The Economic Impact of Lynx in the Harz Mountains

Photography by Erwin van Maanen, Ursula Cos, and Raya Strikwerda.

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The Lynx UK Trust is investigating the feasibility of undertaking a five year trial reintroduction of Eurasian lynx in Kielder Forest. AECOM was asked by the Trust to look at the potential impacts of lynx on tourism in the Harz Mountains National Park in Germany, where a similar reintroduction scheme took place in 1999.

In order to estimate the impact of lynx on tourism in the Harz Mountains, visitors to the area were surveyed using the methodology adopted by the RSPB for estimating the impact of reintroducing white-tailed eagles on tourists visiting Mull. The survey found that lynx were an important factor influencing the decision to visit the Harz Mountains for just over half (54%) of all people surveyed. This is around double the number who listed white-tailed eagles as an important reason for their visit to Mull.

Based on the survey results it is estimated that, in total, lynx support between £8 million and £13 million of tourist spend in the Harz Mountains each year.

Around 12% of the visitors for whom lynx were an important factor in their decision to visit the Harz Mountains said that they would have been less likely visit the area if they knew they were unlikely to see a wild lynx.

These results suggest that the reintroduction of lynx in the UK could potentially inject a significant amount of expenditure in the Kielder area and that the majority of visitors are unlikely to be put off by the fact that lynx are difficult to view in the wild.
Context

Investigating a trial lynx reintroduction in the UK

The Lynx UK Trust is investigating the feasibility of undertaking a five year trial reintroduction of Eurasian lynx (*Lynx lynx*) in Kielder Forest. As part of the preparation for any reintroduction programme, guidelines prepared by the International Union for Conservation of Nature (IUCN) state that an assessment of the potential costs and benefits of a reintroduction should be undertaken.

On the basis of these guidelines, AECOM was asked by the Lynx UK Trust to investigate the contribution that lynx make to tourism expenditure in the Harz Mountains National Park in Germany, where a similar reintroduction scheme took place in 1999.

In order to estimate the impact of lynx on tourism in the Harz Mountains, visitors to the area were surveyed using the methodology adopted by the RSPB for estimating the impact of reintroducing white-tailed eagles on tourists visiting Mull.¹

In addition to estimating the economic impact of lynx, AECOM was also asked to investigate how the results compare to the impact of white-tailed eagles on Mull, as well as to understand the extent to which tourist numbers are influenced by the fact that lynx are difficult to see in the wild.

Harz Mountains National Park, Germany

The Harz Mountains National Park is a nature reserve in Germany which is mostly covered by spruce and beech forests. The Harz Mountains attract a range of visitors for hiking, wildlife watching, winter sports, spas, and visiting historic buildings and sites such as the Brocken, which was the setting for a scene in Goethe’s Faust.

Eurasian lynx died out in the Harz Mountains in 1818 but were reintroduced to the area in 1999 and have successfully populated the area. As part of the reintroduction process, a lynx enclosure was constructed which allows visitors to view captive lynx from a platform and a number of hiking trails were created where visitors can look for wild lynx.

Since the reintroduction, the village of Bad Harzburg on the southern edge of the Park has branded itself as a lynx tourist destination; with lynx statues, images, memorabilia, and recreation activities being widely promoted throughout the area (see selection of photos in Figure 1).

Surveys

Over a four day period in October 2016, 102 face-to-face interviews were conducted with parties visiting the Harz Mountains National Park, accounting for 357 people at three sites in the area. The surveys were organised, undertaken, and analysed by AECOM.

Drawing on the method used in the RSPB study of the impact of white-tailed eagles on tourist visits to Mull,¹ the surveys asked respondents about their motivations for visiting the area so that a judgement could be made about how important lynx are as an attraction to the Harz Mountains.

Questions were also included to determine whether respondents would be less likely to visit the area if the lynx viewing enclosure was closed and they knew that they were unlikely to encounter a wild lynx during their trip.
Survey Results

Lynx were an important factor influencing the decision to visit the Harz Mountains for just over half (54%) of all people surveyed (see Figure 2). This is around double the number of people who listed white-tailed eagles as an important reason for their visit to Mull.

Around 4% of people said that lynx were the most important reason for their visit to the area, a figure which is three times higher than that for white-tailed eagles on Mull.

Of those who said that lynx were an important reason for their visit to the area, 12% said they would be less likely to visit if they knew they were unlikely to see a lynx during their trip.

Figure 2. Factors influencing decisions to visit the Harz

As set out in Figure 3, visitors to the Harz Mountains came from all over Germany, with respondents travelling an average of 112 miles.

