

Final Evaluation Report

Your Details	
Full Name	Rocío Almuna Morales
Project Title	Promoting landscapes of coexistence for humans and predators: a transdisciplinary cross-cultural study
Application ID	38833-1
Date of this Report	02/02/2024

1. Indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
Understanding how different socioecological factors (knowledge, background, landscape attributes, predator distribution) impact stakeholders' tolerance towards predators (Biocultural map of human-predator interactions)				All relevant ecological and sociological data has been gathered through carnivore and raptor monitoring and interviewing local communities. Data will be analysed and published during next year (3 rd year of PhD program)
Explore human worldviews, knowledge and concerns about native predators using an art-based approach (Artvoice Project)				We collaborated with two rural schools where children interviewed their families seeking local stories about human-predator interactions and then used art to understand children perspective of the stories. Drawings were exposed in art exhibitions open for the local community.
Create a short film of the project				We filmed all the necessary shots, recorded relevant interviews, landscapes and wildlife. Next stage is post-production and broadcast the film which will be done next year.

2. Describe the three most important outcomes of your project.

a). Biocultural map of human-predator interactions, spatial and qualitative analysis:

We established 60 sampling sites in the Districts of Villarrica, Pucon and Curarrehue. On each sampling site we gathered data for estimating raptor and carnivore relative abundance, and we interviewed families asking about farming activities, predator knowledge, tolerance, and diverse experiences. The data on carnivore abundance was gathered thanks to a collaboration with a local academic from Pontificia Universidad Católica de Chile (Dr Nicolás Gálvez) who estimated carnivore relative abundance using camera traps in 2019. We surveyed raptors using line transect distance sampling (Buckland et al. 2001) from roads and trails surveying both sides of the transects. Two observers carried out the survey by foot, walking 1 km transects, listening for and visually detecting raptors. Every time a raptor was spotted, observers recorded the location using GPS, the species, date, time, age

(juvenile, immature, adult), sex (if possible), activity, habitat, weather, distance from observer using a range finder and azimuth. Finally, we selected families for interviewing doing door to door and snowball sampling. We are using generalised linear models (GLM) to evaluate the potential association between tolerance data (interviews), landscape attributes (GIS data) and predator relative abundance (camera traps and transects) (Bellier et al 2023).

b). Artvoice Project: We collaborated with two local rural schools and carried out in each school: four children's workshops, one art exhibition with parents and neighbours. Thanks to this we gathered 40 different stories and experiences about human-predator interactions, 30 children's drawings and 30 pre- and post-project surveys to evaluate impact of activities.

c). Short film: We recorded valuable audio-visual material on local stories, expert opinions, landscapes and wildlife that will be accessible to all audience, and broadcast in different contexts next year. For filming we used camera traps, a reflex camera, and a drone.

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

There was a long delay on university approvals for a human ethics amendment submitted before starting fieldwork which delayed the work with schools. On the other hand, fieldwork was unexpectedly long and with extreme weather conditions (including long periods of snow, storms and alerts of a volcano eruption) which made it difficult for starting interviews and raptors counts.

4. Describe the involvement of local communities and how they have benefitted from the project.

We worked directly with local communities; all participants we interviewed received a small, illustrated booklet for chicken protection against raptor predation. When the booklet was delivered, we dedicated time to explain its content to the recipients and have a conversation about the topic, answering questions and presenting the plans to continue this work.

Whilst carrying out fieldwork we established solid bonds with local scientists, authorities, conservationists, and indigenous elders with great dispositions for future collaborations. A few families participated in the creation of a short film about this project. The plan is to use this documentary as a means to tell their story at a national and global level, which could help highlighting the importance of planning for coexistence as a governance and public policy initiative.

