



# Living with the wolf

## A Luhmannian perspective on the human-wolf conflict in Redes Natural Park, Spain

Isabeau Ottolini

April 2018

MSc Thesis CPT-81330

# Living with the wolf

## A Luhmannian perspective on the human-wolf conflict in Redes Natural Park, Spain

### Written by:

Isabeau Romaine Ottolini

Registration number: 920204-633-010

Contact: isabeau.ottolini@wur.nl

Submission date: 23<sup>th</sup> of April, 2018

### Written for:

Wageningen University and Research

Master Development and Rural Innovation

Strategic Communication Chair Group

Course code: CPT-81330

### Supervisors:

Arjaan Pellis & Dr.ir. Jasper de Vries

### Examiner:

Dr. ir. JM (Annemarie) van Paassen

**Image title page:** Patricia Ropohl. *The Iberian wolf in the ever-changing environment*

## Abstract

In present day many rural areas across the world suffer from issues such as rural depopulation and land abandonment. Whilst such issues are generally seen as negative, it can have positive effects, such as giving space for the comeback of wild nature. Nonetheless, this can lead to an increase in interactions between humans and wildlife. Sometimes such interactions are called “human-wildlife conflicts” when resulting in negative impacts on involved humans and/or wildlife. Such is also the case with the human-wolf conflict. This is often framed as a conflict that emerges due to depredation of wolves upon livestock, and great efforts are dedicated to resolving the conflict. However, scientific literature points out that human-wolf conflicts continue to endure despite such efforts. Hence, instead of proposing solutions or asking why current solutions are ineffective in resolving the conflict, this thesis proposes a new way of looking at such conflicts by making use of Luhmann’s Social Systems Theory and relating it to the concepts of human-wildlife conflicts and coping strategies. Through a case study in Redes Natural Park, Spain, and making use of interviews and participant observation, data has been collected to research how the human-wolf conflict becomes constructed through communications, and what role coping strategies play therein.

This research shows that the human-wolf conflict englobes a multiplicity of aspects, thereby going beyond traditional conceptualisations of the conflict, i.e. wolf eating livestock. Instead, it can be considered as a many-headed monster built upon contrasting discourses that include aspects such as changes in people their ways of life, rural-urban dichotomy, top-down approaches, struggles in the livestock sector and the role of politics and the media. Whilst in the past the conflict might have indeed consisted of wolves preying on livestock, over the years the conflict has grown, contaminating surrounding discourses and integrating these into an ever larger conflict discourse. In turn, actors engage in diverse coping strategies to deal with the uncertainties related to the conflict. However, these strategies mainly provide more fuel for the conflict to endure over time, instead of solving it. Hence, the conceptualisation of the conflict and the coping strategies employed to deal with it are related: as the conflict is conceptualised through communicative actions, different coping strategies emerge, proliferate or perish, which in turn (re)shape the conflict. As a result, the conflict discourse changes shape, size and contents over time.

All in all, this research provides a novel way in which conflicts can be researched and understood. Furthermore, it leads to the realisation that we, both the actors in the field and scientists researching the conflict, must be critical of what we do in relation to the conflict, and be more aware of the key role our communicative acts play in the emergence and proliferation of conflicts.

*Keywords: human-wolf conflict, coping strategies, communications, Social Systems Theory, rural depopulation, Spain.*

## Resumen

En el presente muchas zonas rurales padecen de desafíos como la despoblación rural o el abandono de terrenos agrícolas. Mientras que estos generalmente son percibidos como algo negativo, pueden conllevar efectos positivos, como permitir el regreso de la naturaleza salvaje. Sin embargo, puede llevar a un aumento en las interacciones entre fauna silvestre y los humanos, que son vistos como conflictos cuando resultan en efectos negativos sobre humanos y/o la fauna silvestre. Tal es el caso con el conflicto entre lobos y humanos. Esto a menudo se considera como un conflicto que surge debido a la depredación de lobos sobre el ganado, y se realizan grandes esfuerzos para resolver tal conflicto. Sin embargo, la literatura científica señala que este tipo de conflicto siguen perdurando, a pesar de los esfuerzos realizados. Por lo tanto, en lugar de proponer soluciones o preguntar por qué las soluciones actuales no logran resolver el conflicto, esta tesis propone una nueva forma para mirar a los conflictos, haciendo uso de la Teoría de los Sistemas Sociales de Luhmann y relacionándola con los conceptos de conflicto entre humanos y vida silvestre y estrategias de afrontamiento. A través de un estudio de caso en el Parque Natural de Redes, España, y usando las entrevistas y la observación participación, se recopilaron datos para investigar cómo se construye el conflicto del lobo a través de las comunicaciones, y qué papel juegan las estrategias de afrontamiento.

