

EDITOR

Comment: “both reviewers suggest you can gain greater impact and contribution by enhancing your analyses and explaining their implications (e.g., comparison across regions, types of protected areas, or other relevant factors would add valuable insights, and a more in-depth discussion of the results would allow readers a fuller understanding of the study’s implications).”

Response: We sincerely appreciate your time and the reviewers' efforts in evaluating this manuscript. Your feedback has been invaluable in strengthening our work, and we believe this revised document offers a more robust and meaningful contribution to understanding the challenges of wildlife monitoring in protected areas.

We have carefully addressed every comment from the editor and both reviewers, making substantial revisions to improve clarity, depth, and coherence. These revisions include a more comprehensive Introduction, a more detailed Methods section, expanded Results, and an enhanced Discussion.

We recognize the importance of exploring differences across regions and we have included breakdown of survey respondent counts by continent and mentioned this limitation in the discussion.

For other concerns raised about variations in detectability by protected area types, and other relevant factors, we were limited by the original survey design and its objectives. While we recognize the relevance to identify differences across landscape types, continents, etc., these potential associations can be addressed in follow on full *Contributed Paper*. The current study has strong merit for publication without these additions for the following reasons:

- The heterogeneous distribution of respondents under the convenience sampling design limits our ability to generalize findings to other protected areas. This constraint would similarly affect any additional analyses regarding differences across regions or protected area types.
- The current results provide a preliminary yet critical perspective on wildlife health monitoring in protected areas worldwide. Our findings highlight how such data are often unrecorded, incompatible across regions, and poorly managed—key messages for the conservation community.
- We emphasize the importance of reversing this scenario and propose concrete next steps to address these gaps and encourage follow on research.
- We added a paragraph in the discussion section recognizing the limitations of our approach and the need to further explore the role of protected area types and others.
- This revised version is substantially improved in response to editorial and reviewer comments and the original manuscript was already deemed important and relevant by the reviewers.

- The journal describes a "**Research Letter**" as “similar to a Contributed Paper but with more focused or preliminary results and inferences.” We believe our manuscript aligns well with this format and presents a strong case as a Research Letter.

We kindly invite you to review this revised version. We believe you will find it significantly improved and insightful.

REVIEWER COMMENTS

R1 Comment The citation format should be reviewed to comply with the journal’s guidelines. Scientific names should be in italics, including within citations.

Response: Done

ABSTRACT COMMENTS

R2 Comment: “Line 13: please clarify what those percentages refer to. I guess it’s injured/sick (>50%) and dead (>20%) but it’s not clear.”

Response: We have added the suggested text:

“Protected area data managers considered wildlife health as relevant to the conservation goals of PAs and >90% of them confirmed that non-healthy wildlife (injured, sick, and dead) are encountered. However, >50% and >20% of PADMs claimed that injured/sick and dead animals were not recorded, respectively. When these animals were documented, the recording methods and information collected differed. Although domestic animal presence was common and considered a conservation concern, these animals and their health status were not always recorded. Health data were often stored in a database, but paper forms and spreadsheets were also used.”

R1 Comment Abbreviations should be removed from the abstract and introduced for the first time in the Introduction.

Response: Thank you! We have removed the abbreviations.

INTRODUCTIONS COMMENTS

R1 Comment: Page 3, lines 45-47: It would be beneficial to include a reference or improve the English wording, as this data seems more appropriate for the Discussion section than for the Introduction.

Response: the Introduction has been substantially modified. However, the idea presented in these lines is part of the justification of the study. Therefore, we have left the concept in the Introduction:

“To our knowledge, the status of WH monitoring practices in PAs is largely unknown. Potential gaps in WH monitoring in PAs could undermine biodiversity conservation and compromise One Health, highlighting the need for urgent attention. Additionally, baseline information regarding the perception of wildlife, human, and livestock health relevance for biodiversity conservation by PA personnel is also unknown. Their perceptions could impact WH monitoring practices and their implementation.”

R2 Comment: but I think the introduction is a bit lacking and could be made more appealing and informative.

R2 Comment: I appreciate that you had to respect a word limit, but in general the whole introduction feels too succinct, while discussion and recommendations could be made shorter without removing any information.

Response: The Introduction and the Discussion sections have been substantially modified based on this comment and other comments. Please refer to the updated manuscript.

