THE DARKSIDE OF CONSERVATION SURVEILLANCE

THE HUMAN CONSIDERATIONS OF SURVEILLANCE TECHNOLOGIES IN BIODIVERISTY CONSERVATION

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Background

For decades, the way we do biodiversity conservation has been evolving. With constant upgrades in technology, it has gotten easier and easier to monitor biodiversity using various kinds of surveillance tech and this has helped us tremendously in our effort to save and protect millions of lives in the wild (Simlai and Sandbrook, 2021). However, in our strife to achieve environmental sustainability, we have overlooked the impact these conservation surveillance methods have on the humans inhabiting the same lands and forests (Sandbrook et al., 2021). This lack of awareness and engagement by the global conservation science community has led to an unchecked adoption of conservation practices that are unsustainable and unjust, and in many cases exploitative of the freedoms of local/indigenous communities (Brockington et al., 2008).

Drones are one of the most widely used Conservation Surveillance Technologies* (CSTs). Others include Camera traps, Bioacoustics, and Remote sensing.

Aims

To interact with world-leaders in conservation science to understand:

- To what extent, if at all, they have thought about the impact of their surveillance work on human beings.
- What they think are the implications of conservationists adopting a “best practices” approach towards the issue; questioning the need for regulation.
- Their views on how this problem may mature moving forward, including the rise in use of AI/ML in conservation.
- Their stories of and experiences with handling “human bycatch” (Sandbrook et al., 2018) data, from decades of practical knowledge.

Methodology

Purely qualitative research informed by a combination of online and in-person semi-structured interviews (40-80 mins) with 12 leading academics (anonymized) in the field of Biodiversity Conservation working at the Universities of Cambridge, Oxford, Edinburgh, Leeds, Liverpool John Moores, and Sheffield.

These interviews were recorded, transcribed, and thematically coded based on the questions asked. The relevant text was transferred onto an “inference sheet” for analysis and review. The opinions expressed and conclusions derived from interviews were distilled here.

Results

- All interviewees said they had thought about the ethical implications of their work. However, most (6/7) conservationists mentioned that they had only recently started applying it to research.
- After discussion, all interviewees agreed that a voluntary ‘best practices’ approach is important and would be more effective than a regulatory approach.
- There were mixed views about AI/ML and its potential impact on humans surveilled under CSTs*, with strong arguments suggesting both potential benefits and threats.
- All interviewees agreed that funders and journals play a key role in shaping the narrative.
- There was common agreement on the benefits of more socially sustainable forms of conservation.
- All interviewees agreed that this is an important area of research that is heavily understudied.

Conclusion

- There is an urgent need for the voluntary adoption of “best practices” within the conservation science community, since policy can take years to incorporate evidenced, research-based solutions.
- Funding organizations and journals play a critical role in determining how ethically research is carried out (Sandbrook et al., 2023).
- AI/ML offers incredible solutions to many barriers we face with respect to data processing, time, and scale. However, the “black box” nature of large language models in use for conservation surveillance must be acknowledged.
- There is consensus that most conservation practitioners are waking up to this issue and accommodating for errors in their research methods. As a result of the move away from “fortress conservation”(Rai et al., 2021), there is widespread agreement on the effectiveness of people-positive measures such as ‘community-led conservation’.

References

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