Esta investigación muestra que el conflicto entre humanos y lobos engloba una multiplicidad de aspectos, yendo más allá de las conceptualizaciones tradicionales del conflicto, es decir, el del lobo comiendo el ganado. En su lugar, se puede considerar el conflicto como un monstruo con múltiples cabezas, basado sobre discursos contrastantes que incluyen aspectos como cambios en las formas de vida, la dicotomía rural-urbana, el enfoque “top-down”, desafíos en el sector ganadero y el papel de la política y los medios de comunicación. Mientras que en el pasado el conflicto pudo haber consistido principalmente en los lobos comiendo el ganado, a lo largo de los años el conflicto ha crecido, contaminando los discursos circundantes e integrándolos en un discurso de conflicto cada vez más amplio. A su vez, los actores se involucran en diversas estrategias de afrontamiento para enfrentar las incertidumbres que emergen a partir del conflicto. Sin embargo, estas estrategias, en vez de resolverlo, proporcionan más combustible para que el conflicto perdure en el tiempo. Por lo tanto, la conceptualización del conflicto y las estrategias de afrontamiento están relacionadas: a medida que el conflicto se conceptualiza a través de las acciones comunicativas, surgen, proliferan o perecen diferentes estrategias de afrontamiento que, a su vez, (re)configuran el conflicto. Como resultado, el discurso del conflicto cambia de forma, tamaño y contenido a lo largo del tiempo.

En último lugar, esta investigación ofrece una nueva manera para investigar y llegar a entender los conflictos. Además, lleva a la comprensión de que nosotros, tanto los actores en el campo y los científicos que investigan el conflicto, debemos ser críticos sobre lo que hacemos en relación al conflicto y ser más conscientes del papel fundamental que desempeñan nuestros actos comunicativos en la aparición y proliferación de conflictos.

Palabras clave: *conflicto humano-lobo, estrategias de afrontamiento, comunicaciones, teoría de los sistemas sociales, despoblación rural, España.*

## Foreword

Ever since my earliest memories I have been fascinated with nature and wildlife, including the wolf. For many years now I have felt a deep sense of connection with this large carnivore, seeing it as a symbol of wild, untamed nature I so much love. In the past my interest in the species led me to learn more about its biology, conservation and the conflict that exists between humans and wolves. However, over the years certain academic choices eventually directed me away from the wolf. Then, about a year ago, I had to start making choices about my MSc thesis. Whilst I had no intention whatsoever to rekindle my passion for the wolf, there it was one day: the idea to research the conflict I had been hearing about for so many years. Aware of my personal biases, I commenced this adventure with great enthusiasm, but also with considerable caution. Looking back, I am very happy for the choices I took, as this research and its perspective on the human-wolf conflict has provided me with a profound knowledge on the issue, in addition to being able to see similar workings of conflict discourses in other conflicts I encounter in my professional and personal life.

Thus, I can now present with pride this Master Thesis. And looking back at the entire process of doing my thesis, I feel incredibly grateful. This feeling of gratitude comes from the fact that so many amazing people have been there for me along the way, helping with the thousand-and-one worries, giving good advice, telling me they believe I can do it, listening to me... Without them, going through the entire process of writing an MSc thesis would have been much harder.

Where to start with thanking people? My supervisors, who always tried to make me go further, try harder, be more creative, and especially, to be confident in my research and myself. The Thesis Ring, with all their support, enthusiasm, and feedback. My classmates, professors, and friends, who continuously showed their interest in my topic of research, and believed in me when I certainly did not. A dear housemate, for sticking together in the good and the bad times and was always in for a long walk or dinner together. A treasured friend, for making me feel less alone when everything seemed to fall apart.

I would also like to thank all the amazing people I met during my fieldwork, for their enthusiastic participation and for offering me a deeper understanding, not only of the research topic, but also their traditions and values. I feel deep gratitude for all those who have welcomed me into their homes and lives, entrusting me with their hopes and fears, dreams and worries. Spending time together has made me know the area in an intimate way, and I have fallen in love with the Redes Natural Park. It is my dearest wish to one day again return and learn more from all of you.

Then, there is also my family, who have supported me with every step of the way and giving me the much needed space to just be. Lastly, I would like to thank my partner, for putting up with me during those long months, months in which the thesis became the centre of my life and I tended to forget about all other things in my pursuit of the perfect thesis. For reminding me there is more to life than always doing my best at all cost.

But I am not only grateful for the people who have surrounded me during these months. My gratitude also concerns the life lessons I have learnt during this time. For me, writing a Master

Thesis has not been so much about how to do academic research, but how to cope with an all-absorbing perfectionism that led me to the brink of a burnout. This hindered me to work on my thesis for many weeks on end, being caught up in a paralyzing trap of anxiety, fear and frustration. However, I eventually struggled free and learnt a valuable lesson on endurance: even if you fall down a thousand times, and feel like you have failed time after time, if you give yourself the necessary time, space and love to recover, it might just be that the thousand-and-first time you actually succeed. Previous failure never means it will not work out the next time you try.

