Final Evaluation Report

Your Details	
Full Name	WAJNER MATIAS
Project Title	Effects of Subsistence Hunting on Wildlife: An Analysis of Human/Wildlife Relationships in Northern Córdoba, Argentina
Application ID	40591-1
Date of this Report	01/04/2025

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
a) Characterization of the universe of terrestrial vertebrate animals larger than 0.5 kg (potential objects of hunting)				This objective was addressed through the integration of bibliographic sources and field methodologies to assess the richness of medium- and large-sized mammals (>1 kg). We used three complementary approaches: I) A bibliographic review based on Torres & Tamburini (2018) and SAyDS-SAREM (2019); II) Interviews with local residents (n = 39); III) Camera trapping (87 stations across 434 km², totaling 4,453 trap-days).
b)Analysis between terrestrial vertebrates larger than 0.5 kg found in the field and those expected according to bibliography				According to bibliographic sources, the expected richness was 20 species (Torres & Tamburini, 2018) to 24 species (SAyDS-SAREM, 2019). Fieldwork confirmed 21 of these species. Interviews recorded 22 species, including one not previously expected (*Hydrochoerus hydrochaeris*), while camera traps detected 20 species, including one unexpected exotic species (*Axis axis*). Field records also revealed the presence of threatened species in Córdoba province, such as *Tamandua tetradactyla* (EN), *Catagonus wagneri* (CR), *Leopardus colocola* (EN), and *Cabassous chacoensis* (EN). Among the field methods, interviews proved more efficient in achieving species richness

				saturation, while camera traps provided valuable behavioral and ecological information. Additionally, the visual material collected supported meaningful knowledge exchange with local residents. This multi-method approach was key to surveying wildlife in this challenging environment.
c)Evaluation of the cultural importance of hunting animals				The data were collected during various fieldwork campaigns, with over 39 interviews conducted. The outstanding work includes data organisation, analysis, and subsequent publication. Medium and large-sized vertebrates in the study area hold multiple cultural values. Some species are important as sources of food for local communities, while certain animal parts are used in crafts (e.g. *Rhea americana* feathers). Others are perceived as harmful due to predation on livestock, damage to crops, or posing risks to human safety. One of the most significant findings was the recognition that wild animals are part of the everyday life of local people, who engage in dialogical relationships with them and see themselves as co-inhabitants of a shared territory. This perspective challenges conventional conservation categories such as "native" or "exotic," which are often considered irrelevant or fluid in local understandings. Instead, there is a more dynamic view of ecosystems, perceived as evolving and non-static systems shaped by long-term coexistence (Wajner et al. 2023).

d)Ranking of the most hunted species, their seasonality and purposes of use				To identify the most hunted species and understand their seasonality and uses, it was essential to carry out in-depth fieldwork with a strong ethnographic component, combined with semi-structured interviews. These methodologies provided information on hunting techniques, seasons, and locations, as well as data on the number of wild animals hunted and consumed by 17 local families over the course of one year. This approach allowed us to gain trust and access detailed local knowledge. The most hunted species for food are the three-banded armadillo (*Tolypeutes matacus*), the chacoan cavy (*Dolichotis salinicola*), and the plains vizcacha (*Lagostomus maximus*). Among larger animals, the collared peccary (*Dicotyles tajacu*) stands out as the most hunted species in the area. Hunting of *Tolypeutes matacus* and *Dicotyles tajacu* is more frequent in winter, when individuals are fatter and more active, making them easier and more desirable to hunt. In contrast, hunting of *Dolichotis salinicola* and *Lagostomus maximus* occurs throughout the year, with no marked seasonal pattern.
e)Carry out a participatory workshop with the local community to reach a consensus on fauna management actions to improve the living				Four participatory workshops were conducted with strong attendance from local community members, addressing human-wildlife conflict issues Four participatory workshops were held between 2024 and 2025, with variable attendance ranging

