monkeys and close contact.

Tourists were asked whether, that day, they already had or had planned to feed the monkeys (Figure 7). Only 25% of people responded no, for both international and Moroccan tourist, and a larger proportion of Moroccan tourists responded yes (48%) than international tourists (38%). The above section showed that few people were aware of problems associated with feeding and close contact with monkeys (Figure 6).

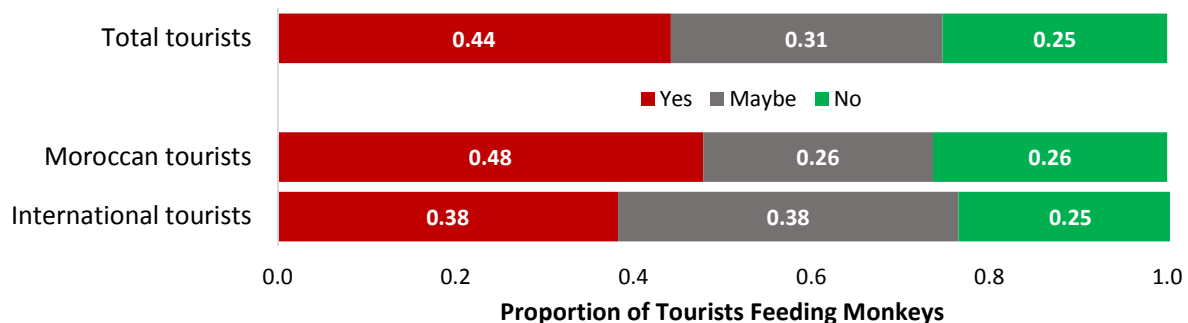


Figure 7: Proportion of people responding yes, no, and maybe, to question as to whether they did or will feed the monkeys that day, including all tourists in total, and divided into Moroccan and international tourists.

Tourists were asked their opinions on physical contact between humans and monkeys and monkeys jumping on people. They could respond with negative answers such as "It is scary," "It is bad," "It is dangerous," and "It should be discouraged," positive answers such as "It is fun," "It is exciting," "It is good," and "It should be encouraged," or neutral answers such as "I feel neutral" or "I don't care." 67% of people said they thought monkeys touching and jumping on people was

something positive and should be encouraged, and only 22% of people said it is something that is negative and should be discouraged.



Figure 8: Tourists at the Moudmam tourist site in Ifrane National Park. Despite the fact that physical contact between macaques and humans can lead to transfer of disease and parasites and risk of aggression, 67% of tourists responded that they viewed physical contact and monkeys jumping on people as something positive. However, as awareness about these issues increases, this opinion decreases.

Tourists' opinions about Ifrane National Park

Tourists were asked their opinion on park cleanliness, park safety, and their overall experience of the park, and this was divided according to Moroccan and international tourists, in order to determine what tourists enjoy and what areas can be improved in order to attract more national and international tourists to Ifrane National Park. Overall, most people (65%) rated their experience with the park as either good or very good. Rating was similar between Moroccan and International tourists. Park safety was also rated positively, with 51% of people in total rating park safety as good or very good, with similar rating between national and international tourists. Park cleanliness, however, was rated poorly, with 68% of people overall rating cleanliness as bad or very bad. Moroccan tourists rated the cleanliness worse than international tourists, with 71% of Moroccan tourists rating cleanliness as bad or very bad, compared to 65% for international tourists (Figure 9).

In response to this feedback on park cleanliness from tourists, MPC and the eco-guards team implemented Park Cleaning Events every two weeks at the in the region of the Moudmam tourist site, beginning October 17th and continuing until the end of the pilot project. A chi-squared test shows that tourists' ratings of park cleanliness significantly improved after the implementation of regular park cleaning events ($\chi^2=62.0145$, $df=4$, $p<0.001$; Figure 11).

A significant association was found between tourists' ratings of park cleanliness and their overall experience of the park ($\chi^2=7.5935$, $df=2$, $p=0.022$)ⁱ (Figure 12). Therefore, it was tested whether there was an improvement in tourists' ratings of overall park satisfaction following regular park clean-ups. This analysis found that after MPC implemented regular park clean-ups, tourists' rating of their overall experience of Ifrane National Park also significantly improved ($\chi^2=11.6436$, $df=2$, $p=0.0030$; Figure 13)ⁱⁱ.

Increasing the cleanliness of the park would serve not only to improve the experience of visitor's to the park, but also make it more safe and hygienic for wildlife as well as humans.

