

Nationalpark Schwarzwald (Black Forest National Park): Exploring the views of local residents on the national park



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CONTENTS

CONTENTS	2
1. INTRODUCTION	3
2. BRIEF DESCRIPTION OF METHODS	4
3. RESULTS	9
3.1. Knowledge about the Black Forest National Park and sources of information.....	9
3.2. Attitudes towards the Black Forest National Park and key reasons.....	9
3.3. Social impacts of the Black Forest National Park before COVID-19 and their distribution between locals and visitors	11
3.4. Impact of COVID-19 restrictions	14
3.5. Users' behaviour when in the national park.....	15
3.6. Potential policy tools to manage overcrowding and irresponsible behaviour.....	18
3.7. Levels of trust in public institutions	19
4. CONCLUSIONS	20
ACKNOWLEDGMENTS	21

1. INTRODUCTION

The Black Forest National Park covers an area of just over 10,000 hectares and is situated in Southwest Germany. It was established in 2014 and is divided into two main parts, north and south (Figure 1). The park is a very popular tourist destination with many recreational activities taking place within its boundaries. It is estimated that annually over 800 000 visits the park to engage with activities such as cycling and walking.

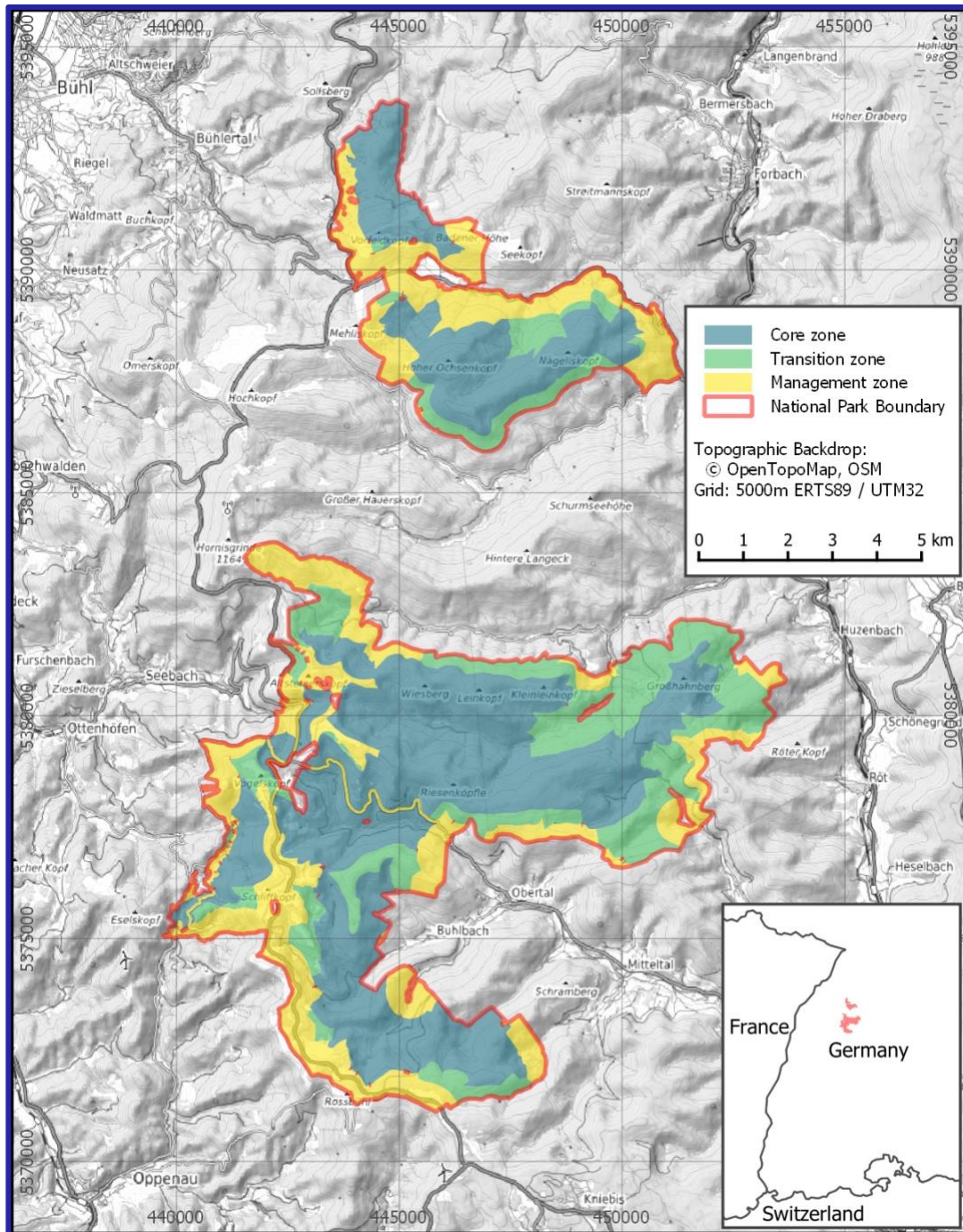


Figure 1. The Black Forest National Park

The park is also surrounded by local communities which are directly influenced by its existence. It is estimated that roughly 3,000,000 people live in close proximity to the park (1.5 hours drive radius) and therefore may be able to readily access the Park. The designation of the park initially faced some resistance from local communities with concerns focusing mainly on restricted access to the land, a change in the accustomed cultural landscape and the fact that there would be restrictions in using certain parts of the forest. Further, there was a strong fear that the bark beetle could develop unhindered in the national park and spread to the surrounding commercial forests. (Berzborn 2018; Stahl 2019). Currently new plans are being set for the park to be expanded, including by connecting the north and south part of the Black Forest (Figure 1).

Given the important role of the park for local communities, we organised a survey during May 2021 which aimed to capture:

- people's views on the Black Forest National Park and the environment in general;
- the social impacts of the Black Forest National Park on locals and the distribution of impacts across different social groups (visitors/locals); and
- the impact of COVID-19 pandemic control measures on everyday life in the vicinity of the park.

The results of the survey are presented in the next sections. For further details of the results please get in touch with the research team at: fidelio@warwick.ac.uk

2. BRIEF DESCRIPTION OF METHODS

In order to explore people's views on the Black Forest National Park, a structured questionnaire was distributed to local communities living inside or near the park. In order to approach a random sample from the local communities, we initially identified the villages and towns which might be directly affected by the designation of the Black Forest National Park. This was done by site visits in the area during Summer 2020 and then in collaboration with the Black Forest National Park Authority. We estimated that the total population of towns and villages in relatively close proximity to the park would result to a sampling frame of just over 600,000 (see also villages included in the final sample in the Appendix).

Due to COVID-19 restrictions we decided to distribute the structured questionnaire online. The questionnaire was piloted and then a postcard was sent to a random sample of households inviting them to participate in an online survey (the postcard provided a link). The villages and towns chosen as the sampling frame were divided into two categories. Those in close proximity to the park, to which 25% of the postcards were sent (5,000), and those benefiting also from the park but located a longer distance from the park's boundaries. To this second category the remaining 75% of the postcards were sent (15,000). The survey was also advertised online via social media and informal networks with the help of the Black Forest National Park Authority.

In total, 559 responses were received, giving an approximate 2.5 % return rate. 500 responses were included in the final data analysis after excluding entries with multiple missing answers. 94% were permanent residents and 2.8% owned a holiday home. The average years living in the area or owning a second home was 41. Sample characteristics are presented in Figures 2a-2e while the geographical distribution of respondents is presented in Figure 4. The number of responses per location is described in Table A1 in the Appendix. A number of different stakeholder groups were identified in the final sample. 332 respondents said that they hike in the national park. Approximately one fifth of the sample are members of the Black Forest National Park friends group (106) (Figure 3).

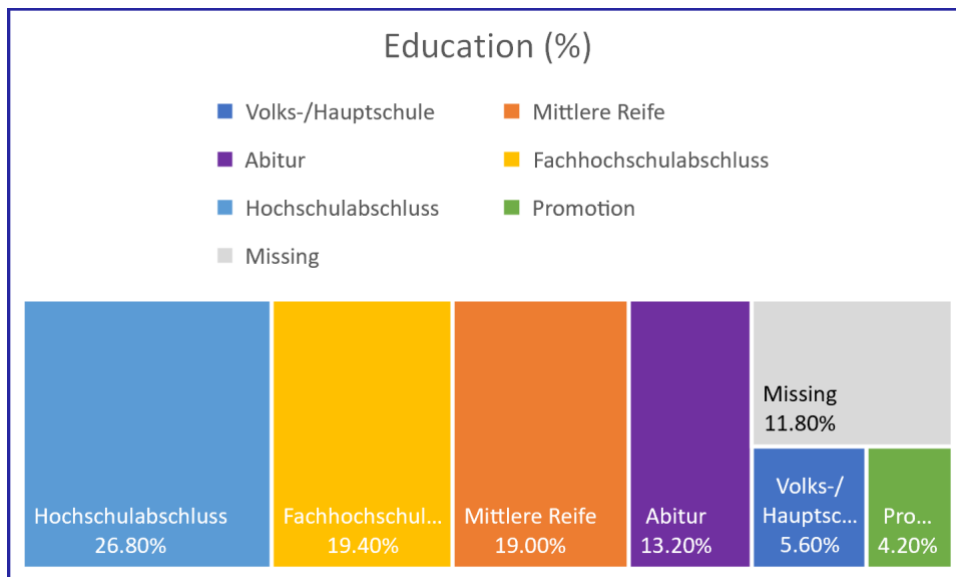


Figure 2a. Educational level in the sample (%)

