Supplemental 1

*Interview questions for Developers of CEAS*

**Opening**: Before we begin, I want to remind you that this interview is being audio recorded for research purposes. I just want to confirm with you that you have received and read the informed consent form and that you agree to participate in this study.

The purpose of this study is to understand the barriers decision-makers face in using satellite-based early warning and alert systems for conservation applications. This information will help inform strategies for increasing tool access and use and evaluating how the tool contributes to conservation outcomes. I appreciate how your experiences can help inform how to improve satellite-based monitoring and alert systems.

This interview is divided into **three** parts, and I expect the interview will last 30-45 minutes to complete.

**PART I.**

**With this first part, I’m going to ask some questions about you and your experiences operating a satellite-based monitoring tool to aid land management decisions in response to ecosystem threats. These threats can be natural disasters such as wildfires, landslides, droughts, and floods; or more human-induced pressures, such as fires, logging, land degradation, and deforestation.**

1. What is your current position within the organization where you work? How long have you worked with this organization - and in what other capacities?
2. What experiences or positions did you hold before working with this organization that prepared you for the work you do now?
3. What is the system you currently support, and how long has your organization had this system in place?
4. How large is the team that supports system operation?
5. Do you see any challenges to the long-term sustainability of your tool?
   1. Do you have long-term institutional support?
   2. How does the organization financially support the system?
6. If you feel there are challenges to the long-term sustainability of the tool, in which ways have you tried to address these challenges?

**PART II.**

**For Part Two, I’m going to ask you questions about how people use your tool and the types of decisions they make with them.**

1. Can you describe who uses your tool and in what type of work environment (office, field, community, urban, remote ...)?
2. What kinds of decisions do these users make with the information from your tool?
3. Can you describe a successful application of your tool?
   1. Which factors do you think made this particular case successful?
4. Can you describe any unexpected applications of your tool? And do you think these could be applied more broadly?

**PART III.**

**Now we are on to Part Three. I’m going to ask you questions about how you design your tool and make tool improvements.**

1. Can you describe some challenges your users may face in using your tool?
2. How do you engage your users to inform your tool design or improvements?
   1. Can you give examples of approaches that worked well?
   2. Can you give examples of approaches that did not work?
3. Can you identify approaches that may help users make better decisions with your tool?
   1. Which approaches are related to technology enhancements? These include enhancements to improve data & systems.
   2. Which approaches are not related to technology?
   3. What are the barriers or challenges to implementing these approaches?
4. I’ve finished with the questions I set out to ask. Is there something that I didn’t ask that you would like to talk about related to your tool or tool development more generally to improve decisions that can result in positive conservation outcomes?

Thank you for taking the time to participate in this study. I truly appreciate your contribution to this research.

*Interview questions for Users of CEAS*

Opening: Hi, [name]. Thank you for taking the time to meet with me today. Before we begin, I want to remind you that this interview is being audio recorded for research purposes. I just want to confirm with you that you have received and read the informed consent form and that you agree to participate in this study.

[wait for verbal agreement]

The purpose of this study is to understand the barriers decision-makers face in using satellite-based early warning and alert systems for conservation applications. This information will help inform strategies for increasing tool access and use and evaluating how the tool contributes to conservation outcomes. I appreciate how your experiences can help inform how to improve satellite-based monitoring and alert systems.

This interview is divided into **four** parts, and I expect the interview will take no more than one hour to complete.

**PART I.**

**With this first part, I’m going to ask some questions about you and your experiences using satellite-based monitoring tools to aid land management decisions in response to ecosystem threats. These threats can be natural disasters such as wildfires, landslides, droughts, and floods; or more human-induced pressures, such as fires, logging, land degradation, and deforestation.**

1. How long have you worked at your current organization? What is your current position in the organization? What prior positions have you held there?
2. Describe the type of training or work experience they had prior to coming to this organization that prepared them for their current position.
3. What country do you currently work in? What regions of the country?
4. Does your scope of work include other countries or regions?
5. Can you describe your work environment in terms of how many people you interact with routinely and your access to technology and the internet?

**PART II.**

**For Part Two, I’m going to ask you questions about how you make informed decisions for your current or previous roles.**

1. What kinds of decisions do you make as part of your current position that are related to land use management or policies?
2. How do you know when you need to make those decisions? (Or what happens that usually triggers the need to make decisions or take action?)
3. What actions do you then take?
4. Would you be able to describe for me an example situation of when this has happened in your current work?

**PART III.**

**Now we are on to Part Three. I’m going to ask you questions about how you or others in your organization use satellite-based monitoring and alert tools to inform decisions.**

1. What satellite-based monitoring tools do you currently use for monitoring? When did you and/or your organization start using these tools?
2. What types of training have you received to use these tools?
3. Why did your organization decide to use this particular set of tools?
4. What are the kinds of decisions or analyses that you use these tools for in your work?
5. How often would you say you make use of satellite-based monitoring tools in your day-to-day work? Has that frequency of use changed over time? How so?
6. Do other people in your organization or workplace also use these tools or other tools? If so, which tools do they use, and what decisions do they make?
7. Can you describe situations where the tools were helpful?
   1. Can you give an example to illustrate how they were helpful?
8. Can you describe situations where the tools were not helpful?
   1. Can you give an example of a situation where the tool was not helpful?
9. Do you think there are other situations or decisions where satellite-based monitoring tools are not being used but that these tools can help?
10. What other types of tools do you currently use for monitoring, and what decisions do you make with these tools? For example, drones, mobile devices, software, field reports...
    1. In which ways are these tools helpful?
    2. In which ways are they not helpful?

**PART IV.**

**We are now on the final part of our interview, Part Four. I’m going to ask you questions about how to improve the design and operation of satellite-based monitoring and alert tools.**

1. How can you use a monitoring tool more effectively for decision-making? What is preventing you from using the tool more?
2. Can you think of ways monitoring tools can be improved or enhanced to help you make informed management decisions?
3. Can you give an example of recommendations you have made to a tool developer?
   1. What was the feedback process, and how was your input received?
4. I’ve finished with the questions I set out to ask. Is there something that I didn’t ask that you would like to talk about related to your use of monitoring and alert tools and recommendations for improvements?
5. Based on what you have responded to in this interview, can you think of anyone else within your organization that I should talk with who could also share their experiences? Is there a colleague outside of your organization that you would recommend I speak with?

Thank you for taking the time to participate in this study. I truly appreciate your contribution to this research. Thank you for participating in this study.