*In memory of a interviewee, whose unexpected death during my thesis came as a big shock. Although we only spoke once, you transmitted a great energy with your knowledge and passion for both the mountains and the protection and conservation of its people. Que descanses en paz.*

# TABLE OF CONTENTS

Abstract.....	ii
Resumen.....	iii
Foreword.....	iv
List of abbreviations, tables and images .....	ix
Abbreviations.....	ix
Images .....	ix
Tables.....	x
Glossary .....	x
CHAPTER 1. INTRODUCTION .....	1
1.1. Problem description.....	3
1.2. Research aim and research questions .....	3
1.3. Relevance of the study .....	4
1.4. Background of Redes Natural Park.....	4
1.5. Outline of the thesis.....	7
CHAPTER 2. THEORETICAL FRAMEWORK.....	8
2.1. Conflicts .....	8
2.2. Human-wildlife conflicts.....	10
2.3. Coping strategies to human-wildlife conflict .....	13
2.4. Assembling the theoretical framework .....	14
CHAPTER 3. RESEARCH METHODS .....	16
3.1. Setting, access and selection of respondents.....	16
3.2. Research methods - Data collection and analysis .....	17
3.2.1. Interviews .....	18
3.2.2. Participant observation .....	19
3.2.3. Data analysis.....	20
3.2.4. Ethics .....	21

3.3.	Quality of the research .....	21
3.3.1.	Limitations.....	21
3.3.2.	Positionality as researcher .....	23
CHAPTER 4. CONTEXT.....		25
4.1.	Wolf population and damages. Spatial and temporal evolution.....	25
4.2.	Changes in natural resource management of Redes.....	26
4.3.	Livestock management and practices.....	28
4.4.	Management of the wolf population and damages.....	31
4.4.1.	Traditional management .....	31
4.4.1.	Present management .....	32
CHAPTER 5. FINDINGS.....		36
5.1.	The wolf in the past.....	36
5.2.	The wolf in the present.....	37
5.2.1.	Wolf sightings.....	37
5.2.2.	Wolf attacks. How big is the problem? .....	38
5.2.3.	Reasons for changing the dimensions of the conflict .....	39
5.2.4.	What has changed, and why? .....	41
5.2.5.	Politics, the media and the conflict.....	43
5.2.6.	Governmental solution I: Compensation payment scheme. ....	45
5.2.7.	Governmental solution II. Wolf Management Plan.....	49
5.2.8.	Role of ganaderos .....	52
5.2.9.	Proposed alternative solutions .....	53
5.2.10.	Use of social pressure .....	57
5.3.	The wolf and the future .....	58
CHAPTER 6. ANALYSIS .....		59
6.1.	The conceptualisation of the human-wolf conflict in Redes .....	59
6.2.	The coping strategies used to deal with the conflict.....	63

CHAPTER 7. DISCUSSION.....	66
7.1. Rural-urban dichotomy. Ontological and epistemological aspects of the conflict ...	66
7.2. Which approach to use when dealing with the conflict: top-down or bottom-up? ...	69
7.3. The role of depopulation in the conflict.....	71
CHAPTER 8. CONCLUSIONS .....	75
8.1. Conclusion of the research .....	75
1 <sup>st</sup> Specific Research Question.....	75
2 <sup>nd</sup> Specific Research Question.....	75
General Research Question.....	76
8.2. The relevance of the research.....	77
8.3. Further research.....	78
Appendices.....	81
Appendix A. Detailed map of Redes Natural Park .....	81
Appendix B. Material for data collection .....	82
Appendix C. List of data sources .....	84
Appendix D. Wolf Conference program.....	86
Bibliography .....	93

## List of abbreviations, tables and images

### Abbreviations

**ASCEL:** Asociación para la conservación y estudio del lobo ibérico (*in English: Association for the Conservation and Study of the Iberian Wolf*)

**CAP:** Common Agricultural Policy

**EU:** European Union

**FAPAS:** Fondo para la Protección de los Animales Salvajes (*in English: Foundation for the protection of wildlife*)

**FEMP:** Federación Española de Municipios y Provincias (*in English: Spanish Federation of Municipalities and Provinces*)

**HWC:** Human-wildlife conflict

**IDC** Instituto de Desarrollo Comunitario (*in English: Communitary Development Institute*)

**IUCN:** Interational Union for Conservation of Nature

**NGO:** Non-Governmental Organisation

**PGL:** Plan de Gestión del Lobo (*in English: Wolf Management Plan*)

**REDER:** Red Estatal de Desarrollo Rural (*in English: State Network for rural development*)

**REDR:** Red Española de Resarrollo Rural (*in English: Spanish Network for rural development*)

**SRQ:** specific research question

**UNISDR:** United Nations Office for Disaster Risk Reduction

### Images

Image 1. Spanish municipalities with less than 500 inhabitants.....	1
Image 2. Location of Redes Natural Park within Spain.....	5
Image 3. Views over the Redes Natural Park from the Majada de la Gamonal .....	5
Image 4. A stone cabin in the Majada de Melordaña .....	6
Image 5. A typical hórreo .....	7
Image 6. The theoretical framework.....	15
Image 7. Illustration of the second participation observation event .....	19
Image 8. Illustration of the third participation observation event.....	19
Image 9. Evolution of the wolf's distribution in Spain.....	26
Image 10. The Majada de Melordaña .....	29
Image 11. Walking with an adult and a puppy mastiff when visiting a ganadero.....	31

