

Together for Wildlife - Interior Universities Research Coalition Student Research Grant Final Report

Student Name: Anna Santo

Principal Investigator: Dr. Kai Chan

Project Title: Designing and implementing a stakeholder and rights-holder consultation process to understand and support communities impacted by an Indigenous-led Grizzly Bear (ki?lawna? / *Ursus arctos horribilis*) reintroduction in southern British Columbia

What has been achieved over the duration of this grant award period?

I (PhD student Anna Santo) have completed the following activities:

- Ongoing support of the North Cascades Grizzly Bear Stewardship planning process. I have joined both the Working Group (broader coalition) and Steering Committee (narrower coalition of agencies and partners leading the stewardship planning) for this process. Additionally, I joined two subcommittees focused on developing strategies for wildlife coexistence and communications.

As a committee member, I participated in a 2-day/2-night planning retreat, at least twenty two-hour long planning meetings, and a half-day communications workshop (in addition to one-on-one meetings with my partners). My contributions have mostly been to add (1) social science experience and frameworks, and (2) relevant ideas/experiences that I have derived from my literature review, expert interviews, and survey research findings (more details below).

- **Contributions to Stewardship Strategy document and appendices.** The Steering Committee is leading development of a Stewardship Strategy for grizzly bear recovery in the North Cascades. I have helped write and edit the strategy, communications plan, and am currently helping prepare a coexistence appendix. I have also been invited to support our First Nations partners' planning for protocols for collecting Traditional Knowledge and engaging Nation communities.

- **Literature review.** I conducted a literature scan and review of peer-reviewed and gray literature on the topic of public engagement and large carnivore reintroduction. I drafted an annotated bibliography and synthesized key findings/ideas into a brief summary (slide deck) that I shared with the Steering Committee.
- **Expert interviews.** I conducted 20 interviews with large carnivore recovery experts. These experts have included people working on a variety of large carnivore reintroduction, recovery, augmentation, or coexistence projects around the world. I conducted a rapid analysis of these transcripts to quickly report key findings out to the Steering Committee for integrating into communications and coexistence planning. I am now qualitatively coding these transcripts to prepare a manuscript for an invited journal article.
- **Manning Park visitor survey.** A priority public engagement action was conducting a visitor survey about attitudes, experience, knowledge, and values around coexisting with bears and grizzly bear recover in Manning Park, a focal area for potential translocations. I worked with several BC government agencies and ministries, as well as WildSafeBC, First Nations Partners to design and implement an in-person, structured survey. We collected 113 surveys over 16 days of data collection, which took between 30-90 minutes each. An additional benefit is that I trained two wildlife coexistence professionals from BC Parks and WildSafe BC in survey research to assist.
- **Facilitating connections.** I am an international, transboundary student working on both the US and Canadian sides of the border. I frequently attend related meetings in the USA, such as the North Cascades Bear Aware Event, public meetings, and meetings with agency staff. One unexpected role that I have been able to play is that my awareness of efforts on both sides of the border have helped me be able to help forge connections between people working on similar efforts to connect on, for example, recreation planning, coexistence planning, or sharing data.

How does this work contribute to the overall project objectives (i.e., to completion of your thesis)?

Project objectives included supporting the completion of my dissertation, and contributing to three research objectives (1) deepening understanding of approaches and strategies for public engagement when planning wildlife reintroductions, (2) working with Ministry staff to develop a plan and priority actions to engage the public on grizzly bear recovery, and (3) beginning to implement an engagement/consultation plan.

This project contributed significantly to all of these objectives, though somewhat differently than originally conceptualized. It supported my thesis completion by enabling me to collect data to write at least two dissertation chapters, and supporting me to advance to PhD candidacy. Our efforts toward Objective 1 went largely to plan. My interviews with large carnivore recovery experts were very informative and provided many useful insights for communications and coexistence planning, such as the critical elements to include as part of the public engagement process, the social processes these actions supported (e.g., trust-building, norm shaping, etc), contextual elements to consider, and messaging strategies. I shared insights with the agencies involved in planning, and have been invited to publish a manuscript on this topic for practitioners around the world (due December).

Objectives 2 and 3 proceeded somewhat differently than anticipated. Most importantly, it was not appropriate for me to *lead* development of a public engagement plan, because a dedicated Provincial employee was appointed to this position/task. So, I shifted to supporting these processes from a social science perspective.

The most significant hurdle for Obj 3 is the lack of Provincial mandate to engage the public on grizzly bear recovery (as anticipated). Implementing an engagement plan with the Provincial agencies was not a feasible action. Rather, I was able to conduct a survey as an independent student researcher (with the support of BC Parks and the Steering Committee) with Manning Park visitors to support bear coexistence planning.

How have you communicated about this project and work?

- Within the academic community?
- With project partners including non-academic and community members?
- With government staff?

Academic community. My abstract to the IUCN International Conservation Translocation conference was accepted for both a conference presentation and our associated manuscript for inclusion in a special issue of *Animal Conservation* about planning animal translocations. Unfortunately, I will not be able to attend the conference in Australia, but I hope to submit a video presentation. I will submit our manuscript to the special issue. Furthermore, a second manuscript of viewpoints on grizzly bear recovery is in revisions at *Conservation Science and Practice*. I presented on this paper at the Ecological Society of America conference. I also coordinated two planning meetings with three UBC faculty that are in early stages of planning a project about bear coexistence in BC Parks, and co-created sections of our Manning Park survey instrument with them so that they may use it in their future work. I am in

early discussions with a researcher from the Stockholm Resilience Center about potential comparative studies.