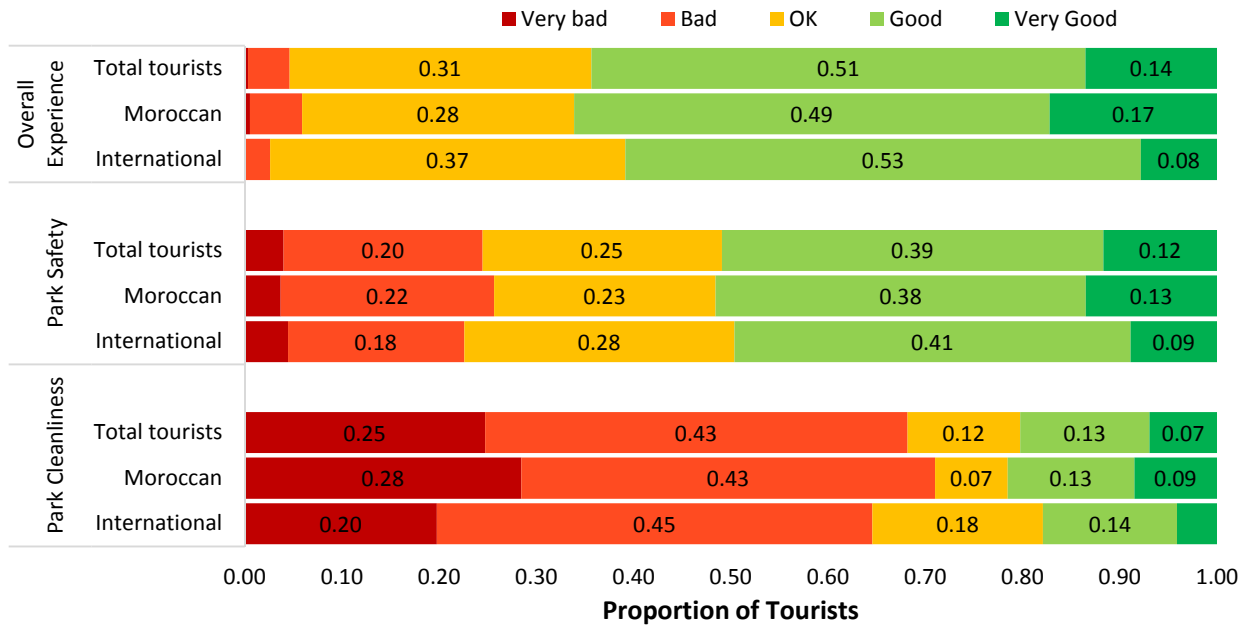


Figure 9: Tourists' ratings of overall experience of the park, park safety (roads, wildlife, etc.), and park cleanliness, including total, Moroccan, and international tourists.



Figure 10: Due to low ratings of park cleanliness by tourists, MPC and the Eco-Guard team began regular park cleaning events. Each two weeks, the Eco-Guard team would clean the Moudmam region of Ifrane

National Park, inviting members of the community and tourists to participate. Materials and garbage collection were generously donated by Azrou Pizzorno Environnement.

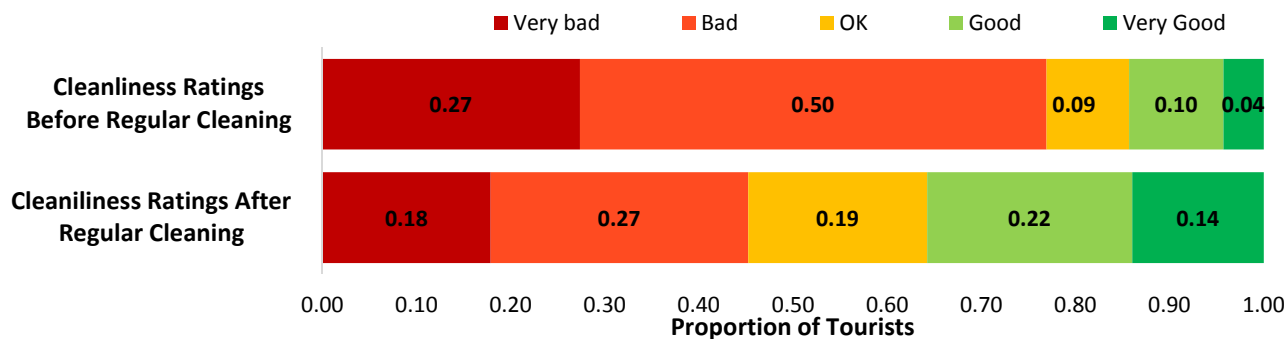


Figure 11: Difference in tourists' ratings of park cleanliness before and after implementing regular park cleaning events each 2 weeks. Following implementation of regular park clean-ups, ratings of park cleanliness significantly improved ($p < 0.0001$).