5. Are there any plans to continue this work?

Yes, last year's project was part of my PhD thesis. I am currently in my 3rd year and will be still working on this project at least until October 2025. In 2023, we gathered an important portion of the data for analysis. This year we still need to gather some more data (mainly interviews) and footage for the short film, and we need to

contact relevant groups for showcasing the film in different instances. The rest of the scientific work will be to analyse the data gathered and produce at least two scientific articles which will be sent to indexed scientific journals for publication. We will also be working on the post-production of the film, hoping to have it ready for streaming in the second half of this year.

In the short term, we will focus on making the best use of the data and information collected for this PhD thesis, creating a variety of outreach products for sharing our results (described below). After this, it is my hope and desire to continue the work with the local communities of the southern Andes of Chile, focusing on human-predator coexistence, collaborating with local schools, universities, farmers, conservationists and Indigenous communities, strengthening the bonds already created and establishing new ones to increase our impact.

6. How do you plan to share the results of your work with others?

We are planning a strong outreach initiative creating a variety of products focusing mainly in three public types.

Academic public: Present results in international conferences and publish four scientific papers (in English and Spanish). Share in Chilean conservation newspapers, journals or podcasts (e.g. Ladera Sur, Revista Endémico, Revista Saberes Socioambientales, among others) the results of this study.

General public: Showcase the short film in schools, universities, Chilean film festivals, farmer fairs nearby the study area, upload it in open access platforms such as Vimeo, YouTube and Instagram. We are also planning on creating a small illustrated short book (in Spanish) telling the stories about native predators gathered during the course of this project. The aim of this illustrated book is to make traditional and indigenous knowledge accessible for newer generations at a national and global level.

Chilean authorities: Write a policy brief with guidelines for coexistence based not only in the information gathered in this project but also in the literature review I made in the first year of my PhD.

7. Looking ahead, what do you feel are the important next steps?

I consider that the most important next steps are to continue to extend our network to authorities, farmers, local conservation leaders and organisations to share the results of this study by showcasing the short film. To do this it is important to work hard on the post-production of the film to have it ready for streaming as soon as possible. I believe audio-visual material is a strong element enhance deeper reflections and engagement with the subject of coexistence. I believe that the film can nurture the audience connection with rural life and native predator conservation by sharing relevant information through beautiful images, sounds and stories that will be engraved in people's minds.

Secondly, publishing scientific articles and the policy brief is also a high priority for us. This year we will be working in 2-3 articles to be published in high ranked scientific journals.

8. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the Foundation receive any publicity during the course of your work?

Yes, certainly. I presented this project in two different seminars and one conference giving credits to The Rufford's Foundation's support. The organisation was also given credit on social media with all the publications associated to this project. We will continue to give credits to The Rufford Foundation on any future material coming from this project.

9. Provide a full list of all the members of your team and their role in the project.

Peter Speldewinde – UWA Primary supervisor (University of Western Australia)

Cristina Estima Ramalho – UWA Co-supervisor

Stephen Hopper – UWA Co-supervisor

Tomas Ibarra – PUC Co-supervisor (Pontificia Universidad Católica de Chile).

Silvia N. Manquilef – Mapuche Elder, Indigenous Ecological Knowledge

María Lara Millapán – Mapuche Elder, Indigenous Ecological Knowledge

Romina Triviño – Field assistant (camera traps, raptor counts, interviews), main camera, postproduction editor

Fernando Novoa – Field assistant (camera traps)

Manuela Alamos – Field assistant (school workshops)

Anais Valenzuela – Field assistant (school workshops)

Camilo Gouet – Field assistant (school workshops)

Ramón Godoy y Lidia – Mapuche farmers, relevant collaborators for networking and film production.

Nicolás Gálvez – Scientist from Universidad Católica, collaborator for film production and native carnivore data.

Camila Sáez – Local citizen, collaborator for film production

10. Any other comments?

I would like to sincerely thank The Rufford Foundation for considering this project relevant and financing it, without your support it would have been impossible to carry out fieldwork of such quality and dedication. There is still work to be done and would highly appreciate to continue counting with your support.