conditions of local residents and wildlife				from 5 to 22 participants. During these meetings, participants discussed topics such as local wildlife, past and present hunting practices, species distribution, and environmental changes. The workshops also featured shared meals, games, and informal activities, which fostered trust and encouraged open, horizontal exchange. These interactions laid the groundwork for discussing possible management actions. Among the topics addressed, participants reflected on how to deal with conflictive relationships with carnivores such as the puma (*Puma concolor*) and the culpeo fox (*Lycalopex culpaeus*) when they prey on livestock. Although formal agreements were not reached, these discussions documented local perspectives and marked an important step toward collaborative wildlife management. Selected photographs from these workshops have been included in Project_Update_August_2024.pdf. Additional images from the first and second workshops will be presented in Annex_FinalReport_2025.pdf (Fig 1-4).
f) Prepare educational material in graphic format that will be useful for schools in the area, reflecting the importance of wildlife and its conservation.				In collaboration with a Professorial Chair in Biology at the National University of Córdoba (Argentina), the educational materials where developed. It is expected to be delivered to the local community by July 2025.

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

a). Meaningful community engagement and trust-building with local stakeholders.

Beyond achieving most proposed objectives, the project fostered significant integration with rural communities. This collaboration not only ensured reliable data collection but also created a reciprocal exchange of knowledge: local residents actively invited me to discuss their realities and explore their lands. Such trust underscores the project's long-term value, as outcomes are both scientifically robust and socially relevant to the communities involved.

b). Dual-impact dissemination:
Scientific and public outreach. The project generated peer-reviewed scientific publications alongside accessible science communication.

Public engagement efforts included:

- Three Facebook posts in a local community outlet, receiving 70, 97, and 81 likes respectively, demonstrating grassroots reach (see Annex_FinalReport_2025).
- A feature in a Córdoba city-based media outlet, which garnered 1,079 likes, significantly expanding visibility beyond the study area (see Annex_FinalReport_2025).
- Interviews with local newspapers near the research site.

This multi-platform approach bridged gaps between academic research and public awareness.

c). Pioneering research into clandestine hunting practices. The project achieved rare access to illegal hunting networks—a group typically closed to outsiders due to legal and social barriers. Through anonymous data collection, I documented hunters' behaviours, motivations, and ecological impacts. These ethically gathered insights provide a foundation for developing targeted conservation strategies addressing human-wildlife conflict root causes.

d) One of the most significant achievements of this project has been documenting and reporting several species previously unrecorded in the study area, including multiple threatened taxa. Key findings include the Endangered Chacoan peccary (*Parachoerus wagneri*; Wajner et al., 2025); the southern tamandua (*Tamandua tetradactyla*; Wajner et al., 2024); capybara (*Hydrochoerus hydrochaeris*; Wajner et al., 2023); Pampas Cat (*Leopardus colocola*). In the case of Parachoerus wagneri, a flagship species for the Chaco region, in addition to records of its presence, hairs, skins, and skulls have been collected and handed over to local experts (Dr. Ricardo Torres) for study. These findings not only provide crucial data for regional conservation assessments, but have been actively shared with local communities through workshops, enhancing their role in protecting these threatened species.

e) An educational resource has been developed for the local school, introducing students to native wildlife species and their conservation challenges.

Additional achievements (supported by Rufford funding):

- Conducted 20 field expeditions, deploying 87 camera-trap stations and completing 40 + interviews and two participatory workshops.
- Substantial progress toward PhD completion, including data analysis and manuscript preparation.

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

The project faced initial challenges in studying sensitive topics like illegal hunting while building trust with local communities. Key issues included navigating ethical concerns—discussing hunting without alienating locals—and limited resources for camera-trap deployment, which delayed data collection. These were resolved through adaptive methods: adding to formal interviews an ethnographic immersion, using camera traps to spark dialogue (financed in part with Rufford grants), and ensuring anonymity for sensitive data. Community engagement was strengthened via grassroots outreach, including sharing wildlife images on WhatsApp and local radio, and participating in village events such as birthdays, Virgin's Day, weddings, meat festivals, etc. These approaches not only overcame barriers but also transformed challenges into opportunities, fostering a participatory framework where local knowledge and scientific research jointly inform conservation strategies.