R2 Comment: Lines 24-28: While you refer to the One Health concept in the abstract and later in the text, there is no mention of it in the Introduction, I would add a brief sentence here.

Response: Agreed and good suggestion. The modified Introduction now contains a paragraph that includes this suggestion: *“Wildlife health (WH) monitoring, which involves tracking diseases, pathogens, and toxic agents in wildlife populations (World Organisation for Animal Health & International Union Conservation of Nature 2024) facilitates the early detection of exposure and disease, enables rapid response to mitigate risks and adverse outcomes, and supports the evaluation of health management strategies (Woods et al. 2019; Machalaba et al. 2021; One Health High-Level Expert Panel (OHHLEP) et al. 2022; Porco et al. 2023; Elnaïem et al. 2023; Vora et al. 2023; Thompson et al. 2024). The One Health (OH) approach recognizes that the health of animals, humans, and their shared environment are deeply interconnected (Machalaba et al. 2021; OHHLEP et al. 2022; World Organization for Animal Health 2023). As a result, WH monitoring is essential for biodiversity conservation and for safeguarding human and animal health.”*

R2 Comment: For instance, I think that SMART should be introduced here rather than in the methods (you could simply move up lines 53-56) and it would be an opportunity for you to highlight one of the strengths of your study: being able to reach quite a big sample of PA managers from different countries (although with some geographical bias).

Response: Thanks for this suggestion. We believe the new Introduction and its contents are more structured and organized, and they reflect that SMART is not a focus of this study, but an asset and a means to reach protected area managers around the world as you have pointed out. For this reason, we have left the SMART as part of the methods.

R2 Comment: Lines 43-45: This whole sentence reads weirdly. Please rephrase.

R2 Comment: “WH monitoring at these sites can strengthen the detection of infectious diseases, physical, and chemical threats; rapid response; and assessment of health management practices.”

Response: The Introduction section has been substantially modified to address this comment and others. The paragraph containing this idea now reads: “Wildlife health (WH) monitoring, which involves tracking diseases, pathogens, and toxic agents in wildlife populations (World Organisation for Animal Health & International Union Conservation of Nature 2024) facilitates the early detection of exposure and disease, enables rapid response to mitigate risks and adverse outcomes, and supports the evaluation of health management strategies (Woods et al. 2019; Machalaba et al. 2021; One Health High-Level Expert Panel (OHHLEP) et al. 2022; Porco et al. 2023; Elnaïem et al. 2023; Vora et al. 2023; Thompson et al. 2024).”

METHODS COMMENTS

R1 Comment: The selection of Protected Area Data Managers (PADMs) and the use of SMART for wildlife health data collection require further clarification in the methodology.

Response: we have re-arranged and added specific content to clarify the selection of PADMs. For a response to the concern regarding SMART for wildlife health data, please see our response directly below. The new text reads: “*We developed a web-based questionnaire aimed at PADMs users of the “Spatial Monitoring and Reporting Tool” (SMART). SMART is a technology platform designed to support the administration of PAs (Cronin et al. 2021) distributed in more than 1,000 conservation sites worldwide, offering the opportunity to engage a large number of PADMs. The survey was distributed globally to the SMART Community Forum users by the SMART Partnership (<https://smartconservationtools.org>) via email in October 2022 and remained open for three months. A reminder was sent three weeks before the closing date*”.

Because the SMART Community Forum users can reach PADMs and other conservation actors, respondents were asked first if their job roles and responsibilities matched our definition of PADM: “*a person directly responsible for managing SMART data in one or more PAs or a general manager or administrator of one or more PAs that uses SMART data*”. Respondents who did not identify as a PADM were considered outside our target population and excluded.”

R1 Comment: Page 3, lines 53-56: We recommend clarifying whether the use of SMART mentioned in the study specifically includes the wildlife health module or if it is used solely for general wildlife data collection. This distinction is important, given that some protected areas limit SMART use to wildlife monitoring, not necessarily for health purposes.

Response: Good point. By the time of the survey, SMART for Health was just introduced in a couple of PAs in Peru, therefore, its use (or not use) did not impact the results. We added a sentence clarifying this point in the first paragraph of the Discussion session.