Image 12. A mastiff guarding goats in a fenced area .....	31
Image 13. Traditional wolf trap in Caín, León, to the East of Redes .....	32
Image 14. Domingo Calvo Testón, the famous alimañero of Redes, with Valdreguín.....	32
Image 15. Criteria for the compensation payment scheme.....	33
Image 16. Wolf culling quota per management area in Asturias for the period 2017-2018....	35
Image 17. Sighting of an Iberian wolf in Redes .....	38
Image 18. Equine livestock.....	42
Image 19. Dead sheep found near Orlé, in Redes.....	44
Image 20. Dead wolf hanging from a signpost in Teverga, Asturias .....	44
Image 21. Canid excrements.....	46
Image 22. Canid tracks .....	46
Image 23. Third participant observation event. ....	54
Image 24. The conflict as seen in the past .....	59
Image 25. The different topics surrounding the conflict in the present.....	60
Image 26. Changes over time, related to the human-wolf conflict, the rural-urban dichotomy; the use of top-down approaches in solving the conflict; and depopulation.....	66
Image 27. Representation of the change in dealing with the conflict over time.....	70
Image 28. Representation of the incorporation of Redes into a bigger system .....	71
Image 29. Representation of the change Redes has undergone due to depopulation .....	73
Image 30. The conceptualisations of the conflict, and the ways actors deal with it.....	77
Image 31. Detailed map of Redes Natural Park.....	81

## Tables

Table 1. List of data sources .....	84
Table 2. Wolf Conference Program - 29 & 30 November, 2017.....	86

## Glossary

<b>Alegaciones</b> → Allegations	<b>Alimaña</b> → Vermin species
<b>Alimañero</b> → Vermin killer	<b>Animalista</b> → Colloquial word for someone who defends animals and their rights

<b>Areas Sin Gestion Especifica</b> → areas without specific (wolf) management	<b>Bandurria</b> → A traditional string instrument used in Spanish folk music, similar to the lute.
<b>Baremo</b> → Scale on which the height of compensation payment is based	<b>Batida</b> → A hunting modality, in groups to hunt big animals, often with help of hunting dogs
<b>Chorcocos de lobos</b> → Traditional wolf trap	<b>Con lobos no hay Paraiso</b> → Regional group called “With wolves there is no paradise”
<b>Coto Nacional de Caza</b> → National Hunting Ground	<b>Cuadra</b> → Stables for livestock, such as the cows, horses and goats
<b>Decreto</b> → Legal decree	<b>Ecologista</b> → Person who defends the environment, can be with positive or negative connotation.
<b>Expediente de daños</b> → Damage case file	<b>Externina</b> → Type of venom used to kill “vermin species”
<b>Ganadero</b> → Cattle rancher. <i>Not</i> the same as a shepherd, who stays with the livestock and tends to have fewer animals.	<b>Ganado mayor</b> → Big livestock, i.e. cows and horses
<b>Ganado menor</b> → Small livestock, i.e. sheep and goats	<b>Hórreo</b> → Typical granaries built from wood and stone, standing on pillars to avoid the access of rodents
<b>Madreña</b> → cogs (a typical type of footwear made from wood).	<b>Majada/mayaes</b> → High mountain summer pastures
<b>Monte</b> → the mountains and its pastures, forests, plants and animals.	<b>Ordenanza municipal</b> → Municipal Ordinance
<b>Pastor</b> → shepherd (accompanies livestock everywhere)	<b>Plan de Gestion de Lobo</b> → Wolf Management Plan
<b>Programa de Actuaciones de Control del Lobo</b> → Action Program on Wolf Control	<b>Reserva de Caza</b> → Game Reserve
<b>Vega</b> → Fertile grass plains in the valleys	

## CHAPTER 1. INTRODUCTION

A considerable part of rural Spain is suffering from depopulation (see Image 1), with currently half of all the country its municipalities being in danger of becoming extinct according to the Spanish Federation of Municipalities and Provinces (FEMP, 2017). Although depopulation itself is not a novel phenomenon in European nor Spanish history (Collantes & Pinilla, 2011; Pinilla & Antonio Sáez, 2017), the FEMP declared in their latest report that the Spanish rural exodus is a demographic crisis upon which has to be acted (FEMP, 2017). What makes Spain's rural depopulation case so unique compared to other European countries is "Spain's fast transition [during the last four decades] towards economic and social modernity witnessed one of the most extreme processes of rural depopulation in Europe. [In one] generation, Spain's rural population fell by more than 25 per cent" (Collantes & Pinilla, 2011:1). Generally speaking, a decline in the rural population goes hand in hand with the abandonment of land (Terres, Nisini, & Anguiano, 2013), such as is the case in the mountainous areas of Spain (Ubalde et al., 1999). One of those areas is where the case study for this research has been conducted, in the Redes Natural Park, which lies in the autonomous region of Asturias, Spain.