A second hurdle arose in bridging academic and local perspectives. Early fieldwork revealed gaps between theoretical conservation goals and community practices. By integrating camera-trap evidence with informal exchanges—like joining communal activities and workshops—the project gradually built mutual understanding. This allowed delicate topics (e.g., hunting) to emerge organically, while public science communication (interviews, social media) made findings accessible. Ultimately, flexibility in methods and sustained community presence turned initial obstacles into the project's core strength: a model for inclusive, ethically grounded conservation research.

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

The project established a strong collaborative relationship with local communities, transforming them from research subjects into active partners. Through an ethnographic approach that respected local knowledge and customs, community members became deeply involved in multiple aspects of the work. They generously provided access to their lands for wildlife monitoring, participated in over 40 interviews, and joined two participatory workshops where knowledge was exchanged bidirectionally. The strategic use of camera traps (totaling 87 stations) proved particularly effective - the wildlife images captured became powerful conversation starters that residents eagerly discussed, with many actively requesting cameras for their own properties. This engagement was further strengthened through community radio appearances and social media outreach, including Facebook posts, significantly raising awareness about local biodiversity.

Local community members derived multiple tangible benefits from their participation. Many gained new skills in wildlife monitoring and data collection during our workshops, while others gained experience by accompanying as field guides. The project validated and documented traditional ecological knowledge that had previously been overlooked by conventional conservation approaches. Perhaps most significantly, it created safe spaces for open dialogue about sensitive

but crucial topics like hunting practices through informal interactions at community events. My unexpected election as secretary of the local school cooperative, despite not having sought the position, demonstrated the level of trust and mutual respect that developed. These outcomes show how the project moved beyond simple data extraction to establish lasting relationships and empower communities in wildlife conservation efforts that continue beyond the project timeline.

Furthermore, the development of educational materials for local schools represents a tangible benefit for the community, particularly given the institution's limited administrative resources.

The participatory approach proved particularly valuable when addressing complex issues like human-wildlife conflict, where local perspectives were essential for developing realistic solutions. By combining scientific methods with traditional knowledge through sustained engagement, the project achieved both rigorous research outcomes and meaningful community development.

5. Are there any plans to continue this work?

Following discussions with my doctoral advisory committee on March 28, 2025, I will be expanding this research in three key directions:

First, I will deepen the investigation into local communities' relationships with pumas (*Puma concolor*), a central theme of my thesis. This requires additional fieldwork to gather more robust ethnographic data on human-puma interactions, complementing existing camera-trap evidence.

Second, to strengthen the wildlife abundance analysis, I need to deploy more camera traps (expanding beyond the current 87 stations), particularly in two critical habitats: 1) grazing fields where and 2) forest islands within the salt flats ecosystem that may serve as crucial wildlife corridors.

Finally, I am committed to completing the community engagement cycle by returning to local villages with educational materials developed from our findings. These "knowledge return" trips will include workshops to discuss:

- Wildlife monitoring results
- Coexistence strategies
- Ongoing dialogues about conservation practices

This continuation work will not only complete my doctoral research requirements but also maintain the reciprocal relationship with communities that has become a hallmark of this project. The additional data collection and community feedback sessions are planned through 2025-26, with the goal of creating both academic outputs and practical conservation tools tailored to local needs.

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

Community Engagement.

- Participatory Workshops: Host community workshops in the study area to present key findings through interactive formats.

- Educational Materials including: Illustrated wildlife guides featuring animals and landscape images.
- Local Media: Continue collaboration with Radio Comunitaria La Plaza (San Francisco del Chañar) and Facebook posts to share updates in accessible formats.