“We developed a questionnaire aimed at globally distributed PADMs to learn about their perceptions regarding WH; the monitoring of injured, sick, and dead wildlife and domestic animals in PAs; and health data storage practices. Our findings from four continents suggest that valuable syndromic WH surveillance data are being lost due to non-collection or inadequate

management. Even when WH data are collected and properly managed, the usefulness for surveillance is likely limited by the diversity of methods employed to record them. By the time of the survey, an initiative to foster the harmonized recording of WH data in PAs (Montecino-Latorre et al. 2024) had only been implemented in a couple of sites in a single country, not impacting the results.”

R1 Comment: It is unclear whether the respondents were directly responsible for field data management (e.g., park rangers, biologists, or field technicians) or if they were protected area administrators, who usually work from offices. This distinction is important, as indirect data management may impact the accuracy and quality of field-collected information. We suggest clarifying whether the "general managers" or "administrators" selected in the analyzed surveys were directly responsible for using SMART in the field.

and

R1 Comment: Page 4, lines 80-82: The separation of data between managers overseeing one or two protected areas and those managing three or more areas might be relevant; however, the general results seem to follow the same trends. We recommend emphasizing the selection of respondents with firsthand access to field information rather than focusing on the number of areas they manage. This approach would minimize the potential bias introduced if respondents lack direct contact with field monitoring. If significant differences exist, these should be addressed as limitations of the study.

Response: The original manuscript provided the definition of our targeted audience and it mentioned that respondents had to identify themselves or not with our definition of PADM in the first question. Those individuals that responded “no” were not considered in the analyzed dataset. Please see the very first response for the methods section above.

Furthermore, our separation between “local” and “non-local” PADM aimed to generate the distinction between PADM on-site and those in a central office. SMART is a protected area database manager system, so PADM at protected areas can upload data collected by rangers to the corresponding protected area database. Then the database can be updated to a server. Officers in an office can access the same exact information in real-time. Under this system, PADM with access to a single PA database are usually based in the field. Those with access to several PA databases are usually district or national officers located in an office.

We recognize that the ‘non-local’ and ‘local’ category definitions need improvement to understand their purpose and we have modified the corresponding paragraph to make this distinction clearer:

“Responses by PADM could represent either a single or multiple PAs. For our analysis, we focused on what we defined as “local” responses, which included one or two PAs. “Non-local responses”, which covered more than two PAs, were analyzed separately. We assumed that PADM that included more than two PAs would conduct occasional site visits making them less likely to have insights of specific PA realities. However, they can help understand perceptions at central offices at decision-making level. Instead, “local” PADM would work on-site and

understand PA realities. The two-PA cutoff was chosen to balance maximizing the sample size of local respondents while accurately classify them as having first-hand knowledge of field activities.”

R2 Comment Lines 81-84: This distinction is not clear to me. I understand that some managers manage more than one PA but each responded to a single questionnaire, listing one or more PAs at its start. But why did you set the threshold between local and non-local at 2 PAs? Why not one? I think you should expand on this.

Response: Please see the response above.

What training did the respondents have? How long have they been using SMART in the areas they manage?

Response: Unfortunately, the original survey instrument did not collect this information. We have added this point in the Discussion:

“This is the first account of wildlife health perceptions and monitoring practices in PAs. Survey respondents were contacted through the SMART Partnership, and while informative, the targeted audience and participants may not fully represent the broader population of local and non-local PADM. Ideally, a follow-up longitudinal study and respondents selected through random sampling from a sampling frame, including local and non-local PADM of the same PAs could further refine and enhance these initial insights. This approach could also identify geographic differences and associations between distance patrolled per time unit, the landscape type, and the fauna size in the overall encounter rates with health and non-healthy wildlife and domestic animals. Potential differences in reporting as a consequence of experience with the recording tool employed (SMART Mobile or another) should also be assessed.”

R2 Comment: it is probably obvious, but I would specify “different than terrestrial ones”.

Response: Good suggestion, it is now specified.