Figure 3. Origin of visitors to the Harz Mountains
Economic Impacts

Total spending by visitors

A detailed survey of the total amount spent by visitors to the Harz Mountains National Park was undertaken by a German university in 2014. The study included 14,000 short surveys of visitors and 1,700 longer interviews. The results are summarised in Table 1.

Table 1. Visitor numbers and spending in the Harz

<table>
<thead>
<tr>
<th>Visitor type</th>
<th>Visitors (days per year)</th>
<th>Av. daily spend per visitor (£)</th>
<th>Total spend per visitor per year (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holidaymakers</td>
<td>876,000</td>
<td>£55.08</td>
<td>£48.3 million</td>
</tr>
<tr>
<td>Day-trippers</td>
<td>870,000</td>
<td>£14.29</td>
<td>£12.4 million</td>
</tr>
<tr>
<td>Total</td>
<td>1,746,000</td>
<td>-</td>
<td>£60.7 million</td>
</tr>
</tbody>
</table>

As set out in Table 1, total annual spending by visitors to the Harz Mountains National Park is estimated to be around £61 million each year. Holidaymakers contribute significantly more than day-trippers to local spending due to higher daily spend.

Spending attributable to lynx

In order to estimate how much of this £61 million could be attributed to lynx, respondents to the surveys carried out by AECOM were asked about their reasons for visiting the area, with lynx suggested as one of 13 possible options. The responses to this question are shown in Figure 2.

Visitors were also asked to identify the most important reason for visiting the area out of the 13 possible options. Using these responses, a proportion of each person’s expenditure was assigned to lynx. Following the method used by RSPB, a high and low attribution rate was used to give a range of estimates for total attributable spend. The results are set out in Table 2. The attribution rates used were conservative compared with a similar study performed by the Scottish Government in 2010.

Table 2. Visitor spending attributable to lynx

<table>
<thead>
<tr>
<th>Importance of lynx to visit</th>
<th>Visits (%)</th>
<th>Spend attributed to lynx (%)</th>
<th>Total spend attributed to lynx (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>One of the reasons</td>
<td>49.3%</td>
<td>20%</td>
<td>35%</td>
</tr>
<tr>
<td>Main reason</td>
<td>4.2%</td>
<td>60%</td>
<td>80%</td>
</tr>
<tr>
<td>Total</td>
<td>53.5%</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Based on these calculations it is estimated that in total lynx support between £8 million and £13 million of tourist spend each year. This is more than double the amount recorded for white-tailed eagles on Mull, suggesting that lynx could potentially be a more significant draw to tourists in the UK.

Of the visitors who identified lynx as an important reason, around 12% said that they would be less likely to have visited the area if the viewing enclosure was closed and they knew they were unlikely to see a wild lynx. Accounting for the potential loss in spending of these visitors, the presence of wild lynx in the area is estimated to support between £7 million and £11 million each year.
My experience with lynx

Feedback from a visitor to the Harz Mountains

"Several times a year and in all seasons I visit the Harz and go looking for tracks and signs of animals living there in the wild. When biking, hiking, or cross country skiing I almost always find plenty tracks of deer, wild boar, fox, and other animals of the forest, often just along the many trails. The animals like to use the same trails as humans do.

A few years ago in winter I found my first lynx tracks. It was so exciting finding the tracks of this animal that lives so hidden in the woods of the Harz. Since then I have been following the tracks of lynx and once found a kill and scat of the cat. Once you learn to recognize the tracks and signs of the lynx, you gain insight into the life and behaviour of this beautiful animal.

Sometimes I am in the company of other animal trackers or friends and families with their kids, and share the excitement of tracking lynx and other wildlife in the forests of the Harz.

The presence of lynx and also the wildcat make the Harz very special to me. Knowing that these animals are there and maybe watching me is a great feeling."

Conclusions

A survey of visitors to the Harz Mountains in Germany found that lynx were an important factor influencing the decision to visit the area for just over half (54%) of all people surveyed. This is around double the number of people who listed white-tailed eagles as an important reason for their visit to Mull.

Based on the results of this survey it is estimated that lynx support between £8 million and £13 million of tourist spend each year, more than double the amount recorded for white-tailed eagles on Mull.

Despite being difficult to view in the wild, knowledge that lynx are present in an area provides a draw to tourists (see ‘My experience with lynx’), and the majority of visitors to the Harz Mountains (88%) were not put off by the fact that they are difficult to view in the wild.

These results suggest that reintroduced lynx in the UK could provide a significant economic boost to the Kielder area and, although it is difficult to draw a direct comparison, could be a more significant tourism draw than the white-tailed eagles on Mull.

References