Academic Publications

- Short-term: Submit a paper on wildlife hunting practices in northern Córdoba to peer-reviewed journals (e.g., Journal of Ethnobiology or Conservation & Society).
- Long-term: Publish broader thesis findings on human-puma coexistence and participatory methods in high-impact journals (e.g., Biological Conservation).
- Open Access: Ensure all publications are freely available to local stakeholders via institutional repositories.
- Conference Presentations: Present results at both academic (e.g., ATBC Latin America) and community-focused events.
- ResearchGate/Google Scholar: Upload publications and field reports.

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

Key Next Steps Timeline:

April-December 2025: Organize, analyse, write and publish the results of the objectives achieved in the period that passed.

October 2025- May 2026: Additional camera-trap deployment

January-July 2026: Human-puma relationship interviews

August-September 2026: Community return workshops

October 2025: Final data analysis integration

This planned work will significantly enhance both the scientific rigor and applied impact of the research.

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?

The Rufford Foundation was duly credited as a project funder in the following peer-reviewed publications:

Wajner et al. (2025)

2025 Wajner M., Merlo F., Argibay D., & Zamudio F. (2025). Filling gaps in the southern range of the Endangered Chacoan Peccary, Parachoerus wagneri (Rusconi, 1930) (Artiodactyla, Tayassuidae), in Argentin. Check List 21 (1): 184–190. https://doi.org/10.15560/21.1.184

Funding statement: Explicitly acknowledges The Rufford Foundation's support.

Wajner et al. (2024)
2024. Wajner, M., Merlo, F., Argibay, D., Orona, M., Campos, S., & Zamudio, F. (2024). Nuevos registros del oso melero Tamandua tetradactyla (Linnaeus, 1758) en el centro y sur de la provincia de Santiago del Estero, República Argentina. Notas sobre Mamíferos Sudamericanos, 6(1).

Includes Rufford in the funding acknowledgments.

The Rufford Foundation's logo and acknowledgment were prominently included in all educational materials produced for local schools.

Conference Presentation. Wajner y Zamudio 2024
The Rufford logo was displayed in the Conference Presentation (uploaded to the Rufford Foundation's platform), highlighting its role in enabling the research.

Additional Publicity
Community Engagement: While not formally documented in publications, the Foundation's support was verbally acknowledged during:

- Workshops with local communities.
- Radio interviews (e.g., Radio La Plaza).
- Social media posts about project milestones.

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

Matias Wajner
PhD Researcher/Project Lead. Conducted 20 field expeditions, executed all fieldwork (87 camera traps, 40+ interviews). Synthesized interdisciplinary datasets. Developed outreach materials

Dr. Fernando Zamudio
Project Director. Provided overall research guidance and field supervision. Advised on analytical methodologies and study design

Dr. Celeste Medrano
Co-Director (Qualitative Methods). Advised on qualitative research approaches and ethnographic methods. Guided community engagement strategies

Dr. Julieta Torrico Chalabe
Field Research. Assisted in data collection and community interactions

Dr. Julia Astegiano & Dr. Ana Calviño
Methodological Advisors. Quantitative Methods Specialists. Designed statistical frameworks for data analysis. Reviewed ecological data processing

Dr. Carla Rueda

Community Engagement Advisor. Developed participatory workshop methodologies. Advised on local knowledge integration approaches

Magalí Beato y Marisol Segovia
The educational materials for local schools were co-created through a participatory process with them.

Local Collaborators
Field Assistants. Community liaison and radio outreach coordinator. Supported camera-trap deployment and logistics

10. Any other comments?

I am profoundly grateful to The Rufford Foundation for their crucial funding support, which enabled this research on human-wildlife coexistence in Argentina's Chaco region. At a time when the country faces severe economic challenges, such financial support is indispensable for conducting conservation-focused fieldwork. Without The Rufford Foundation's commitment, it would have been impossible to document threatened species like the Chacoan peccary and southern tamandua; Implement community-based conservation strategies with local stakeholders; Generate scientific knowledge that bridges academic and traditional ecological perspectives.
This support has directly contributed to protecting biodiversity in working landscapes where species survival hinges on collaborative solutions.