RESULTS COMMENTS

R1 Comment Overall, text, tables and figures are clear. The texts highlight the main findings. However, the results do not provide analysis comparing findings beyond the simple response to each question. While the information presented is relevant, comparisons across regions, types of protected areas, or based on the duration of SMART use could add valuable perspectives. Including these points would enrich the study's contribution, **which certainly provides valuable information.**

Response: In addition to our general response to the editor above, we appreciate your comment that the manuscript “certainly provides valuable information”. We wholeheartedly agree that the potential insights across landscapes, regions, or type of protected areas are unarguably important. We have submitted this manuscript as a “Research Letter” which are, “more focused or

preliminary results and inferences”, which was the intention of the study. Therefore, further analysis to include these factors seems more appropriate for future research. We have added a paragraph in the Discussion section that reads:

“This is the first account of wildlife health perceptions and monitoring practices in PAs. Survey respondents were contacted through the SMART Partnership, and while informative, the targeted audience and participants may not fully represent the broader population of local and non-local PADM. Ideally, a follow-up longitudinal study and respondents selected through random sampling from a sampling frame, including local and non-local PADM of the same PAs, could further refine and enhance these initial insights. This approach could also identify geographic differences and associations between distance patrolled per time unit, the landscape type, and the fauna size in the overall encounter rates with health and non-healthy wildlife and domestic animals. Potential differences in reporting as a consequence of experience with the recording tool employed (SMART Mobile or other) should also be assessed.”

R1 Comment: Page 4, lines 97-101: We understand the importance of protecting respondent confidentiality; however, not specifying the countries that responded to the survey results in a loss of useful information for analysis. Knowing the countries or regions that participated would be valuable, provided respondent confidentiality is maintained. Providing this information could help contextualize the results.

Response: We do want to provide contextualization, as geographical or regional bias in this type of convenience survey is a clear limitation. In the revised manuscript we have revised as follows:

“The final dataset contained 86 respondents from 23 countries. Seventy-three were local responses with 67 surveys representing a single PA and 6 representing 2 PAs. Local responses came from 19 countries. There were 13 non-local responses that came from 10 countries (results in Appendix). The specific countries are not provided to protect the identity of the respondents, but local responses were from North, Central, and South America (n=45); West, Central, East, and Southern Africa (n=16); Southeast and South Asia (n=11); and Europe (n=1), with most coming from South America. Non-local responses were from West, Central, and East Africa (n=6), Central and South America (n=3), and Southeast and South Asia (n=4)”.

We believe that this is a good balance between providing the spatial distribution information while protecting the identity of the respondents and we would like to highlight again that this is a Research Letter manuscript.

R2 Lines 116-117: I think that the frequency of encounters with sick/dead animals would be much more meaningful if normalised by the frequency of patrolling. “Rarely” may mean quite different things depending on how often patrols are performed in the PA. I see from Supplementary Information that you gathered information on this, even if you are unable to normalise the encounters, it would be interesting if you at least reported some data on this.

Response: We agree but unfortunately, question 11 — “On average, how many patrols are completed in the protected area in one month?”— posed unforeseen challenges for respondents. Many answers appeared to reflect a cumulative number of patrols across multiple protected areas

rather than a single area per month. To address this issue, we have added text in the Discussion section highlighting the lack of normalization as a limitation.

“This is the first account of wildlife health perceptions and monitoring practices in PAs. Survey respondents were contacted through the SMART Partnership, and while informative, the targeted audience and participants may not fully represent the broader population of local and non-local PADM. Ideally, a follow-up longitudinal study and respondents selected through random sampling from a sampling frame, including local and non-local PADM of the same PAs could further refine and enhance these initial insights. This approach could also identify geographic differences and associations between distance patrolled per time unit, the landscape type, and the fauna size in the overall encounter rates with health and non-healthy wildlife and domestic animals. Potential differences in reporting as a consequence of experience with the recording tool employed (SMART Mobile or another) should also be assessed.”

R1 Comment Page 5, line 140: The term “not consistent” is used to describe the data. For improved clarity, we suggest specifying exactly what you mean.

Response: We have added a “(Figure 3)” at the end of this sentence and kept the remaining text as is. Now the paragraph reads: *“The items recorded from each observation were not consistent across responses (Figure 3). Photographs and the species were the main items collected across documentation methods and health categories. Anomalies observed in non-healthy wildlife and the condition of carcasses were not always recorded (Figure 3).”*

R1 Comment Page 5, line 133 / Table 1: Upon reviewing the results, it seems that some questions may have caused confusion among respondents. It would be helpful to detail whether respondents were specifically asked if they recorded all observed animals or only those that were sick, injured, or deceased. Information about “healthy” animals may be biased since they are often the most frequently observed and may lack detailed information. We understand that not all SMART users apply the application with a health-oriented perspective, so we again recommend clarifying whether the evaluation was specific to the health module or general wildlife monitoring.