*Image 1. In red are all the Spanish municipalities with less than 500 inhabitants. Source: ABC (Perez, 2018)*

According to Ceașu et al. (2015), farmland abandonment results from various economic and social changes at different levels, and tends to occur in those regions where agriculture is marginal, such as in mountainous and remote areas (Keenleyside & Tucker, 2010). In consequence, these regions suffer from "an exodus of skills, experience and energies", which negatively influence the economy at both the local and regional level (Schepers & Jepson, 2016:29). Although land abandonment is commonly associated with negative effects, such as the loss of rural and cultural landscapes (Höchtel, Lehringer, & Konold, 2005), increased risk of wildfires (Ursino & Romano, 2014) and a decline in incomes derived from the land (Navarro & Pereira, 2015), in terms of nature conservation it can "provide the opportunity for significant

large-scale restoration of non-agricultural habitats” (Keenleyside & Tucker, 2010:1) and offer cultural ecosystem services such as hunting and tourism (Navarro & Pereira, 2015).

While the comeback of nature in (semi)abandoned agricultural landscapes and the creation of local nature-based sources for income is actively supported by initiatives such as Rewilding Europe (Sylvén & Widstrand, 2015) as ways of giving local people the opportunity to remain in rural areas, there are several shortcomings. One of them is the comeback of wildlife, which has the potential to materialize into conflicts between humans and wildlife (Navarro & Pereira, 2015). A well-known protagonist in human-wildlife conflicts is the wolf (*Canis lupus*). According to Boitani & Linnell (2015), one of the most ancient European human-wildlife conflicts emerges from wolf depredation on livestock. In addition, the competition for common game species and the perceived threat to human safety lead to interactions with wolves being framed as a conflict (Kellert, Black, Rush, & Bath, 1996; Woodroffe, Thirgood, & Rabinowitz, 2005; ASCEL, personal communication, 16 October, 2017). As a member of the *Association for the Conservation and Study of the Iberian Wolf* (ASCEL) explains, over the last few years, both at the research site and in Asturias, the discourses surrounding the human-wolf conflict are said to have increased. These have been fuelled partly by media attention and by political lobbying, leading to tensions both between different groups of actors, and towards the wolf (ASCEL, personal communication, 16 October, 2017).

Learning about the abovementioned tense situation, and the conflict its persistence throughout time despite multiple efforts to solve it, I started wondering what the human-wolf conflict is about and how (or even if) it can be solved. Therefore, I conducted an initial literature research before formulating the research objective and questions. From this, I learnt that a wide variety of scientific literature can be found on both the general human-wildlife conflict and the more specific human-wolf conflict. This literature ranges from the idea that the conflict exists as a negative interaction between a certain wildlife species and human and must therefore be resolved by applying scientific knowledge (see, for example, Gore, Knuth, Scherer, & Curtis, 2008), to stating that underlying issues exist or that it is actually a human-human conflict (see, for example, Dickman, 2010; Hill, 2004; Redpath et al., 2013). One common aspect of the reviewed scientific research on human-wolf conflicts is the use of actor-centred approaches, in which it takes either humans and/or the wolf as the central actor(s) in the conflict and considers that upon those actors actions must be carried out to achieve the goal of permanently resolving the problem.

Nevertheless, attempts to resolve the conflict have been rather unsuccessful up till now in achieving the total dissolution of the conflict, as the literature shows (see, for example, Andersen, Linnell, Hustad, & Brainerd, 2003; Eklund, López-Bao, Tourani, Chapron, & Frank, 2017; Fischer & Lindenmayer, 2000). Such attempts at resolving the conflict might in fact be an additional factor that leads to its endurance in many places, such as in the Redes Natural Park. Therefore, this thesis proposes to look at the conflict from a communication perspective, inspired by Niklas Luhmann's book on Social Systems Theory (Luhmann, 1995). Whilst such a perspective has not been used previously to conduct research on the human-wolf conflict, it was chosen with the hope to provide new insights regarding how the conflict in Redes becomes constructed through communications, and what role the coping strategies play in it, as it takes communication as the starting point instead of actors. By applying a Luhmannian perspective, the conflict is not per se considered as a negative entity between certain actors that needs to be resolved, as is often done from an actor-oriented approach. Instead, it gives the necessary space to think beyond conflict resolution and ask ourselves whether the conflict cannot be let be. Based on that premise, room exists to further explore the conflict beyond problematising it.

