

Draft Principles for the Responsible Use of Conservation Surveillance Technology and Data

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Wildlife conservation and research benefits enormously from automated and interconnected data collection tools (e.g. drones, remote cameras, social media). These conservation surveillance technologies (CSTs) and the data they yield can be also beneficial to people. There is increasing evidence, however, that in some circumstances they can have negative impacts on people, accidentally or even deliberately. To help avoid such negative outcomes we propose a provisional set of principles for the responsible use of CSTs and their data. Our intent is to publish these in a full peer-reviewed paper, but before we do we want to obtain feedback on a summary of the principles from experienced users of conservation surveillance technologies. This will help us to ensure that we're not overlooking any important considerations, and that our proposed guidance will be helpful to the conservation community.

These principles are as follows:

- 1. Recognize and acknowledge CSTs can have social impacts.** Conservation surveillance technologies can affect the lives of people positively and negatively, and deliberately or inadvertently. Social impacts are worthy of consideration in their own right, and they might affect conservation outcomes if they change attitudes and behaviours towards conservation. However, social issues raised by CSTs have rarely been discussed in either the academic literature or practical guidance for users.
- 2. Deploy CSTs based on necessity and proportionality relative to the conservation problem.** These two concepts originate from international law and go hand-in-hand, forming the boundaries of what kinds of CST use is acceptable in any given context. To ensure that a particular CST use is both proportionate and necessary requires clear definition of purpose and need, demonstrating that their use is the least intrusive means to achieve that objective. Explicitly consider the balance of expected ecological and social benefits against any possible harm to the rights and interests of people likely to be affected.
- 3. Evaluate all potential impacts of CSTs on people.** We recommend *a priori* social impact assessments which should consider both who might benefit and who might be harmed by CST use, and how these outcomes might be distributed within the population of those affected. Determine whether there are particular groups of people who might be affected more than others, or any history of conflict or social unrest in the area in which CSTs are to be deployed. Having identified the potential benefits, costs, and risks of CST deployment and their differential effects on people, users will need to weigh them up, keeping in mind that social costs could make conservation work more difficult in future. Deciding not to proceed with the deployment of CSTs should always be a potential outcome.

4. Engage with and seek consent from people who may be observed and/or affected by CSTs. Benefits from engaging local people in conservation practice and research can be substantial for both nature and people. Realizing such benefits though depends critically on communicating with the people who will be observed by CSTs, even inadvertently. In most cases a fundamental initial component of such engagement will be obtaining the free, informed, and ongoing consent of those who may be observed. Informed consent by members of the public becomes especially important in the case of social media platforms. A person's decision to share data online is not the same as giving consent for its use by a third party or their user communities. Ideally, social media platforms should invite users to consciously and voluntarily contribute their data for research.

5. Build transparency and accountability into CST use. Clearly communicate with people who may be observed regarding how data is collected and stored, who uses it (including third parties and government agencies), for what purposes, and why it is needed. Ongoing consistency and transparency about the range of uses to which CST data may be put is important. In other words, don't start using social data for a different purpose than what was discussed and agreed with potentially surveilled people. A simple proactive step that can alleviate mistrust is to make contact information publicly available to anyone who may have questions or concerns about CSTs (e.g. posting signs, having contact information on visible CST infrastructure).

6. Respect peoples' rights and vulnerabilities. Certain groups of people are particularly vulnerable to CST surveillance and so require particular care by CST users. Careless or malicious CST use can reinforce social inequalities and hierarchies along the lines of gender, class, and race. Before deploying CSTs it is important to consider such vulnerabilities in their local context, including customs and traditions. The legitimacy and legality of specific CST applications must be clearly established beforehand in order to retain public trust in conservationists and conservation authorities, as well as minimize the risk of legal action or other negative consequences for CST users.

7. Protect data in order to safeguard privacy. Responsible data handling practices are essential for protecting privacy and fostering trust with local communities. Data protection laws such as the European Union's GDPR also provide a solid framework on which to base data handling practices. It is essential to only collect data that is necessary for a specific intended purpose, store it only as long as it is required, delete data that is no longer needed, and ensure data security.