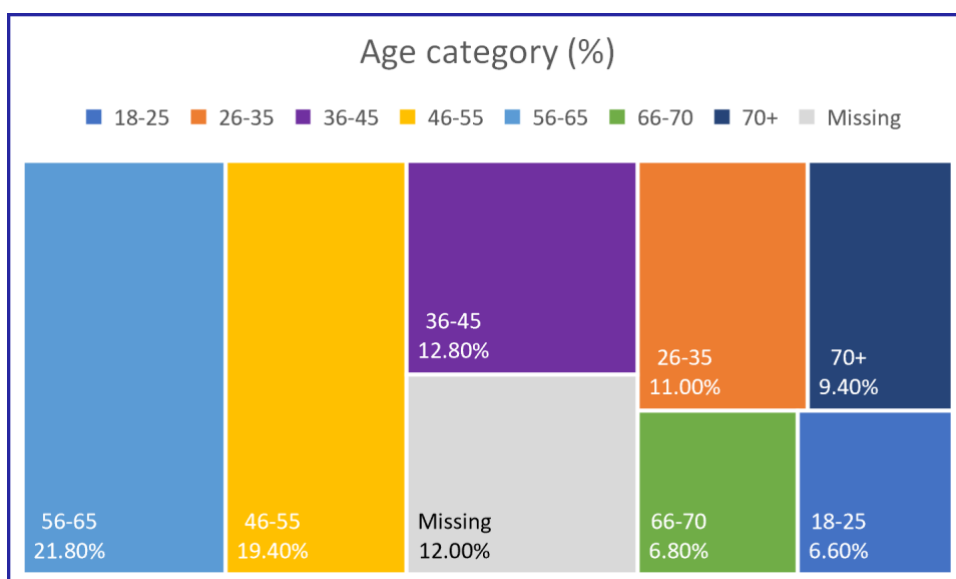


Figure 2b. Age distribution in the sample (%)

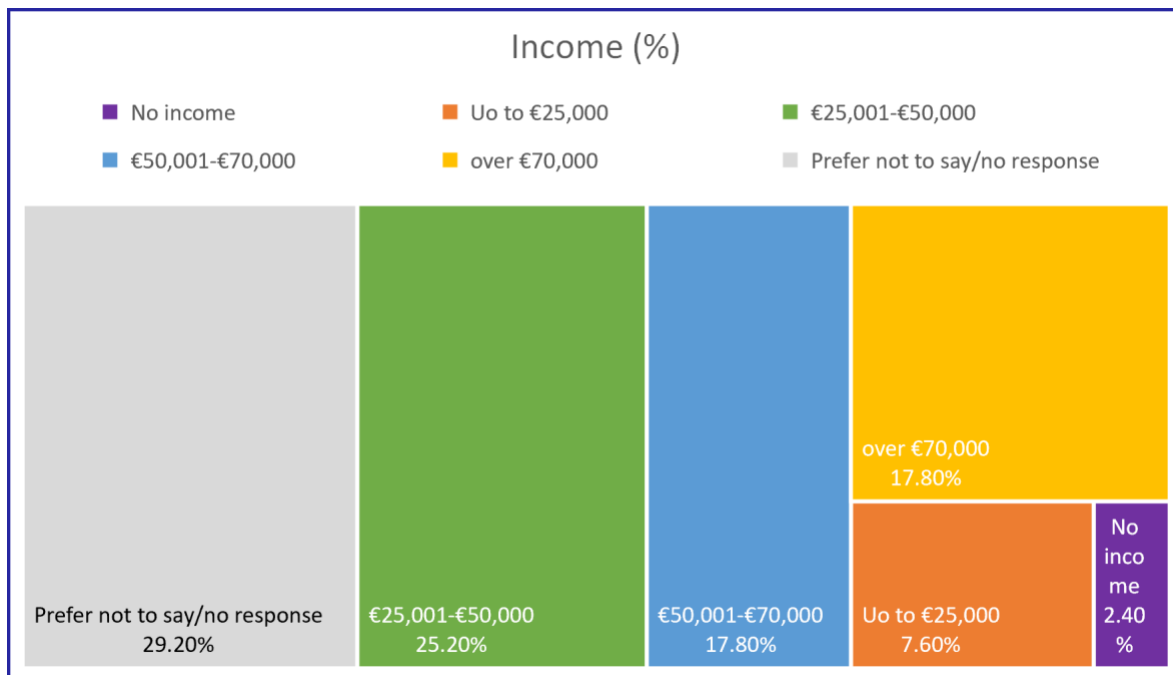


Figure 2c. Income level in the sample (%)

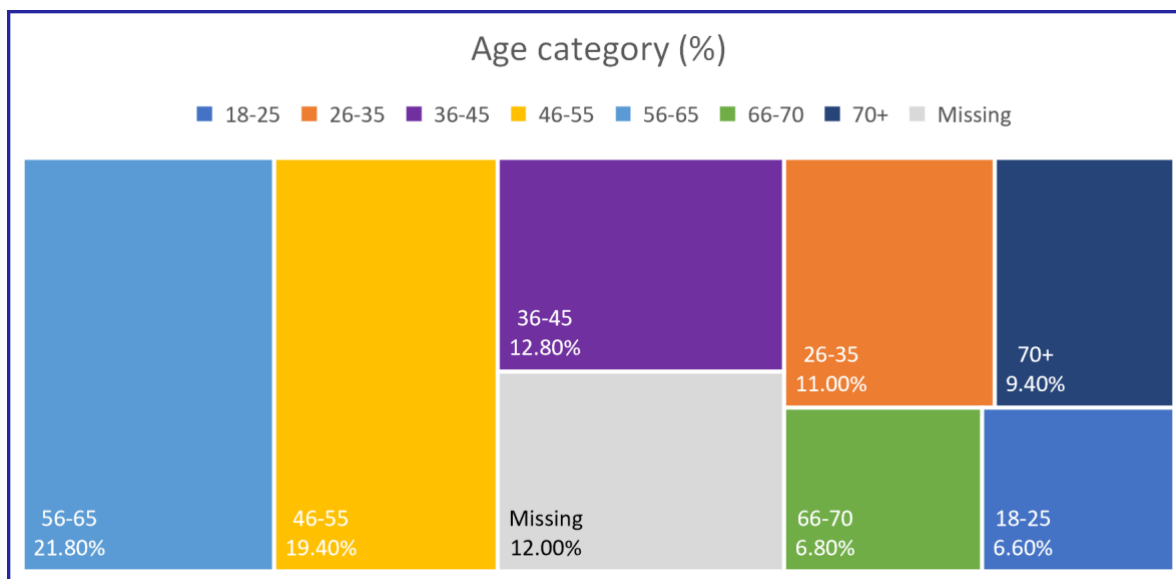


Figure 2d. Age distribution in the sample (%)

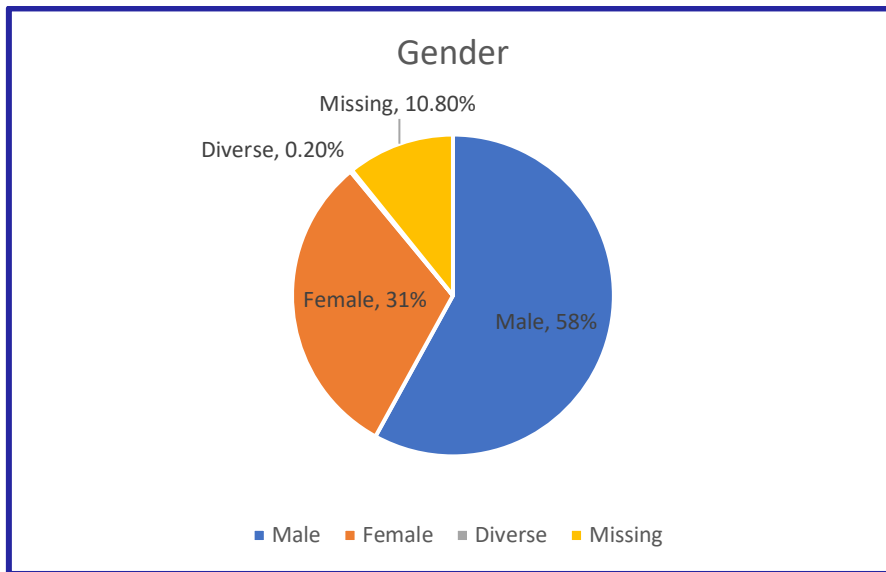


Figure 2e. Gender distribution in the sample (%)