### **1.1. Problem description**

The interaction between humans and wolves, not only in Redes Natural Park but across the planet, is oftentimes seen as conflictive in nature. In combination with issues such as the depopulation of rural areas, the wolf is oftentimes pointed out as the scapegoat for the hardships people in rural areas experience. In order to resolve the human-wolf conflict, countless studies have been conducted. Based on new knowledge, a wide range of solutions have been applied. Nonetheless, human-wolf conflicts have a tendency to endure over time, resisting the efforts carried out to resolve it.

### **1.2. Research aim and research questions**

The aim of this thesis is *to provide novel insights to the human-wolf conflict that may contribute to the coexistence between humans and wolves, by examining how such conflicts become shaped through recurrent communications*. As such, the purpose is not to build new theories, nor to test a hypothesis, but to use a certain theoretical framework as a glass through which to explore a real-world phenomenon and see which new knowledge might be produced. The theoretical framework, based on Luhmann's Social Systems Theory and its application to the concepts of human-wildlife conflicts and coping strategies, has been used in this research to conduct a case study in Redes Natural Park, Spain, whereby the required data has been collected through interviews and observations.

The general research question is: *How does the human-wolf conflict in Redes Natural Park (Spain) become constructed through communications, and what role do coping strategies play therein?* To answer this question, it has been divided into the following two specific research questions:

- *SRQ1. How is the human-wolf conflict conceptualized, both academically and by people in the field?*
- *SRQ2. What coping strategies are the people engaged with in coping with the human-wolf conflict, both at this moment of time and in the past?*

### **1.3. Relevance of the study**

The reason for choosing abovementioned perspective emerges out of the hope to provide novel insights into the human-wolf conflict. While I am aware that from this perspective one cannot aim to create, nor implement, solutions that lead to the definitive ending of the problem, I do expect that the obtained knowledge leads to new insights in the conflict between wolves and humans, both in Redes and at other places. By doing so, this research intends to go beyond what has been studied up till now through the more traditional, actor-centred approaches.

Regarding the social relevance, the obtained knowledge might result in more awareness of how our communicative acts contribute to the endurance, proliferation, and fading of conflicts, including the one between humans and wolves in Redes Natural Park. Furthermore, such insights might make people, both those who research the conflict and those who deal with it on a daily basis, more conscious of that our words and actions have the capacity to influence conflicts. Therefore, instead of being powerless victims of the conflict, people can become more aware of their role in the conflict through the words and actions they engage in.

### **1.4. Background of Redes Natural Park**

The Redes Natural Park (Redes henceforth) is located in the Autonomous Region of Asturias, in northwest Spain, and includes the two municipalities of Caso and Sobrescobio. In Image 2 is the location of Redes, and in Appendix A there is a more detailed map of Redes. In the book about the Natural Park, Lopéz Fernández, Ramos Lopéz, & León Suárez (2006) explain that the area has been a Natural Park since 1996. Moreover, it has been a UNESCO Biosphere Reserve since 2001, extending over 377 km<sup>2</sup> of mountains, forests, pastures, and villages. It encompasses the upper part of the Nalón river, and with its high peaks, reaching up till 2104 meters, it is part of the Cantabrian Mountain range.

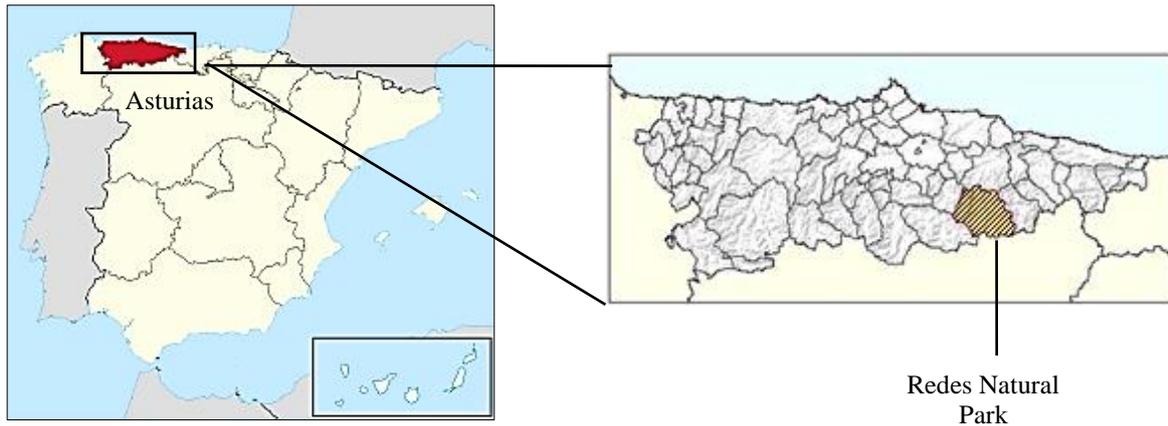


Image 2. Left: Location of Asturias within Spain. Source: Wikipedia, 2018. Right: Location of Redes Natural Park within Asturias. Source: Taxus Medio Ambiente, 2007

In the Natural Park over two hundred species of vertebrates can be found, amongst which the most emblematic are the Cantabrian Capercaillie (*Tetrao urogallus cantabricus*), the Cantabrian Brown Bear (*Ursus arctos pyrenaicus*), the Chamois (*Rupicapra pyrenaica parva*) and the Iberian wolf (*Canis lupus signatus*). There is also a rich variation in flora, ranging from pastures and beech forests to shrublands and alpine vegetation. The landscape of Redes is characterized by its rugged orography, with mountain peaks that are covered in snow during winter, and green valleys with human settlements. The major geologic forces sculpting the landscape have been glaciers, rivers and karstic processes, resulting in cirques, caves, gorges and *vegas*<sup>1</sup>. An example of the park's landscape can be seen in Image 3.