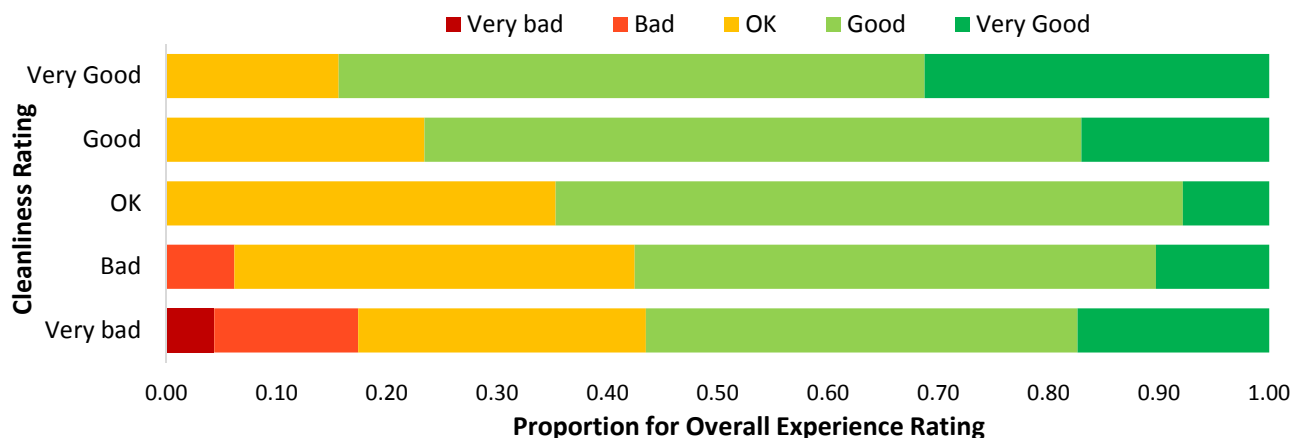


Figure 12: Relationship between tourists' rating of park cleanliness and rating of overall experience at Ifrane National Park. There is a significant association between these two ratings ($p = 0.022$; note that ratings of "bad" and "very bad" for overall park rating were combined with "neutral" in analysis due to few responses in these categories); visitors responding that the park is cleaner also rate their experience of the park as more positive.

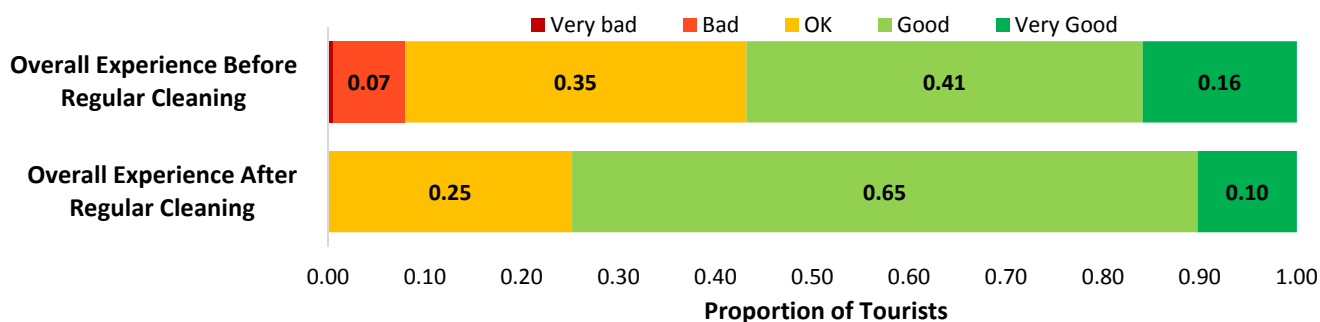


Figure 13: Difference in tourists' ratings of overall park experience before and after implementing regular park cleaning events. During analysis, the "Bad" and "Very bad" categories were included with "neutral" due to low numbers of observations. There was a significant improvement in overall rating of the park following implementation of regular park clean-ups ($p = 0.003$).

Tourist survey conclusions

Most tourists were national tourists, with the largest international populations of visitors being from France and Spain. Tourists were of a variety of ages, and most came with friends and family. The main reason tourists come to Ifrane National Park is to see the monkeys, yet most people were unaware that these monkeys are Endangered or that there are many problems associated with feeding them and being in close contact. Most people answered that they did or were going to feed the monkeys, most people viewed it as something positive that the monkeys touch people and jump on people, and few people were aware of the problems associated with this. This confirms the lack of awareness and a strong need for education for both national and international tourists. Because most tourists come to the park to see the monkeys, ensuring the long-term survival of the Barbary macaque will ensure that international and national tourists continue visiting Ifrane National Park.

Overall ratings of the park and park safety were generally good, but park cleanliness ratings were poor. After implementation of regular park cleaning events by MPC and the NPI Eco-Guard team, ratings of park cleanliness significantly improved. Tourists' overall experience of the park is significantly related to their rating of park cleanliness, and tourists' ratings of their overall experience of the park also significantly improved following regular park clean-up events. Therefore, regular cleaning of tourist sites in INP should be continued in order to enhance visitor experience, while simultaneously enhancing safety and hygiene.

MPC is continuing to implement these surveys to tourists in order to gauge the effectiveness of education efforts, with hopes that the results from 2016 will show a significant improvement.

ⁱ due to very few ratings of "bad" and "very bad" overall experience of the park, these categories were removed and the categories "good" and "very good" combined to improve the estimates of the statistical test;

ⁱⁱ Again, due to few ratings of "bad" and "very bad" for overall experience of the park, these categories were excluded to ensure there were enough observations within each category.