I have also conducted an interview with the Ubysey student newspaper.

Government staff, First Nations government, and NGO project partners. I have communicated about this project regularly in our planning meetings. I have attended over 20 two-hour meetings, and have presented on research plans, progress, and findings at many meetings. I also planned at least 11 meetings with BC Parks, our First Nations Partners, WildSafeBC, Manning Park Resort, to envision, design, refine, test, and implement our Manning Park visitor survey. Staff from BC Parks and WildSafe BC also assisted with survey implementation.

Furthermore, I attended the International Grizzly Bear Commission meeting to share about our research during public comment. Several Washington State county commissioners followed up with specific requests for information, which I shared. I anticipate that our survey data will be shared with BC Provincial leadership in an anticipated November meeting.

How have you fulfilled the commitments of your knowledge management plan?

All of our data collection and sharing has been overseen by UBC's Behavioral Research Ethics Board and followed UBC and Tri-agency Research Data Management policies. We sought permission from all research participants to share research products and de-identified data in public reports, my dissertation, scientific research papers, and in public repositories.

This project was designed so that knowledge created could be directly mobilized in development of the North Cascades Grizzly Bear Stewardship Strategy. This commitment has been fulfilled by codeveloping research tools and regularly sharing findings directly with the Steering Committee. Stewardship Strategy documents have directly integrated research findings by, for example, drawing from lessons learned in other large carnivore recoveries about successful/unsuccessful messaging, or the importance of including particular engagement efforts (e.g., developing stakeholder advisory groups, developing a response matrix indicating the agency's planned responses to emergent wildlife conflict situations, or communicating directly about contingency planning if carnivore populations recover beyond expected numbers). The group has drawn from these lessons to develop an outreach and engagement strategy that Provincial staff will use (if granted permission to engage).

The Manning Park visitor survey has provided the first rigorous dataset about the opinions and preferences of a potentially affected user group about recovering grizzly bears, as well as a deeper understanding of knowledge and recall about safe coexistence practices, behaviors around bear attractant management, willingness to adopt coexistence practices, and more. This survey was designed to specifically gather information to support BC Parks' emerging Bear Strategy and to help identify opportunities to educate Manning Park visitors and improve upon infrastructure in ways that will support coexistence with all wildlife, and specifically grizzly bears if they are recovered in this landscape.

Importantly, this work was designed with the intention of braiding Western and Indigenous Knowledges and outreach to affected settler and First Nations communities. The interviews and surveys conducted through this project intentionally primarily targeted non-Indigenous participants (although some participants in both efforts were from Indigenous communities), because Okanagan Nation Alliance is designing their own protocol to reach out directly to their Nation communities. Our interview and survey protocols were reviewed by our First Nations Partners and designed to complement the efforts they are working on to engage their Nations. I have been invited and will help develop these protocols with them this fall.

Our upcoming journal articles/dissertation chapters will expand the reach of this knowledge mobilization to include practitioners working across different contexts on large carnivore, and specifically grizzly bear, recovery efforts in other parts of the world.

Where will the data and/or information collected from this project be stored?

Most of the data collected during this project (interviews, surveys) were collected under a Behavioral Research Ethics Board (BREB) approval process. Our BREB protocols state that:

- (1) Interview data will be stored for at least five years on the PI's and student researcher's encrypted and password-protected computer and/or UBC's OneDrive account. Participants did consent for future use of this work during the consent process.
- (2) Survey data will be stored for a minimum of five years on the Principal Investigator (Hagerman)'s UBC OneDrive account. It will also be retained on UBC PhD student (Santo)'s UBC OneDrive account for five years unless that account is removed following graduation. After removing any identifying information, the data will be shared in a public data repository (e.g., UBC Dataverse).

I will submit a public-facing report to BC Parks from the Manning Park survey findings by March 2024.

I anticipate that both datasets will be published in peer-reviewed journal articles, including a special issue of *Animal Conservation*. We are targeting *Conservation Biology*, *Conservation Letters*, and/or *Journal of Wildlife Management* for up to three anticipated articles from the Manning Park survey.

Please provide links to any publicly available information on or from your project:

The Stewardship Strategy documents created by the Steering Committee have not yet been publicly released. An associated website has been created and I expect that it will be made public in October 2023.

A profile about my work is highlighted on UBC's Public Scholars website:
<https://www.grad.ubc.ca/campus-community/meet-our-students/santo-anna>

An article in the Ubyssy student paper is upcoming (expected October 2023); I do not yet have the links.

Our manuscript in *Animal Conservation* is due for submission in December. I anticipate that it will be published within one year of that date.

My final report on the Manning Park survey will be released prior to March 2024. I will publish it on UBC CIRCLE.

Budget Reporting

Budget Item	Details	Proposed Amount	Actual Amount	Comments
Graduate student stipend	PhD student Santo; proposed stipend to hire student to support implementation of consultation plan	\$20,200	\$24,140	This change made after consulting with T4W program staff
Interview transcription	Professional transcription of interview audio	\$4,800	\$0	I found a way to transcribe for free
Field expenses	Mileage, supplies for conducting surveys, printing, camping	\$0	\$860	