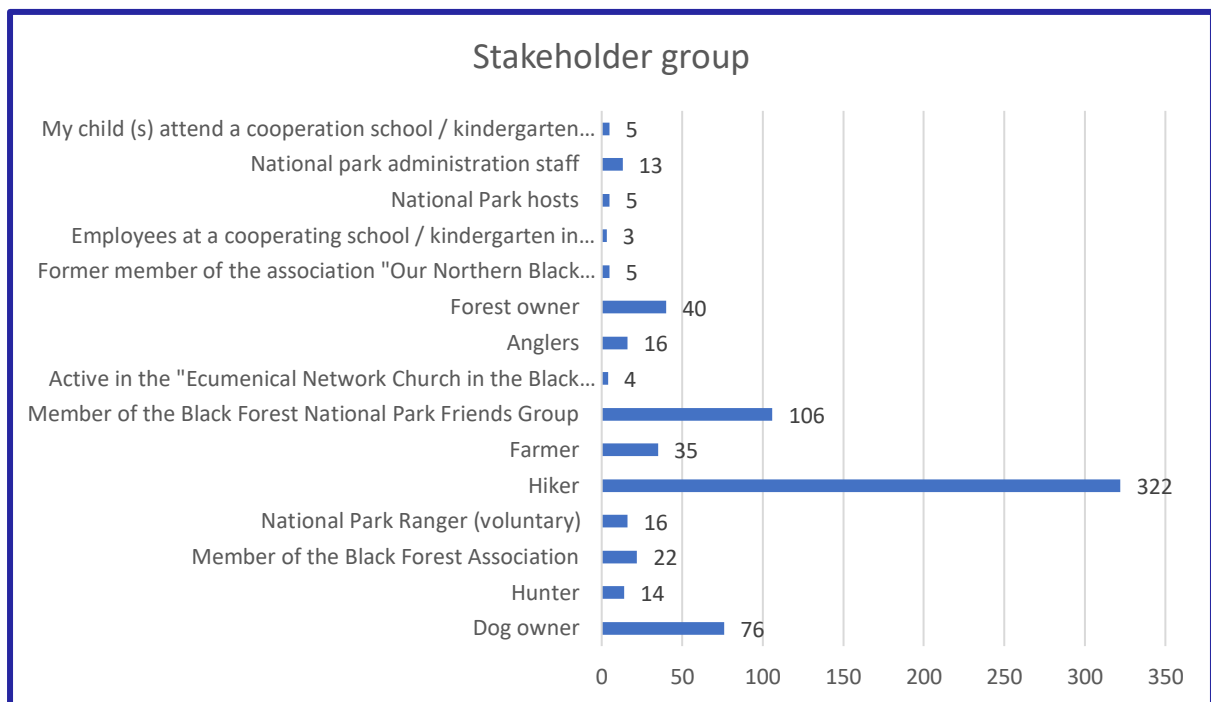


Figure 3. Stakeholder groups within the survey sample (number of responses).

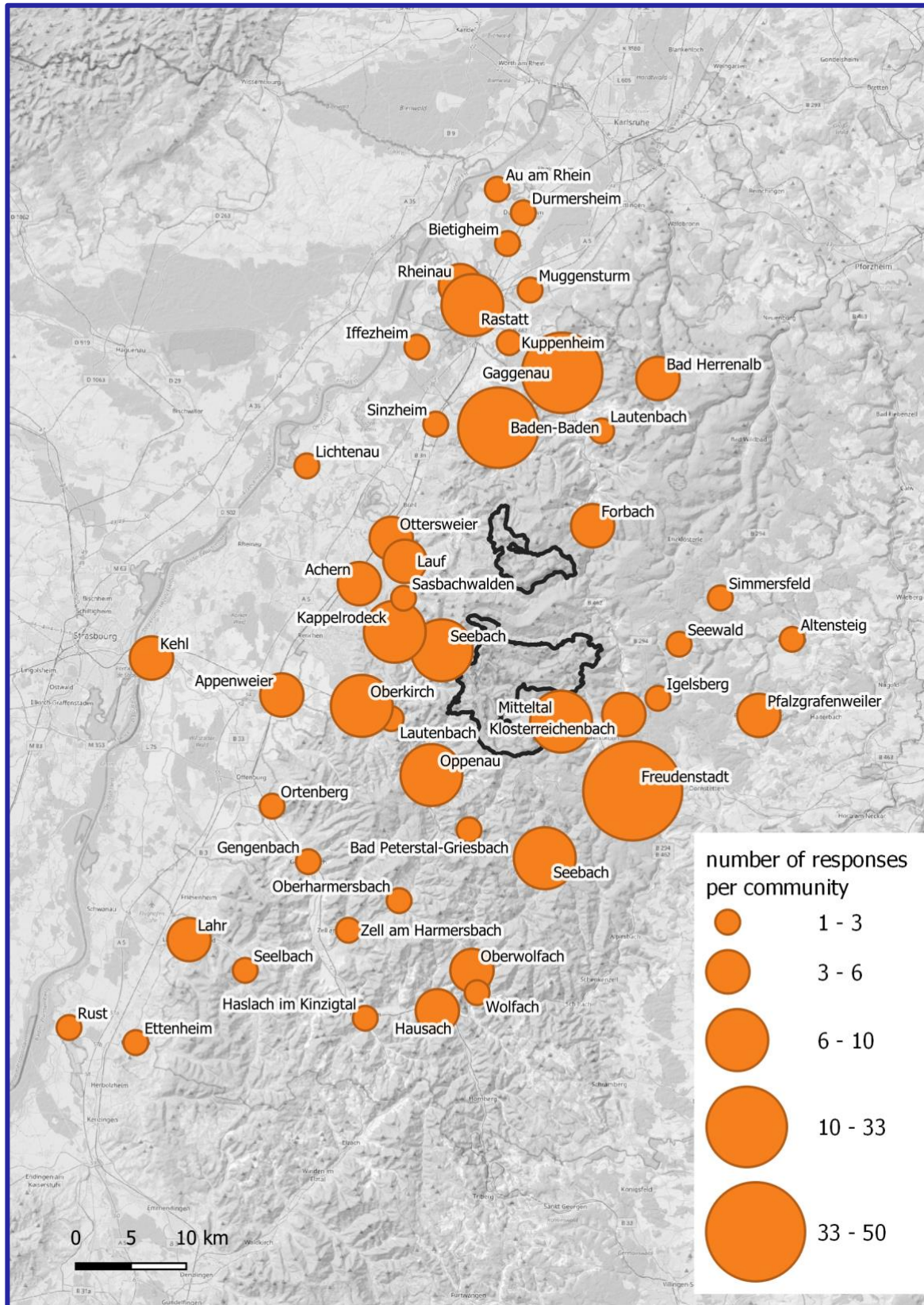


Figure 4. Sample spatial distribution (the black border represents the boundaries of the National Park)

3. RESULTS

3.1. Knowledge about the Black Forest National Park and sources of information

Almost all respondents (98.6%) are aware that the area is a national park. This is significantly higher than the average values for the wider German Land (State) of Baden-Württemberg, found in recent surveys (2018-2020) conducted on behalf of the National Park management. These surveys found that average awareness varied by year in range 60-66%, and that results for residents of major towns in the State varied between 59-69%, with awareness higher in the administrative district of Freiburg. State-wide surveys showed also that awareness increased with age between 34% for younger people (14-29) to 78% for older people (60+). Overall, residents around the Park clearly have a very high awareness of its existence.

Respondents were also asked how well they feel informed about the national park. The majority of the respondents stated that they consider themselves 'well' (38.6%) or 'rather well' (38.6%) informed whereas 3.4% and 18.8% said that they were 'badly' or 'very badly' informed, respectively. Regarding specific sources of information, Figure 5 presents % of different sources of information stated by participants. The most popular sources of information are the information boards in the park (52.4%), the website of the national park (53.8%) and the leaflets produced by the National Park administration (48.4%).

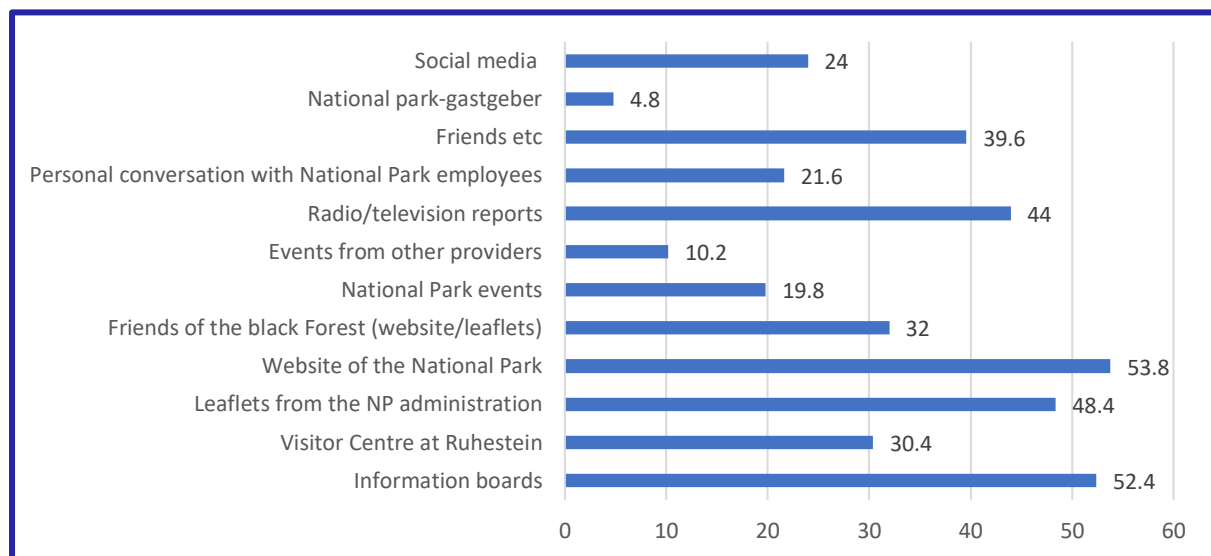


Figure 5. Sources of information about the National Park

3.2. Attitudes towards the Black Forest National Park and key reasons

Respondents were asked how they rate the existence of the Black Forest National Park. **71.4% of respondents rated the park as 'good' or 'very good'**. However 9.8% of respondents did

state that they rated it as ‘very bad’ (Figure 6). Respondents were asked if their perception of the Black Forest National Park had changed since the park was established in 2014. 19.8% stated that they have a more positive perception of the park and 60.6% stated that their perception had remained the same. However, 19.2% stated that their perception is worse compared to 2014 (Figure 7).

These results are in good agreement with a survey of residents of Baden-Württemberg undertaken for the National Park management in 2016, which indicated that approximately 73% of people surveyed evaluated the Park as very good, good or quite good, with 7% evaluating the Park negatively (our calculations based on Forsa (2016), see also Berzborn and John (2018)). When looking at this data from residents near the Park it is noted that residents in municipalities adjacent to the Park were slightly more negative, but that the differences were very small (71% positive, 9% negative), similar to this study. This earlier survey did however note more negative evaluations by residents in the municipality of Freudenstadt (56% positive, 20% negative), although the sample size is too small to evaluate statistical significance. More recent surveys for the wider State of Baden-Württemberg 2018-2020 (Forsa, 2020) continue to report high levels of support in the wider area (77%-86% positive; 4%-6% negative), with respondents who use the Park reporting a more positive evaluation.