Response: Thanks for raising this point and we understand the specifics of how the questions were asked can be confusing. Hence, the survey instrument itself was provided in the Supporting Information and it shows that we asked if healthy, injured, sick, and dead animals were recorded as separate categories. Figure 3 shows the distribution of items recorded per health status. Those distributions are based on the subset of answers that reported the documentation of each health class.

For good measure, as this comment suggests a misunderstanding of the instrument, we have now added a sentence in the methods section to clarify that we asked if healthy, injured, sick, and dead animals were recorded as specific animal categories. The text now reads:

“Section 2 requested PADM to rank the overall frequency of encounters with injured, sick, or dead wildlife in PAs and to indicate whether animals in each of these classes, along with healthy wildlife, are recorded as a specific type of individual when found during patrols.”

For the health module concern, please refer to our answer to a similar comment above.

R2 Comment: Line 142: I am not sure if you asked specifically for this, but did anyone report sample collection from carcasses? If any case, I think that in the discussion/recommendations you could briefly address sampling as an additional opportunity for health monitoring in PAs.

Response: The questionnaire was not designed to collect this information as its intent was more focused on whether any wildlife health related observations were being recorded. This means we are unable to report or add this item in the discussion, but we do note this type of information would be important to collect in any follow up study.

DISCUSSION COMMENTS

R1 Comment: Discussion: The discussion section should be enhanced by addressing the presented results in greater detail. If additional analyses are performed, these should also be accompanied by a corresponding discussion to thoroughly interpret and contextualize the findings.

Response: We have addressed most of the comments made by both reviewers given the limitations of the survey design. The survey designed limited our ability to conduct additional analyses but we submit it remains well aligned with the guidelines for a ‘Research Letter’. We also enhanced the Discussion section substantially and used the recommendations from the reviewers to guide future research in this area.

R2 Comment Line 169: I was not familiar with SMART and I noticed from their website that very few PAs in the Northern hemisphere are using it, so yes I guess your data are strongly geographically biased. Could you add something more on this?

Response: This is a very salient observation and critique. The online map showing SMART sites is rather outdated with respect to the current distribution. For example, the Mexican National Park Service has adopted SMART nationally (e.g., <https://www.youtube.com/watch?v=dQt-DME9xZ4>). There very well could be an initial spatial bias in the distribution of SMART users on top of the potential spatial bias of the respondents. We have added this point in the Discussion to acknowledge this situation:

“This is the first account of wildlife health perceptions and monitoring practices in PAs. Survey respondents were contacted through the SMART Partnership, and while informative, the targeted audience and participants may not fully represent the broader population of local and non-local PADM. Ideally, a follow-up longitudinal study and respondents selected through random sampling from a sampling frame, including local and non-local PADM of the same PAs could further refine and enhance these initial insights. This approach could also identify geographic differences and associations between distance patrolled per time unit, the landscape type, and the fauna size in the overall encounter rates with health and non-healthy wildlife and domestic animals. Potential differences in reporting as a consequence of experience with the recording tool employed (SMART Mobile or other) should also be assessed.”

R1 Comment The first paragraph of the Discussion is very insightful. Expanding this analysis and connecting it with the various points discussed throughout the Discussion would be valuable.

Response: Thanks for this positive feedback and we hope the revised discussion does a better job of connecting the analysis to the key takeaways.

R1 Comment An in-depth analysis of the high proportion of respondents who gave neutral responses to several questions in the first section (Figure 1) would be useful in the context of wildlife surveillance.

Response: This is a helpful and good critique. We added information in the Results section and also in the Discussion section.

The new text in the Results reads: *“Regarding the affirmation “pathogens carried by wildlife inhabiting the protected area(s) where I work in can affect livestock health”, most respondents strongly agreed or agreed (48%) although neutral respondents were more prominent (29%). Across respondents, 63% strongly agreed or agreed that “pathogens carried by wildlife inhabiting the protected area(s) where I work in can affect human health”. The percentage of neutral responses was 19%. Detailed distributions are shown in Figure 1. Non-local responses followed similar trends with proportionally fewer neutral responses (Appendix S2).*

The new text in the Discussion section reads: *“PADMs largely considered WH as relevant to the conservation goals of PAs. However, several local PADM s expressed neutral views on the potential impact of wildlife pathogens on human and livestock health. Local PADM s represent field staff and they might have a risk of exposure to zoonotic pathogens (Adjemian et al. 2012). It is essential to provide rangers with training in biosecurity measures to mitigate these risks.”*

R2 Comment Line 174: I do not think you asked whether the respondent ever experienced a disease outbreak in the PA, but this is something that would strongly affect their risk perception and should be acknowledged.