Image 3. Views over the Redes Natural Park from the Majada de la Gamonal. On the left is the Tarna reservoir, and on the left the Rioseco reservoir. In the valleys are the villages, while the mountain slopes are covered by dense forests and pastures. Source: Isabeau Ottolini

In addition, humankind has played a major role in giving shape to the landscapes of Redes, by interacting and modifying the surroundings since immemorable times. This modification of the landscapes reached its height in the 17<sup>th</sup> and 18<sup>th</sup> century, and occurred mainly through, on one

---

<sup>1</sup> Fertile grass plains in the valleys

side, the use of wood (e.g. to make the *madreñas*<sup>2</sup> and the *bandurria*<sup>3</sup>), and on the other side, the creation of pastures. The pastures, which are located both in the valleys and the high mountains, played a big role in the transhumant livestock practices. An important ethnographic element of Redes that reflects those practices are the highest pastures, called “*les mayaes*”<sup>4</sup> (see Image 4), which contain groups of stone cabins where the shepherding families would live during summer with their livestock. The autochthonous *casina*, a cow breed especially suitable for mountain areas, is used to elaborate one of the oldest types of cheese in Asturias called “*queso casín*”. The thirty-three villages scattered through Redes still contain many elements of traditional architecture, such as the “*hórreos*”<sup>5</sup> (see Image 5), “*cuadras*”<sup>6</sup> and mills, which represent the agricultural practices of the past.



*Image 4. A stone cabin in the Majada de Melordaña, a summer pasture located upstream from Orlé at 1220 metres high. Source: Isabeau Ottolini*

During the 19<sup>th</sup> and 20<sup>th</sup> century the industrial revolution led to a generalized loss in traditional practices and an increase in the exploitation of minerals and energy resources throughout Asturias, whereby many people emigrated to the central parts of the Autonomous Region to find work there. This process became especially accentuated from the 1950's onwards, resulting in a great decrease in the population of Redes, passing from almost 6400 inhabitants

---

<sup>2</sup> Translation to English: cogs (a typical type of footwear made from wood).

<sup>3</sup> A traditional string instrument used in Spanish folk music, similar to the lute.

<sup>4</sup> Also called “majadas”, these are the summer pastures

<sup>5</sup> Typical granaries built from wood and stone, standing on pillars to avoid the access of rodents

<sup>6</sup> Stables for livestock, such as the cows, horse and goats.

in 1950 to just 2400 in 2017 (Instituto Nacional de Estadística, 2018). This process of depopulation, together with a decrease in traditional practices, has led to changes in the landscape as nature has taken over those places where mankind has been the driving force for long (López Fernández et al., 2006).



Image 5. A typical hórreo, a granary upon pillars to prevent the access of rodents. Source: Isabeau Ottolini

### 1.5. Outline of the thesis

This thesis consists of eight chapters. *Chapter one* starts off with introducing the topic of research. It also includes the problem statement, research objective and research questions. It then provides general background information about Redes Natural Park, the area that constitutes the setting of this case study. *Chapter two* presents the theoretical framework based on the Luhmann's Social Systems theory and the concepts of human-wildlife conflict and coping strategies. *Chapter three* elaborates on the methodology used to conduct this case study, including data collection, data analysis, and quality of the research. *Chapter four* provides the necessary context needed to understand the data collected in the field. After that, in *Chapter five* the findings from the field research in Redes are presented. Next, in *Chapter six*, the findings are combined, summarised and linked to the theoretical framework. In *Chapter seven* the findings are linked with the wider scientific literature to discuss the relation between the conflict and topics that have emerged throughout the research. Lastly, this thesis concludes with *Chapter eight*, which provides a summary to the research questions, a reflection upon the relevance of the research, and ideas for future research.

## CHAPTER 2. THEORETICAL FRAMEWORK

The framework of this thesis is based on three concepts: *conflicts* in general, the more specific *human-wildlife conflicts*, and *coping strategies*. All three concepts can be seen from a wide variety of different perspectives, and in this thesis a particular perspective is used in order to answer the research question. Firstly, an explanation will be provided on how conflicts can be understood through the lens of Luhmann's Social Systems Theory. In turn, this perspective will help with looking at the second, more specific, concept, which is the human-wildlife conflict. Afterwards, the concept of coping strategies will be introduced, which is linked to the previous concept as it represents how people deal with the human-wolf conflict.