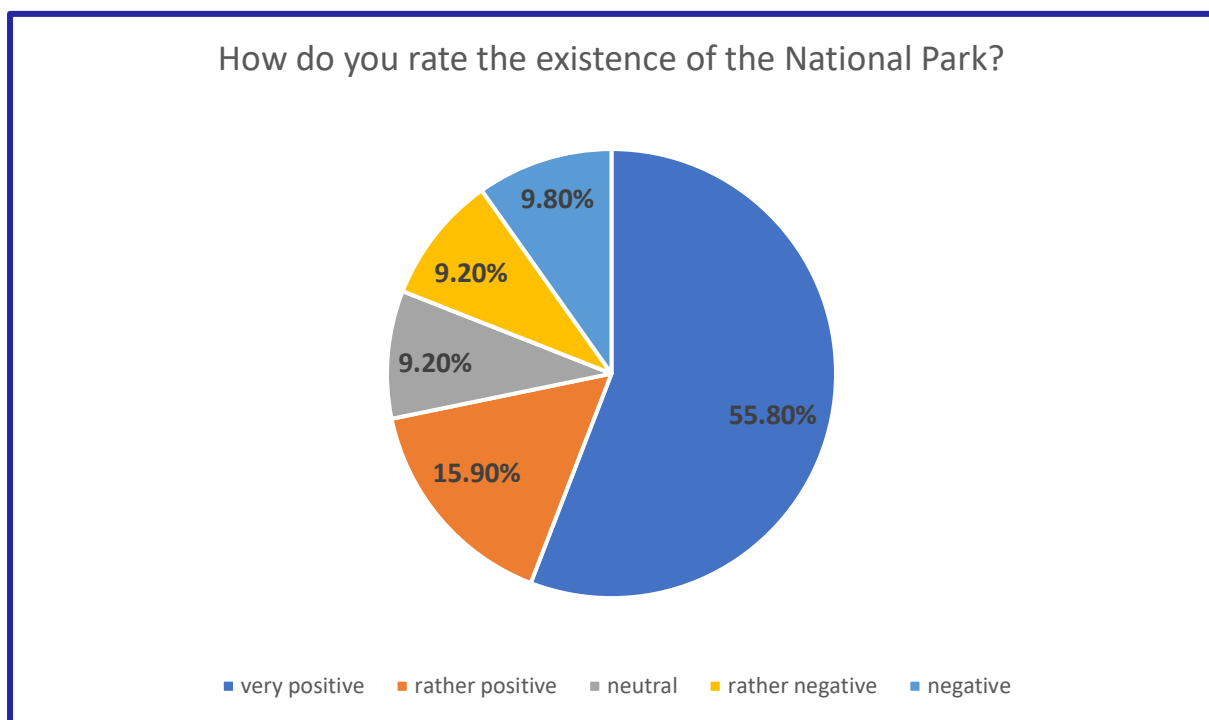


Figure 6. How respondents rate the existence of the National Park

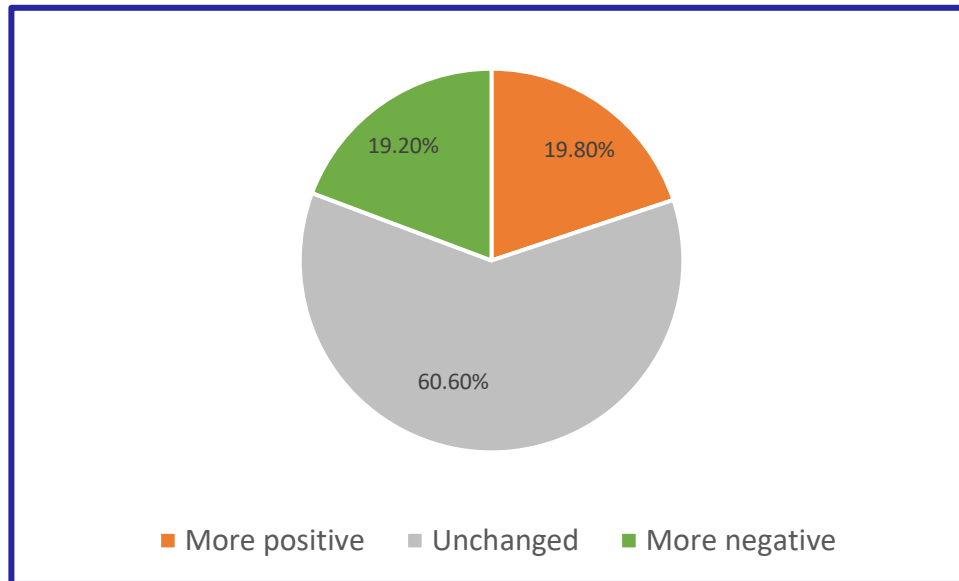


Figure 7. Attitude towards the Black Forest National Park since its foundation in 2014

In terms of more active support for the National Park and a wider engagement with environmental issues, approximately 20% of all respondents noted that they were members of a nature conservation or pro-environment charity.

3.3. Social impacts of the Black Forest National Park before COVID-19 and their distribution between locals and visitors

The most positive impacts reported from the designation of the Black Forest National Park for locals were related to the reputation of the region (mean: 3.91), environmental protection (mean: 3.69), connectedness to nature (mean: 3.59) and tourism (mean: 3.45). Traffic (mean: 2.33), personal freedom of movement (mean 2.81) and prices/costs (mean: 2.85) were considered as the least positive impacts of the national park (Figure 8).

These results from the survey questions are supported by the qualitative comments provided by respondents in the open field accompanying the structured questions. The largest number of comments related to problems associated with the impacts of tourism and visitors to the Park (just under half of all comments). Specifically, several participants noted traffic-related problems including: increased traffic flows and congestion, parking problems, traffic noise and loss of tranquility, with many comments mentioning motorbike noise.

The remaining comments mainly related to overcrowding at popular locations, car parks and on walking paths. A small number of comments also noted problems with visitor behaviour, litter and consistently not keeping dogs on leads, contrary to Park rules.

Approximately a quarter of comments related to issues of landscape and resource management. Half of these were critical of forest management in the Park, whilst the other half were critical of infrastructure management such as maintenance of paths and

signposting, and closure of certain footpaths. A number of additional comments were positive about the Park's role in nature conservation and education for sustainable development, but a similar number were negative about footpath closure and restrictions on mountain biking. Some further comments were critical of governance issues such as public involvement and information flow between management and public, and spending priorities.

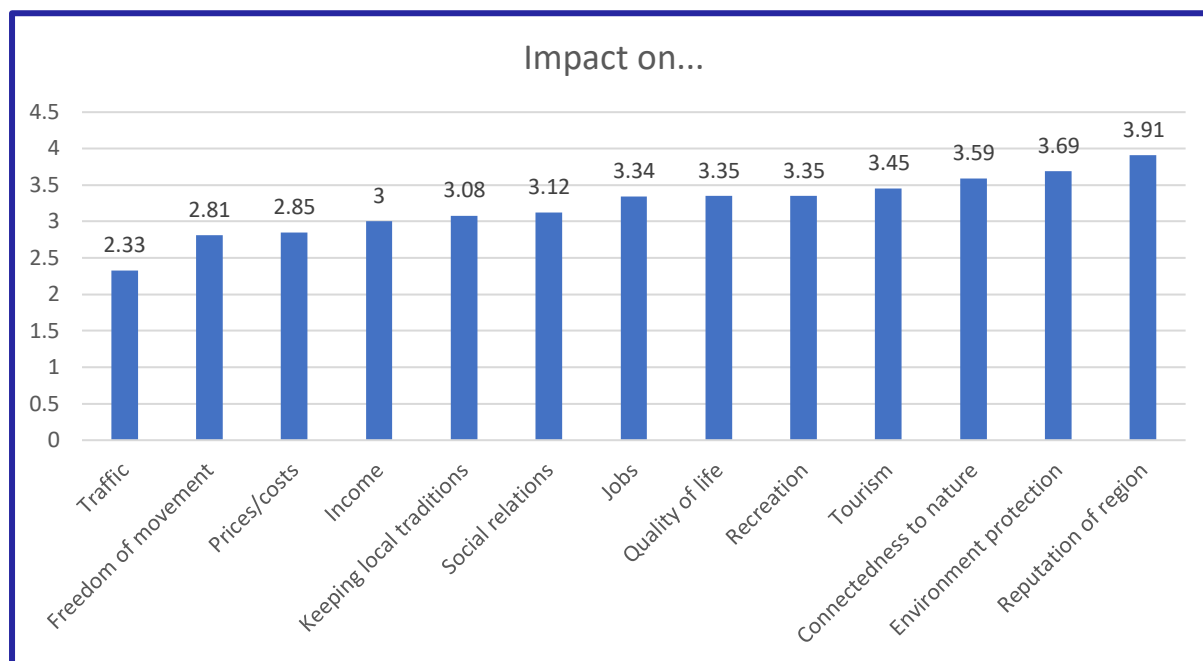


Figure 8. Perceived social impacts of the Black Forest National Park before COVID-19¹

Through the questionnaire, we also explored the perceptions of local people regarding the distribution of advantages (benefits) and disadvantages (costs) from the designation of the national park, both between locals and visitors, and among locals and different segments of their communities.