Response: The original text included the possibility of Avian Influenza as an explanation of responses reporting the encountering and wildlife health as relevant for conservation goals but the lack of documentation. We have expanded the results to include that this combination was observed within surveys also. We expanded the discussion to also include the possibility that a mortality or morbidity event of other etiology could have led to this combination.

Results: *“Most local “overall frequency of encounters” responses concentrated between “Very rarely” and “Occasionally” (Figure 2). Seventy-six percent of local PADM s reporting the encounter of dead animals in the PAs (e.g., “Very rarely” or more frequently) answered that these encounters were documented. Only 48% and 35% of local PADM s reporting encounters with injured or sick animals in the PAs (e.g., “Very rarely” or more frequently) confirmed their documentation, respectively. In general, the documentation of injured, sick, or dead animals tend to be higher as the encounter frequency increased from “Very rarely” to “Very frequently”. For example, the proportion of local responses reporting the documentation of sick animals in the*

encounter frequency “Very rarely” was less than 20% versus over 50% in the encounter frequency “Very frequently” (Figure 2). All non-local PADM reported the encounter with injured or sick wildlife and dead wildlife (“Very rarely” up to “Very frequently”). The proportions of non-local PADM reporting the documentation of these animals were larger compared to local responses (85, 62, and 92% for injured, sick, and dead wildlife respectively; Appendix S3).”.

Discussion: “Most PADM confirmed that non-healthy wildlife were encountered. However, the percentage of local PADM who agreed or strongly agreed that WH is relevant for the conservation goals of PAs was higher than the percentage of those reporting the recording of non-healthy wildlife. In other words, the perceived importance of WH did not translate into reporting. This contradiction was also observed in the responses specifically reporting the encounter of non-healthy animals but not their documentation. The discrepancy could be explained by recent global pathogen-driven crises such as SARS-CoV-2 and H5N1 Highly Pathogenic Avian Influenza virus (Nicola et al. 2020; Leguia et al, 2023) or by other morbidity or mortality events of different etiology that might have sensitized our audience by the time the survey was distributed but before health-associated monitoring objectives could be planned and rolled out. These findings could also suggest a lack of knowledge or resources to act on their understanding of the importance of WH for conservation goals.”

R1 Comment Page 6, lines 177-185: Given that the use of mobile applications like SMART presents certain challenges, we suggest that the Discussion expands on the topic of limitations, considering whether all users have the knowledge, time, and resources to adequately complete the questionnaire in the field.

and

R1 Comment Page 7, lines 204-205: The preference of some users for paper records also deserves analysis in the Discussion. This preference may be related to application complexity, connectivity issues in remote areas, or the time it takes to implement SMART in the evaluated areas. The historical aspect of paper records in fieldwork is relevant and should be discussed.

Response: Thanks for this comment and we have added a new portion in the Discussion to include the good points suggested in the two previous comments:

“The lack of harmonization across PAs, within and beyond country borders, diminishes the value of collected health data, making transboundary health assessments challenging. Similarly, tracking wildlife health trends over time becomes infeasible. Additionally, records of non-healthy wildlife could be stored in paper forms or Excel sheets rather than a SMART database. Data can be uploaded to a SMART database manually by filling specific fields or through a mobile application (SMART Mobile) designed to capture data as determined in the corresponding SMART database (Cronin et al. 2021). Consequently, the use of paper forms and spreadsheets reflect that WH data was not considered in the PAs SMART databases and does not reveal problems with the recording tool used (SMART Mobile or other). We did not ask about the use of SMART Mobile but challenges in its adoption have been described (Wilfred et al. 2019; Kavhu & Mpakairi 2021; Wyatt et al. 2023).”

R1 Comment Recommendations: We suggest that authors discuss these points and expand on the topics included in the recommendations in the discussion, as the journal does not consider a separate "Recommendations" section for research notes.

Response: Well received and corrected. We have expanded the discussion to include the main points of the Recommendations section. Please see the modified Discussion section.