### 2.1. Conflicts

Commonly conflicts are studied from an actor-centred approach, in which the conflict is seen as a problematic entity existing between two or more actors, and emerges when differences exist between them (Pellis, Duineveld, & Wagner, 2015). As Pellis, Pas, & Duineveld (in press) explain, such a perspective tends to focus on how and why a conflict emerges. Nevertheless, focussing on this can limit both our understanding of conflicts and our capacity to cope with them. For example, Malsch & Weiß (2000) point out that it leads to speculations about the more abstract aspects such as "mental or emotional states" of actors and confusing conflict reasons with conflict topic or actual ongoing interactions. Moreover, it gives the idea conflicts are negative or useless (Pellis et al., in press). Following the footsteps of different authors (Duineveld, Pellis, & de Vries, forthcoming; Malsch & Weiß, 2000; Pellis et al., 2015; Pellis et al., in press) the Social Systems Theory developed by Niklas Luhmann (1995) has the potential to offer an alternative post-structural way of looking at conflicts, by taking communication as the starting point for understanding conflicts, instead of actors.

Conflicts can be considered as self-referential modes of ordering, meaning that they use and generate communications as the operational elements of their own reproduction, building upon prior communications (Malsch & Weiß, 2000; Pellis et al., 2015). Altogether these communications form a discourse, meaning that conflicts can be studied just as any other discourse (Duineveld et al., forthcoming). Nevertheless, conflicts have a series of specific characteristics that make it a unique type of discourse. As Duineveld et al. (forthcoming) explain, a conflict only becomes one when it is a heated and emotionally loaded communication. Moreover, conflicts are based on contradictions: they only emerge when "a difference [...] is expressed and leads to an emotional or heated response, which in return lead to a counter-response, and so on" (Luhmann, 1995; Malsch & Weiß, 2000, in Pellis et al., in

press:8). As such, the conflict has the capacity to suddenly flame up at almost any moment and occasion, but also to cool down again just as quickly (Malsch & Weiß, 2000).

Despite a conflict's fickle character, it has a tendency to escalate and make a "greater social career" (Luhmann, 1995:392), as it "tends to draw the host system into conflict to the extent that all attention and all resources are claimed for the conflict" (Luhmann, 1995:391). This is why conflicts are seen as parasitic systems that are difficult to cool down (Duineveld et al., forthcoming; Luhmann, 1995; Malsch & Weiß, 2000). A conflict its capacity to develop autonomously and having a self-referential character makes it possible for the conflict to gain a life of its own and continue propagating long after the original source and involved actors have disappeared (Duineveld et al., forthcoming). Being a parasitic system, a conflict might lead to "respecifying and reorganising [of] every single communicative act according to the logic of adversarial interests and priorities" (Malsch & Weiss, 2001:11), whereby the discourses surrounding the conflict become a part of it.

Although the possibility exists to end a conflict, it is by all means a difficult task, not only because persistent conflicts parasitically feed on different sources, but also because the sources of the conflict are subject to change or can even disappear (Duineveld et al., forthcoming). As Malsch & Weiß (2000) explain, the conflict topic often tends to differ from the underlying structural reasons for the conflict. For conflict management this implies that, on one hand, solutions might be applied that have nothing to do with the real reason for the conflict. On the other hand, underlying societal reasons are very hard to abolish, which, if attempted to be solved, can lead to an aggravation of the conflict situation (Malsch & Weiß, 2000).

However, we must ask ourselves critically whether we want to abolish all conflicts. Despite traditional approaches considering conflicts as negative entities that need to be avoided, overcome or solved (Pellis et al., 2015), other authors also recognize the need for conflicts to take place. For instance, Malsch & Weiß (2000) explain that conflicts are related to a society's immune system, by irritating and strengthening it as a common cold would do with a human's immune system. By doing so, social pathologies can be revealed and in consequence drive structural social change (Malsch & Weiß, 2000). Furthermore, it can lead to innovations, the expression of underlying tensions, or contribute to democracy (Duineveld et al., forthcoming) In other words, conflicts can be productive, in the sense that they awaken creativity and energy from the actors engaged in it (Aarts & van Woerkum, 2008).

In order to study and understand conflicts, one must take into account that they have a past, a present and a future, and are therefore discourses in constant change fuelled by their surroundings (Duineveld et al., forthcoming). However, changes in the conflict discourse do not occur randomly, but are marked by path-dependencies that enable and constrain the conflict its evolution (Assche, Beunen, & Duineveld, 2014, in Pellis et al., 2015), whereby a path is “a series of events and decisions within which a conflict is formed” (Pellis et al., 2015:119). Paradoxically, by studying a conflict, as is done through this thesis, more fuel is potentially given to the conflict, enabling its endurance through a layer of sociological representation of human-wolf conflicts that may, or may not, be absorbed by observed human-wildlife conflict interactions (Frerks, de Graaf, & Muller, 2016; