

Supplementary File 1: Pre-Intervention Questionnaire

January, 2021

Collaborative Systems Modeling to Inform Tiger Conservation Efforts

We are a research team from North Carolina State University (USA) and Bergen University (Norway) working to help conservation managers better understand complex systems and the social, economic and ecological dynamics of tiger farms.

Given that there is no universally recognized definition of “tiger farm”, for the purpose of this study we are using the following definition:

A tiger farm is a facility that keeps or breeds tigers in captivity with an intent (or reasonable probability) of supplying or directly engaging in the commercial trade in tiger products, be they body parts or derivatives. The application of this definition is not limited by the stated purpose of such facilities.

Some conservation organizations are working to phase out tiger farms in China, Laos, Thailand and Vietnam. They are concerned that trade in parts and derivatives of tigers from farms stimulates demand for tiger products and complicates law enforcement efforts aimed at reducing illegal tiger trade. Some experts argue that such demand could lead to an increase in the poaching of wild tigers, yet others argue that the presence of tiger farms may reduce pressure on wild tigers. Our research aims to help managers and decision-makers more fully understand this complex system by bringing together expert knowledge and systems modeling to explore potential impacts of policies related to tiger farming and the illegal tiger trade.

We are inviting you to participate in this study because of your expertise and involvement in either tiger conservation, trade, or farming, or wildlife trade and conservation more broadly. Your responses to this questionnaire will provide a foundation for understanding and developing strategies to address these problems in tiger conservation. Participation in this project, and this survey, is voluntary. All answers to this survey will be kept confidential by the research team.

Thank you in advance for your contribution to this important effort!

More information about the details of the study and your requested participation can be found [HERE](#). Before proceeding with the survey, please read and respond to the following statement: **“I have read and understand the information about the study that was presented to me. I agree to participate in this study with the understanding that I may**

choose not to participate. I understand that I may stop participating at any time without penalty or loss of benefits to which I am otherwise entitled.”

- ☐ Yes, I agree to participate in this study. Please take me to the survey!
- ☐ No, I do not want to participate in this study.

One last question before the survey itself! We have had requests to share a list of people participating in this project with the whole group. This list will not be made public by the research team beyond those participating. Given that there may be sensitivity around sharing this information, please let us know whether you would like your name to be shared.

- ☐ Yes, my name and organization may be shared with the study group
- ☐ No, I do not want my name or organization shared with the study group

Defining and Understanding the Problem

As part of the project, you will be working with a team ***to better define and understand potential impacts of tiger farms on the illegal tiger trade and tiger conservation***. Please answer the following from your own perspective.

Q1 From your perspective, what is the most important problem to address within this system?
(Write answer in the space provided.)

Q2 What factors are contributing to this problem?
(Write answer in the space provided.)

Q3 What is a possible solution to this problem? How do we fix this? (can give more than one)
(Write answer in the space provided.)

Q4 What are the challenges in implementing this solution? (can give more than one)
(Write answer in the space provided.)

5. What are your perspectives on tiger farms* and tiger conservation?

(Select *ONE* response for each item.) *A tiger farm is a facility that keeps or breeds tigers in captivity with an intent (or reasonable probability) of supplying or directly engaging in the commercial trade in tiger products, be they body parts or derivatives. The application of this definition is not limited by the stated purpose of such facilities.

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
The illegal trade in tiger parts and products is a major threat to wild tiger populations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tiger farms are currently a major threat to wild tiger populations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tiger farms facilitate the illegal trade in tiger parts and products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tiger farms increase the demand for wild tiger parts and products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If there were no tiger farms, poaching of wild tigers would increase (assuming demand for tiger parts and products remains the same).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tiger farms could reduce poaching pressure on wild tigers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tiger farms provide an important stock of tigers that could be reintroduced to enhance wild tiger populations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Tiger farms could stimulate demand for tiger products that lies beyond what can be feasibly produced through legitimate operations.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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It is impossible to understand the connections between tiger farms and wild tigers.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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All tiger farms should be closed or phased out.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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6. How confident are you in your knowledge of the following topics? (Select ONE response for each item.)

	Not at all Confident			Somewhat Confident			Very Confident
Tiger ecology and biology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tiger farming in Asia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Farming of non- tiger species	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wildlife trade	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Natural resource economics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Human behavior and behavior change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anti-poaching and law enforcement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Landscape conservation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Systems thinking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participatory (or collaborative) model building	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q23 Which category(ies) best describes the interest or type of organization you represent in this process? (check all that apply)

- ☐ International Non-Governmental Organization (NGO)
- ☐ National or local NGO
- ☐ Government
- ☐ Intergovernmental Organization
- ☐ Consultant
- ☐ Researcher
- ☐ Law Enforcement
- ☐ Other _____

7. How do you feel about the following statements regarding your conservation partners and this proposed project?

(Select ONE response for each item.)

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
I feel that individuals working in conservation organizations have similar goals as mine.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Individuals working in conservation organizations agree about approaches to tiger farms.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Individuals working in conservation organizations agree about the challenges impacting tiger conservation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I trust the strategies developed by the partners in this project will ultimately benefit wild tigers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident that the partners involved in this project will reach agreement about priority actions following this process.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe every partner on this project team is committed to doing what is best for tiger conservation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe we will be able to solve this problem.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organizations working on tiger conservation always do what they say they will do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Planning processes that
I have been a part of
usually result in better
conservation outcomes.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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I believe that my voice
will be heard in this
process.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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I am willing to work
cooperatively with other
participants in this
process.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Many organizations are starting to use systems thinking to solve problems. We are interested in your knowledge and opinions about this effort.

8. What does the term "systems thinking" mean to you?

9. Have you had any previous experience with systems thinking?

- ☐ Yes
- ☐ No
-

9a. If yes, please tell us a little about your experience(s) with systems thinking.

10. How valuable do you think systems thinking is...

(Select ONE response for each item.)

	Not at all valuable		Somewhat valuable		Highly Valuable	<i>Don't Know</i>
To your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To wildlife conservation in general	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10a. Please explain your response above.