R1 Comment In general, it would be beneficial to improve figure titles, axis labels, and the clarity of some legends. In Figure 2, for example, the meaning of the green bar should be clarified or considered for removal if it does not significantly contribute.

Response: Please see the response to specific comments regarding Figure 2 below, including a new version of the figure.

R2 Comment Figure 2: This composite plot is quite hard to read. It could be improved by representing recording (yes/no) as stacked bars. In this way you would have a single bar per category and encounter rate, and you could get rid of the green bars as it's not very clear what they should be representing. You state they are proportions, but there is a single y-axis and it's showing absolute numbers.

Thanks for your comment on how to improve the figures. We found that stacked bars are hard to read when they are close to the same values across categories. However, we have modified the legend of the figure and added the proportion values in the y axis. The new figure is shown below:

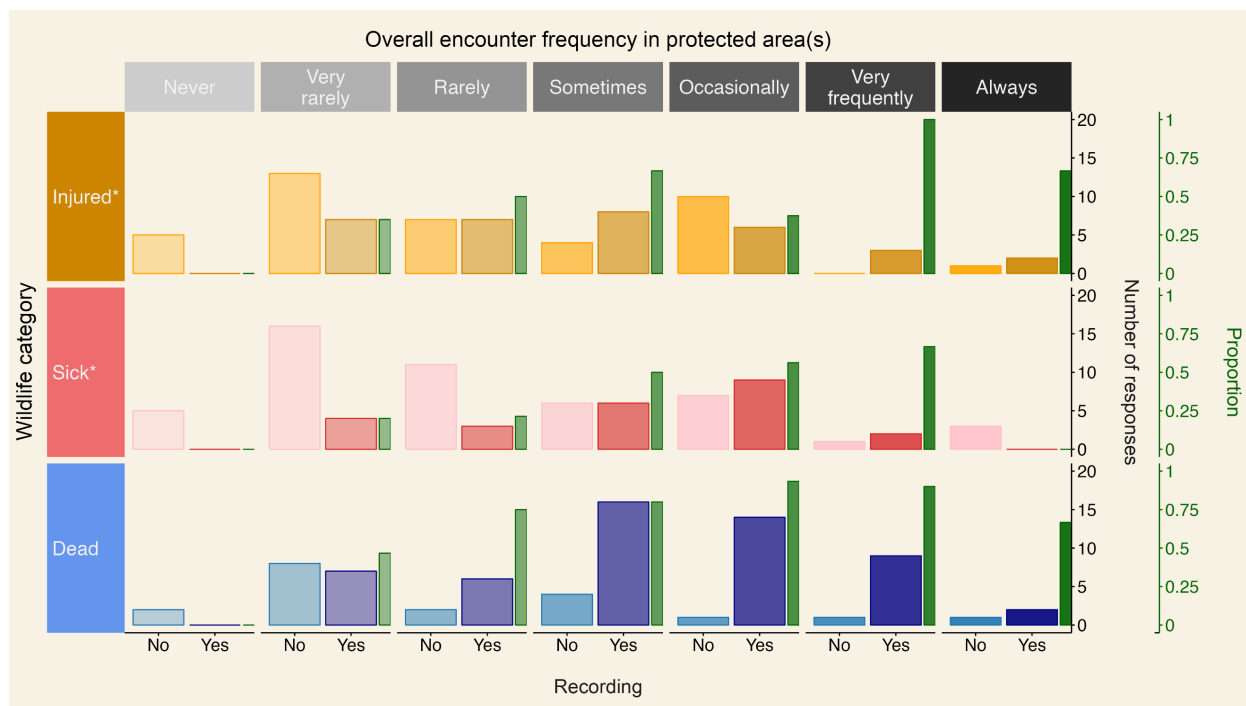


Figure 2. Number of local protected area data manager responses reporting the recording or not of wildlife across health status and encounter frequency in the protected area(s) where they work. Bright and pale orange, red, and blue bars represent the number of responses reporting recording and not recording in each non-healthy wildlife category, respectively. Green bars represent the proportion of responses that reported recording of wildlife in each category.

R1 Comment Figure 2: Are there any differences in the reports/records of injured, sick, or deceased animals? An analysis to better understand these differences would be important.

