On the stone footpath - Reactions to abrasion reducing measures at Besseggen, Jotunheimen National Park, Norway

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National parks are popular areas for outdoor recreation. An increased commitment to enhance nature based tourism and sustainable use of national parks has put nature areas under increasing pressure in several places. Besseggen is one of Norway's most popular mountain hikes, and is therefore exposed to significant user pressure which has led to extensive wear and erosion damage (figure 1). Annually, approximately 40.000 persons complete the hike. A path project was initiated in 2005 on the most used entry paths to Besseggen, and the aim was to reduce the impacts and restore the hiking paths by laying stones in the most exposed areas up and down from the ridge. The project sparked discussion in regional media and newspapers as well as among professionals, mostly about the appropriateness of such a measure; partly also about the fact that the project would import foreign expertise on stone laying technique.



Figure 1: Overview showing Gjendeosen and the beginning of the *Besseggen* path from Gjendesheim. The eroded path is clearly visible in the terrain, even at a great distance. Photo taken summer 2008 by Cathrine Restad.

The aim of our study was to assess user satisfaction and other experiences related to the consequences of the management measure, viewed in context of factors in which recreational research is known to influence people's satisfaction and behavior. These are often grouped in situational (resource, social and managerial setting) and subjective factors (including demographic, experience, norm and attitude characteristics, Manning (1999)).

The study is based upon an on-site user survey conducted in the summer season of 2008. In total, 566 individuals participated in the survey. The survey instrument was based on the purpose of the study, and builds on recommendations made by Kajala et al. (2007). The sample is strictly considered a convenience sample, yet it covers most of the relevant user segments at Besseggen. However, the possibility of undersampling early- and late season visitors and visitors avoiding peak season days remains.

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Generally, the respondents are predominantly positive to the stone path (figure 2), and their hiking trip satisfaction does not seem to be influenced negatively to any particular degree. However, we documented significant differences in degree of satisfaction between segments based on sociodemographic and attitudinal characteristics. Women, persons over 45 years of age, persons on shorter day trips and visitors with the more "urbanistic" attitudes were shown to be the most positive ones. Respondents with previous experience with the hike reported reduced impacts and improved environmental conditions following the measure. Interestingly, the respondents view the stone path more as an ecological restoration project rather than as a project enhancing use and providing better access.



Figure 2: Respondents' impression of the stone footpath, distribution in percent (N=357).

In further research, there is a need for greater knowledge about the relationships that are found. Especially to what extent situational variables - such as high use levels - justify and modify more general values and attitudes needs to be examined. Projects such as the Besseggen stone footpath also need to be studied from an ecological point of view, especially investigating effects on soil and vegetation.

References

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