While 54.2% of respondents consider the benefits to be equally distributed between locals and visitors, a significant percentage (22.8%) feels that benefits are mainly enjoyed by visitors (Figure 9). The main negative impacts, i.e. 'costs', that locals perceive to result from the designation of the national park are increased traffic and increased prices (Figure 8 above), which 53.6% of the respondents consider a burden on the locals rather than visitors (Figure 10). Only 9.0% of participants see these costs to affect visitors and locals equally (Figure 10).

About half of the respondents (54.6%) thinks that costs and benefits are distributed equally among the locals while 41.0% consider that this is not the case, suggesting that there may be inequalities in the distribution of costs and benefits. In this regard, it is notable that 31.8% of respondents do not associate any costs with the designation of the national park, whilst conversely 14.6% of respondents consider that the park has no benefits (Figure 9).

¹ Mean values, scale 1-5: 1 representing negative impact, 5 positive impact, 3 no impact.

A third of respondents provided qualitative comments on the issue of equality of distribution of benefits among locals, suggesting that the topic is salient for many of them. Nearly half of these comments noted that residents' location in or near the Park was a significant factor. Of these, some noted that people living on or near main access roads suffered the negative impact of traffic noise and disturbance, with further comments about disturbance for those living near busy popular locations resulting from litter, parking problems and noise. A number of comments noted that, overall, the negative impacts were more acute for those within or closer to the Park, diminishing with distance.

Just under a half of all comments related to employment, with the distribution of costs and benefits dependent on profession and income. Most disadvantaged according to the comments were foresters and the wood industry (a fifth of all comments on this topic), and also farmers. The most advantaged were stated to be those working in tourism and the restaurant and hospitality sectors.

Some comments noted how perception of benefits and costs will depend on their sense of connection to nature and to the Park landscapes, and their attitude to the National Park, as well as their leisure interests, and a number of comments criticised limitations on access to some areas of the Park, and path and road closures.

Although the question posed related to the distribution of impacts among residents, some comments related to the distribution of costs and benefits between resident and visitor. Rather than noting that benefits or costs were mainly received by residents or visitors, most of these comments noted that there was a trade-off between the two groups and that it was very context specific as noted above.

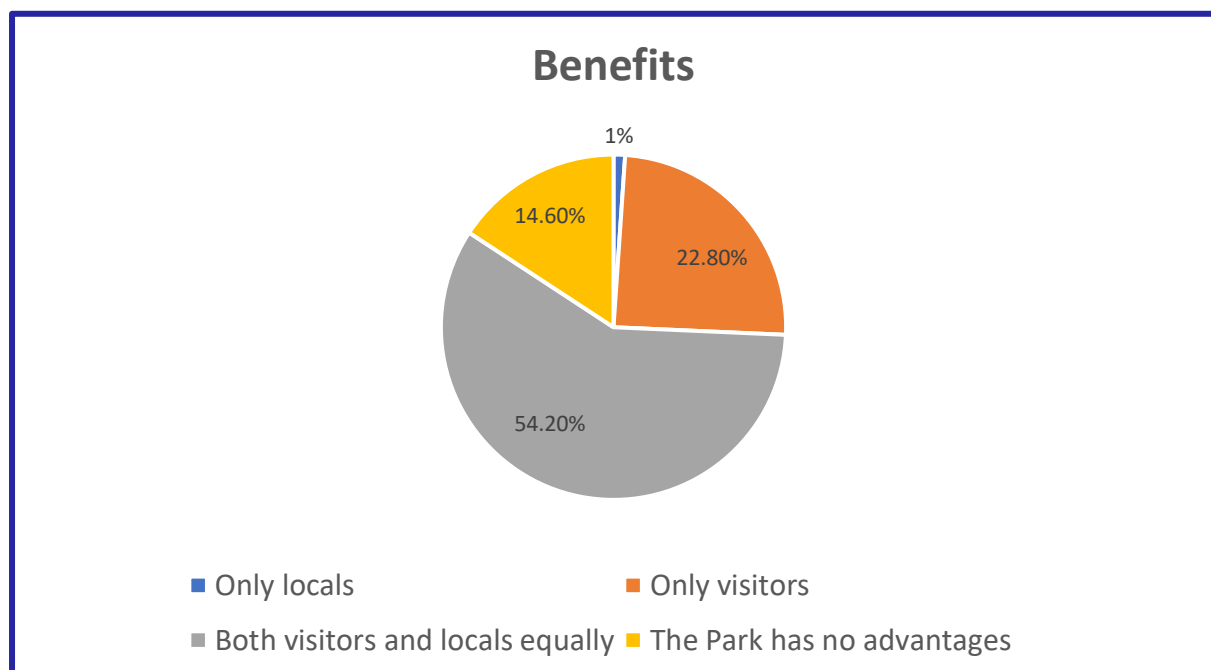


Figure 9. Distribution of benefits from the Black Forest National Park between (mainly) locals and (mainly) visitors (%).

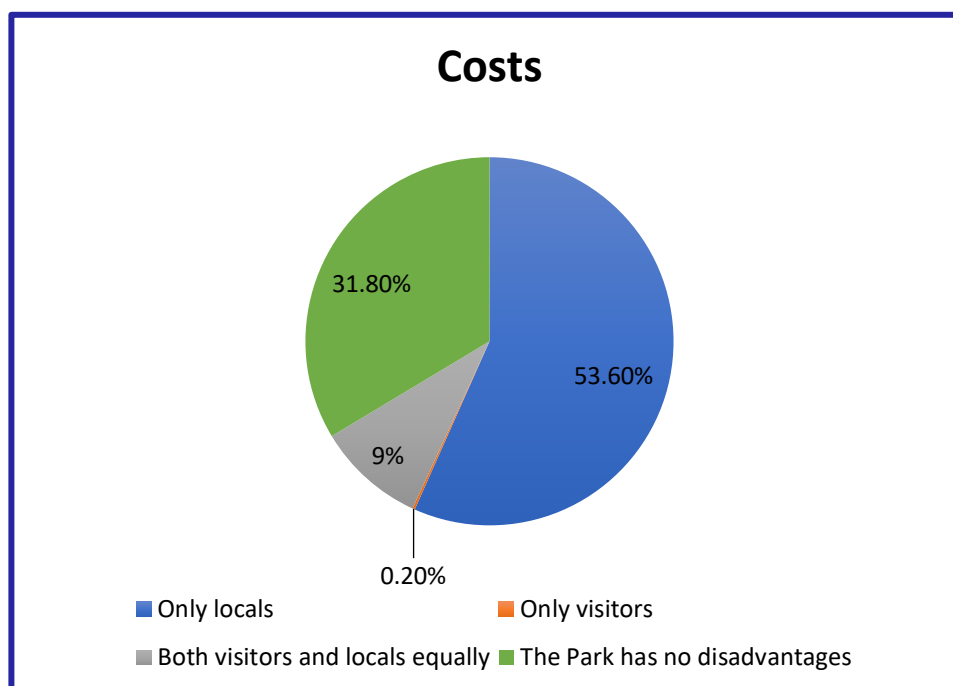


Figure 10. Distribution of costs (disadvantages) from the Black Forest National Park between (mainly) locals and (mainly) visitors (%).

3.4. Impact of COVID-19 restrictions

After 22 March 2020, new regulations came into force in Germany limiting on occasions people's movement and everyday activities in response to the increasing number of COVID-19 infections. However, protected areas such as the Black Forest National Park remained generally open and accessible. The number of visitors to the national park increased significantly as many indoor options for alternative leisure activities were forced to close. Participants in the Black Forest National Park survey were therefore asked about the impact of the wider COVID-19 restrictions on their everyday lives, in general, and in relation to the national park.

Our results reveal that there were several significant negative impacts following the introduction of COVID-19 restrictions (Figure 11). The most negative impact was the fact that people could not socialise as before. This is followed by negative impacts resulting from the limited options for shopping. Enhanced numbers of visitors to the national park, specifically, busier than usual cycle paths and walking trails were also noted as negative impacts (Figure 11). In terms of positive impacts, most people enjoyed working from home, not having to travel as much as before and spending more time with members of their household (Figure 11).

Approximately a quarter of respondents gave qualitative comments on impacts of COVID-19 restrictions and on the effects of COVID-19 on life in and around the Park for residents. These comments mentioned impacts on the social, environmental, economic and political spheres.

Nearly two thirds of these comments focussed on the social impacts of the COVID-19 pandemic measures, and were a mixture of positive and negative impacts. On the positive side, people noted that lockdown had had a positive impact on quality of life as life got quieter and slower, which included having more time to appreciate nature and opportunities to shift from indoor to outdoor activities. Others noted the more negative effects of lack of socialising: closed public spaces, cancelled cultural and social events, lack of social contact which especially affected children and the elderly, and the inability to travel or go on holiday. Other comments were on the challenges of home schooling.

Some comments on the environmental impacts of COVID-19 were also positive: less air traffic, better air quality, energy saving and less consumption, but the majority highlighted problems with littering and rubbish dumping, as well as overcrowding and noise from increased visitor numbers, visitor behaviour and the associated disturbance of nature. Conversely, comments on political issues of democracy and the legitimacy of COVID-19 measures were negative, either criticising measures as an infringement of personal freedom or at least disproportionate. Comments on the economy were not very numerous but noted the loss of trade from closed businesses.

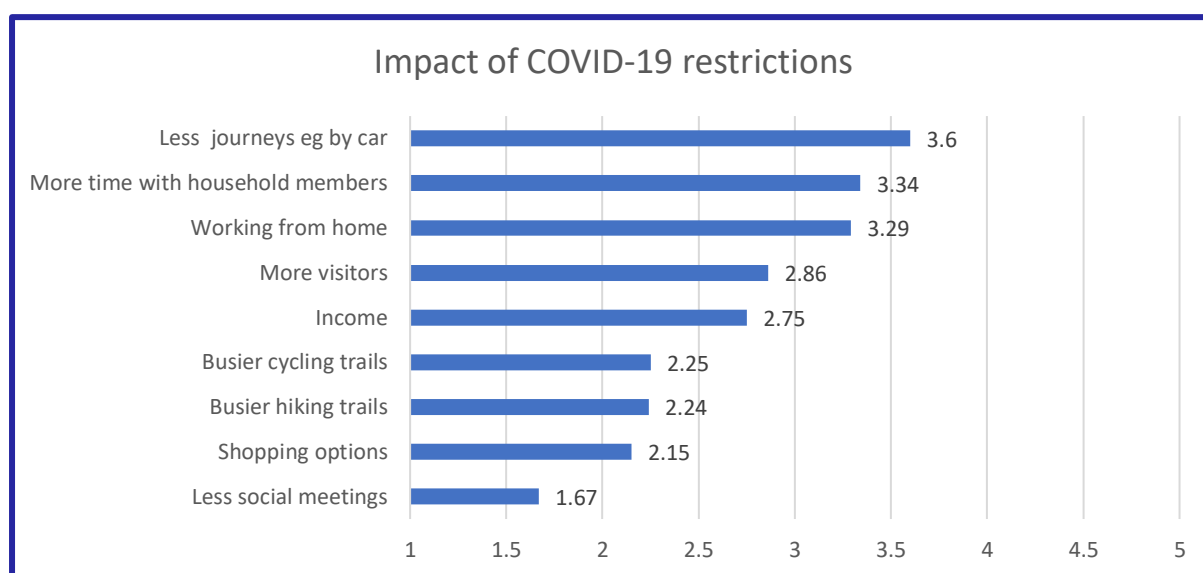


Figure 11. Impact of COVID-19 restrictions as perceived by locals. Mean score, scale ranging from 1 (most negative impact), to 5 (most positive impact) with 3 representing neutral impact.

Asked whether or not it was important to live in or near to the Black Forest National Park during the implementation of COVID-19 regulations in 2020/2021, 44.2% of the participants considered this to be very important or important. Only 24% consider that living close to the park was unimportant during the pandemic.

3.5. Users' behaviour when in the national park

72.2% of respondents think that most or all local people follow the rules and regulations for the protection of biodiversity in the Black Forest National Park. Only 10% consider that only some locals follow the rules. **When asked about the behaviour of visitors, 49% of**

respondents consider that most visitors follow regulations and recommendations while 19% consider that only a few visitors follow the regulations/recommendations. Visitors were therefore considered less likely by respondents to comply with Park rules and behave in a pro-environmental or pro-biodiversity manner in the Park than local residents. Regarding compliance with specific regulations, the majority of respondents stated that they follow the regulations. The only exception is that regarding staying on designated paths, with 58.9% of the respondents stating that ‘most of the times’ they stay on paths (Figures 12a-12f).

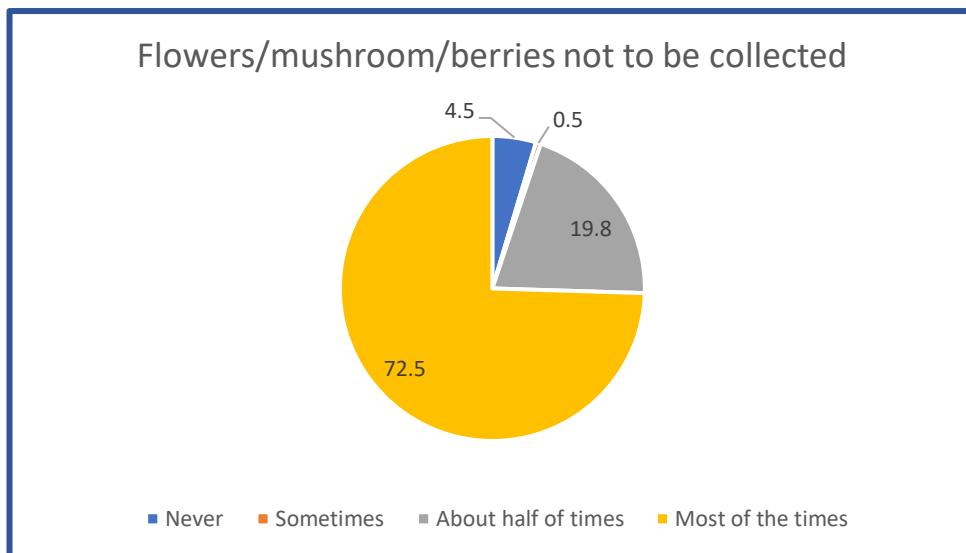


Figure 12a. How often do you follow the regulations/recommendations in the Black Forest National Park? (%)

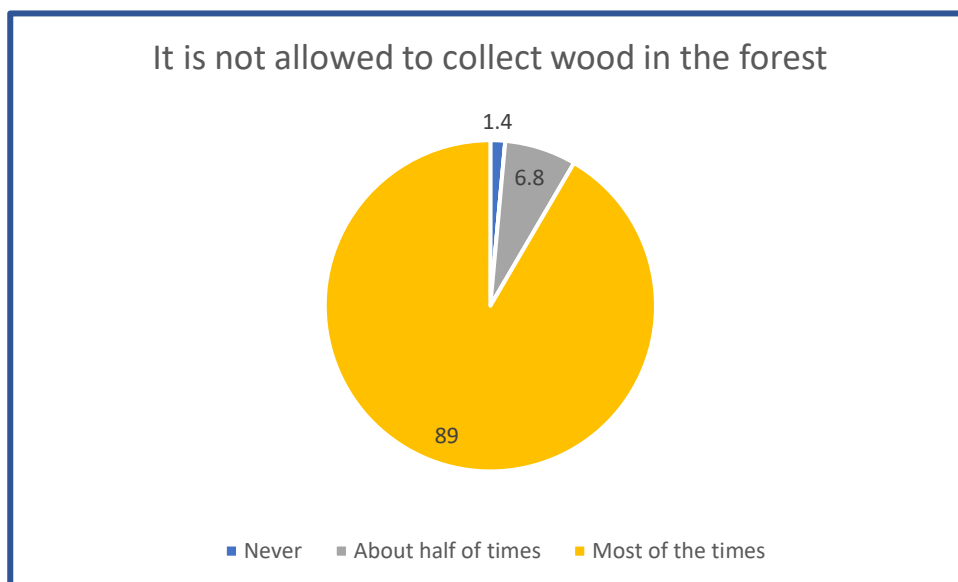


Figure 12b. How often do you follow the regulations/recommendations in the Black Forest National Park? (%)

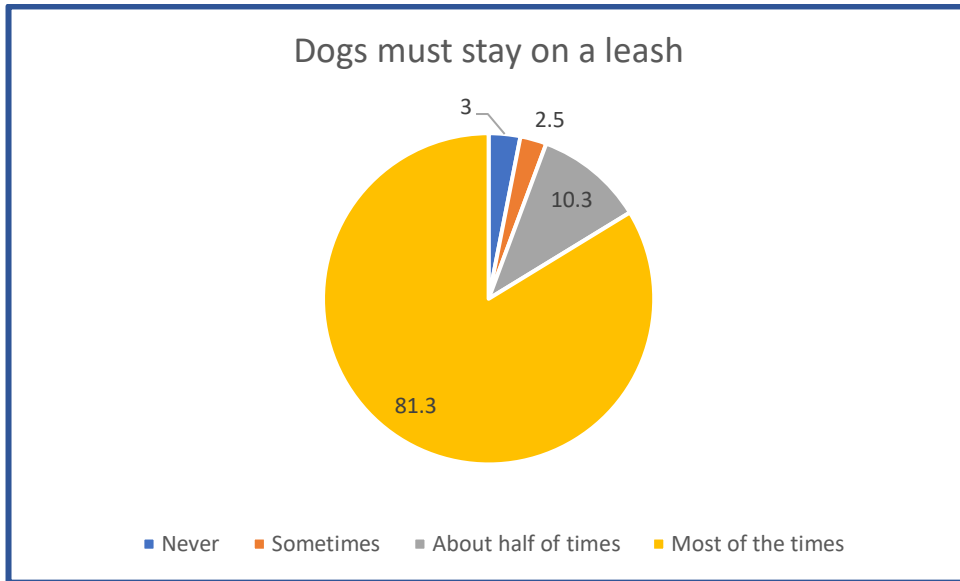


Figure 12c. How often do you follow the regulations/recommendations in the Black Forest National Park? (%)

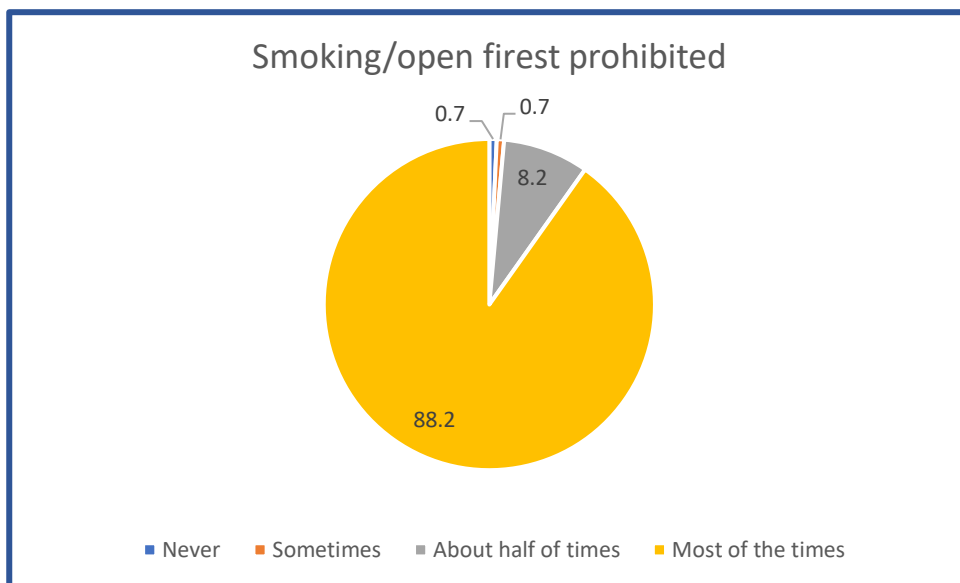


Figure 12d. How often do you follow the regulations/recommendations in the Black Forest National Park? (%)

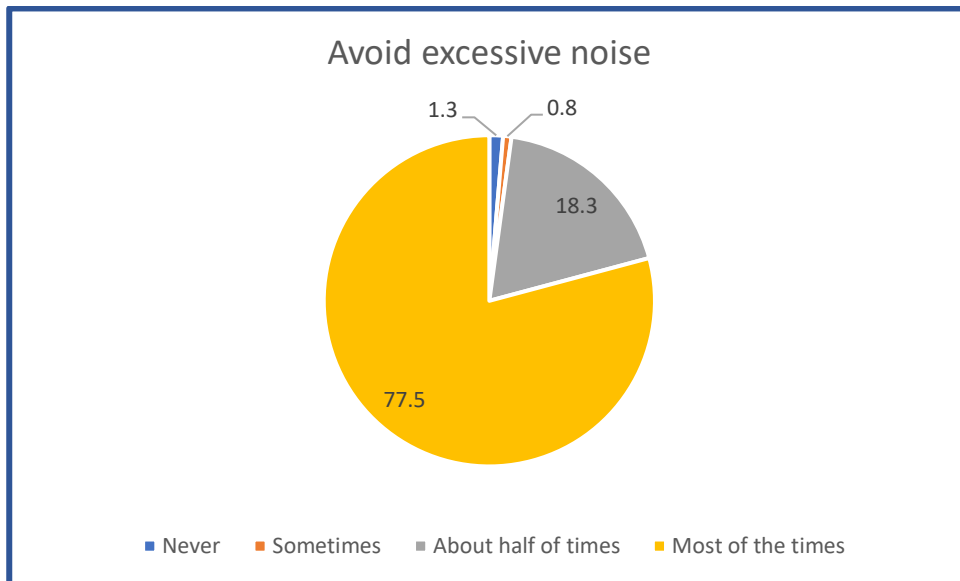


Figure 12e. How often do you follow the regulations/recommendations in the Black Forest National Park? (%)

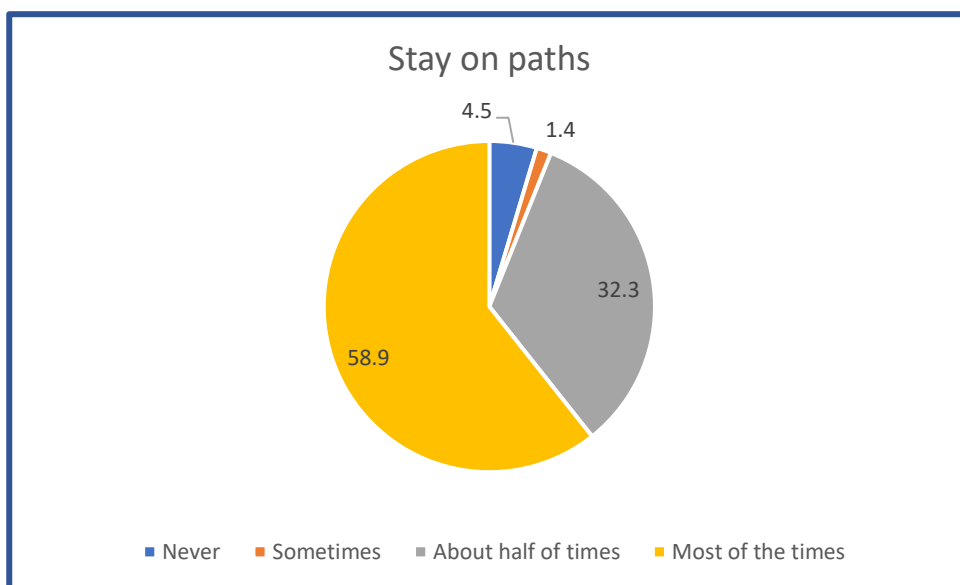


Figure 12f. How often do you follow the regulations/recommendations in the Black Forest National Park? (%)

3.6. Potential policy tools to manage overcrowding and irresponsible behaviour

Preferences for a number of potential policy tools to manage overcrowding, especially during COVID-19, were also explored in the questionnaire. All the options proposed were evaluated positively. **The most preferred tools were the use of a mobile app through which people can be alerted of overcrowding incidents and an online booking parking system** (Figure 13). The

least preferred option was to reduce visitor parking spaces. The two least popular options may well be difficult to implement without also impacting on local residents negatively.

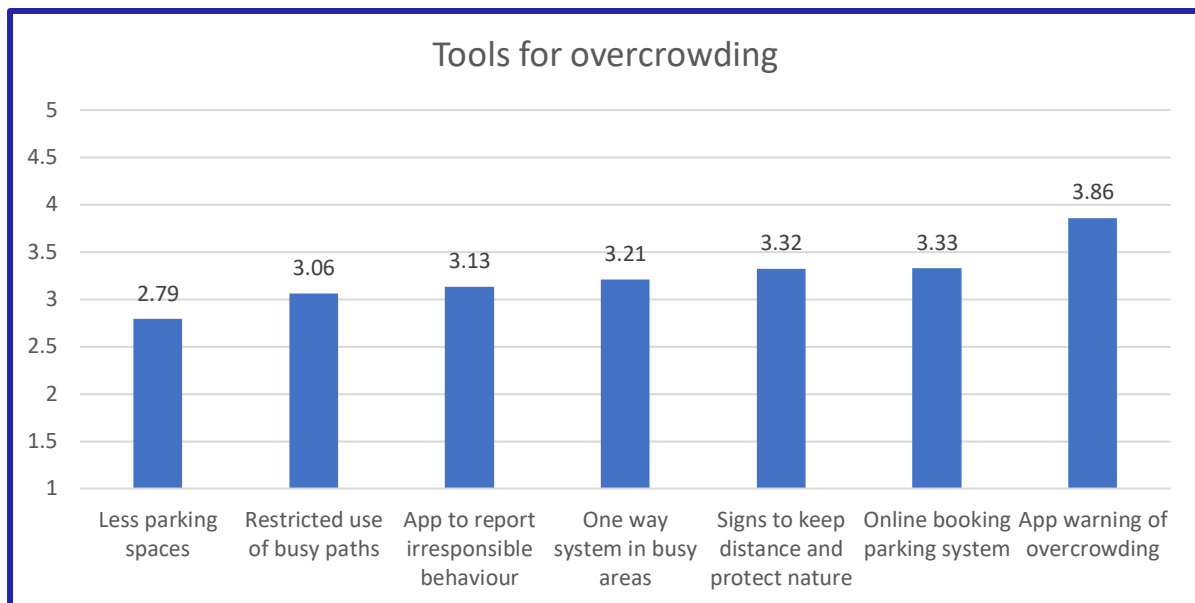


Figure 13. Preferences of managing overcrowding in the Black Forest National Park²

3.7. Levels of trust in public institutions

Finally, respondents were asked how much they trust a number of institutions involved directly or indirectly in the management of the national park. This was measured on a 5-point Likert scale with 1 representing a low level of trust and 5 the highest. The average scores for each institution are presented in Figure 14. All institutions were evaluated positively. Broadly, the more locally-based the institution, the higher the level of trust expressed. The highest level of trust was expressed for the Black Forest National Park Authority (mean: 3.47) and the local government (mean: 3.37). The Federal government was not trusted as much by respondents (scores under 3 reveal a lower level of trust).

² (mean values, 5-point Likert scale: 1 representing total disagreement and 5 total agreement).

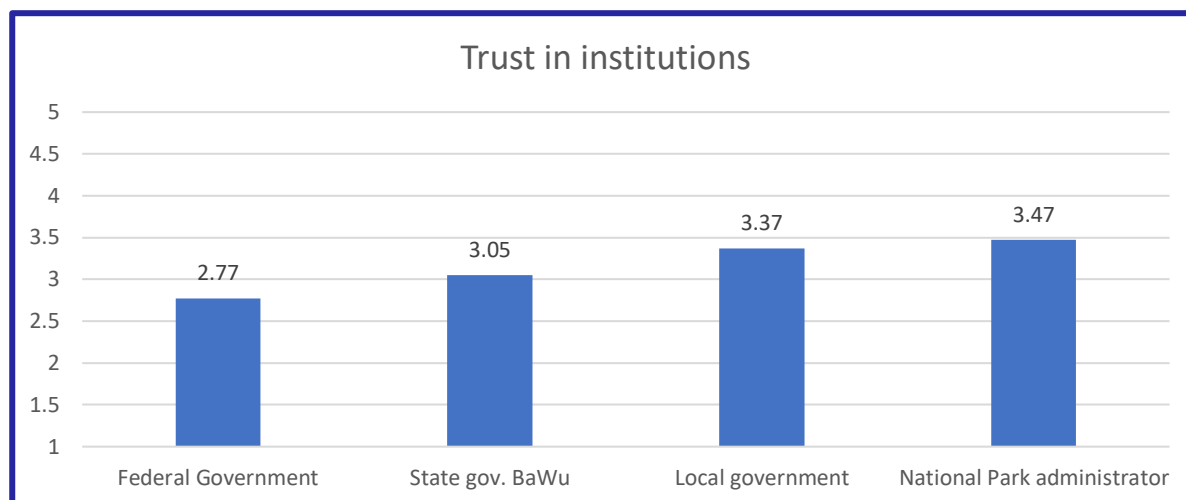


Figure 14. Level of trust in public institutions³

4. CONCLUSIONS

In conclusion, the survey results indicate that awareness of the existence of the Schwarzwald National Park is very high amongst people living in its vicinity and higher than is typical in the wider area of Baden-Württemberg.