Response: Please see a modified version of the results section: “Most local “overall frequency of encounters” responses concentrated between “Very rarely” and “Occasionally” (Figure 2). Seventy-six percent of local PADM’s reporting the encounter of dead animals in the PAs (e.g., “Very rarely” or more frequently) answered that these encounters were documented. Only 48% and 35% of local PADM’s reporting encounters with injured or sick animals in the PAs (e.g., “Very rarely” or more frequently) confirmed their documentation, respectively. In general, the documentation of injured, sick, or dead animals tend to be higher as the encounter frequency increased from “Very rarely” to “Very frequently”. For example, the proportion of local responses reporting the documentation of sick animals in the encounter frequency “Very rarely” was less than 20% versus over 50% in the encounter frequency “Very frequently” (Figure 2). All non-local PADM’s reported the encounter with injured or sick wildlife and dead wildlife (“Very rarely” up to “Very frequently”). The proportions of non-local PADM’s reporting the documentation of these animals were larger compared to local responses (85, 62, and 92% for injured, sick, and dead wildlife respectively; Appendix S3).”

R2 Comment Figure 3: Same as above: this is quite complex to read and forced you to add that NAs on the x-axis. I think that the presence of domestic animals could instead be represented on the x-axis, to have the red and blue bars next to each other for a more direct comparison of perception differences based on the presence/absence of domestic animals in the PAs; then the blue bars could be coloured to represent recording or no recording of their presence. The specific recording of their health status could be left out and mentioned only in the text (or vice versa). Or you could try using three colors and see if it is still easily readable.

Response: Based on these helpful suggestions we have modified the plot as follows:

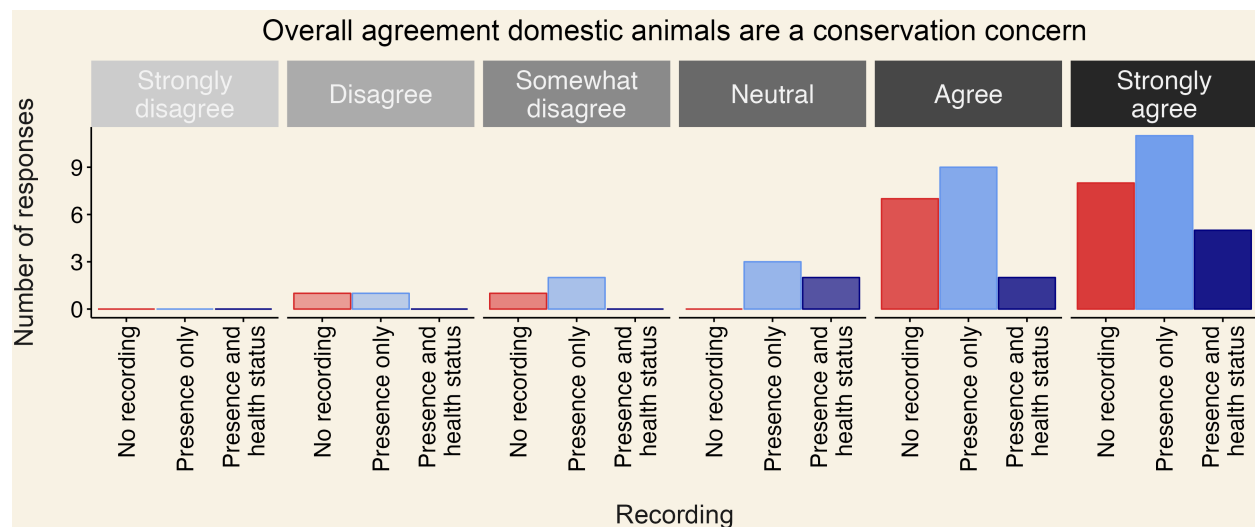


Figure 4. Number of local protected area data manager responses reporting the recording of domestic animals when found in the protected area and their health status across agreement category with the statement: 'Introduced domestic animals are a conservation concern for the conservation goals of the protected areas where I work'. Red, light-blue and blue bars show the number of responses reporting non-recording of domestic animals, the recording of domestic animals but not their health status, and the recording of domestic animals and their health status, respectively. The data shown represents the group of protected area data managers that reported the presence of domestic animals in the protected area(s).

Also please note that we reported findings on domestic animal absence in the text: "Fourteen out of twenty-one respondents claiming that domestic animals are not found in the corresponding PAs also either agreed or strongly agreed that they are a conservation concern (67%)."