Local residents are mostly positive and supportive of the existence of the Park, and only a small proportion of residents are negative or unsupportive about the Park. Levels of support appear to have been consistent over time since the Park was established in 2014, and are largely in line with those of the wider population of the State of Baden-Württemberg.

The most positive impacts reported from the designation of the Black Forest National Park for locals were related to the reputation of the region, environmental protection, connectedness to nature, and tourism business opportunities. The most negative impacts reported related to traffic and overcrowding at popular locations, as well as loss of personal freedoms and the cost of living. Other critical comments made regarding impacts related to forestry management and restrictions on access in some areas of the Park resulting from path and road closures.

A significant proportion of respondents felt that benefits and costs of the Park were not evenly distributed between visitors and locals, or amongst locals, particular regarding traffic impacts and cost of living. The distribution of costs and benefits among residents appears to be highly context dependent, particularly on location and profession. Residents near main access routes and popular sites appear to bear the costs of traffic, disturbance and overcrowding at the visitors' expense. As regards profession, people who gained their income from tourism and hospitality sectors were seen to benefit disproportionately, whilst those in forestry and the wood industry were the most disadvantaged. Overall, nearly half thought the benefits and costs of the Park were not equitably distributed among the local residents.

³ mean scores, measured in a 5-point Likert scale, 1 representing low level of trust, 5 representing highest level of trust.

The negative impact of disturbance appears to have been exacerbated during the COVID-19 pandemic by increased visitor numbers, overcrowding and disturbance. Overall the impact of COVID-19 on social life was seen to be a mixture of positive and negative impacts, with better quality of life but also social isolation. Environmental impacts were seen as partly positive as regards pollution and resource consumption, but mostly negative regarding littering and waste issues. Economic and political impacts were viewed as negative, with businesses forced to close and curtailed personal freedoms.

As regards following rules of the National Park, respondents considered that visitors were less likely than residents to follow Park rules and behave in a pro-park or pro-environmental manner. In order to manage visitors and overcrowding, respondents were positive about a range of measures focused on information provision and 'softer' crowd and behaviour management measures. Harder, more coercive measures were less popular, and restrictions on visitor parking that might also impact residents were viewed least positively. With regard to enacting such measures, it is positive to note that public institutions are generally trusted, local institutions more so, and the National Park administration most of all.

ACKNOWLEDGMENTS

The authors would also like to thank Dr Christoph Dreiser for creating Figure 3 in this report.

REFERENCES

Harald Stahl (2019: 145) „Die hohen Bäume und das Unterholz und das Tote“. Waldnaturschutz im Nordschwarzwald, Waldbewusstsein und Naturerfahrung. Münster/New York: Waxmann Verlag

Berzborn and John (2018) ‚Wahrnehmung und Bewertung von Natur und Nationalpark.‘ Pressekonferenz 28.06.2018, Ruhestein. See https://www.nationalpark-schwarzwald.de/fileadmin/Mediendatenbank_Nationalpark/Pressemitteilungen/PM_20180628_PK_Panelstudie.pdf

Forsa (2016) ‚Bericht über die Befragung zur Wahrnehmung und Bewertung des Nationalpark Schwarzwald‘, forsa Politik- und Sozialforschung GmbH, Berlin.

Forsa (2020) ‚Der Nationalpark Schwarzwald in der Wahrnehmung der Bürger in Baden-Württemberg‘, forsa Politik- und Sozialforschung GmbH, Berlin, 18th December 2020.

APPENDIX

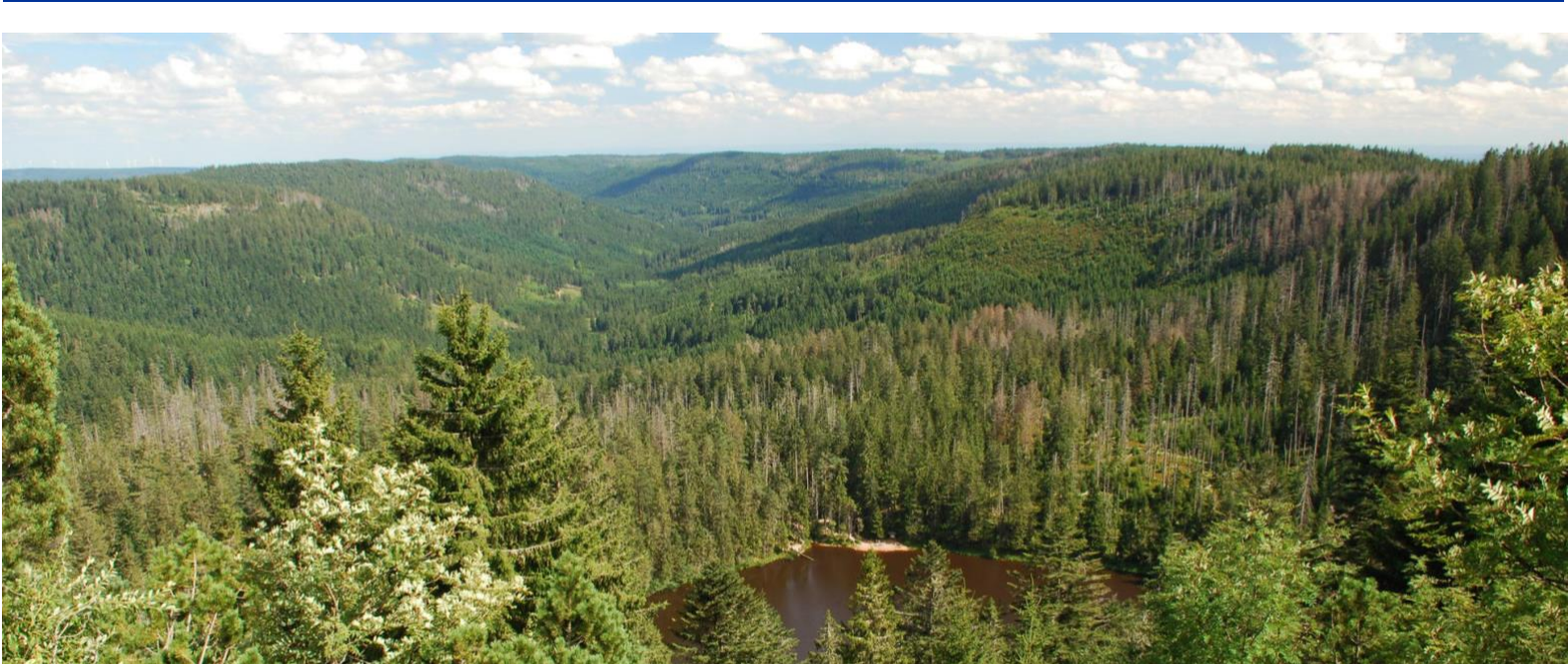
Table A1. Distribution of respondents in different locations in and around the Black Forest National Park

	Frequency	%
Forbach	6	1.4
Bühlertal	19	4.3
Kappelrodeck	7	1.6
Klosterreichenbach	5	1.1
Mitteltal	10	2.3
Freudenstadt	50	11.4
Baiersbronn	57	13.0
Biberach	1	0.2
Bad Peterstal-Griesbach	3	0.7
Oppenau	10	2.3
Lautenbach	2	0.5
Sasbach bei Achern	10	2.3
Ottenhöfen	9	2.1
Lauf	5	1.1
Sasbachwalden	2	0.5
Seebach	8	1.8
Bad Herrenalb	4	0.9
Enzklösterle	1	0.2
Simmersfeld	2	0.5
Igelsberg	2	0.5
Altensteig	3	0.7
Pfalzgrafenweiler	6	1.4
Seewald	1	0.2
Achern	5	1.1
Ottersweier	4	0.9
Bühl	27	6.2
Oberkirch	7	1.6
Gengenbach	1	0.2
Appenweier	4	0.9

Rastatt	8	1.8
Durmersheim	3	0.7
Kuppenheim	1	0.2
Muggensturm	1	0.2
Bietigheim	1	0.2
Ötigheim	1	0.2
Iffezheim	2	0.5
Au am Rhein	1	0.2
Elchesheim-Illingen	1	0.2
Sinzheim	2	0.5
Hügelsheim	1	0.2
Gaggenau	16	3.7
Rheinmünster	1	0.2
Lichtenau	3	0.7
Baden-Baden	33	7.5
Bad Rippoldsau-Schapbach	6	1.4
Kehl	5	1.1
Oberwolfach	4	0.9
Wolfach	3	0.7
Haslach im Kinzigtal	3	0.7
Zell am Harmersbach	1	0.2
Hausach	5	1.1
Oberharmersbach	2	0.5
Gutach	1	0.2
Ortenberg	1	0.2
Rheinau	4	0.9
Lahr	6	1.4
Ettenheim	2	0.5
Seelbach	2	0.5
Rust	2	0.5
Schuttertal	2	0.5
Other location	43	9.8
Missing value	62	
Total	500	

FIDELIO Research Project

FIDELIO is a research project funded by the European Research Council (project no 802605). The project aims to explore why some Protected Areas are supported more than others setting at its core the unravelling of complexities in socio-ecological systems of Protected Areas and the important role of social impacts of these conservation policies. During the project, a large amount of qualitative and quantitative social data is being collected in 20 European Protected Areas including the Black Forest National Park. All reports of the project are available at: www.fidelio.landecon.cam.ac.uk and <https://warwick.ac.uk/fidelio>



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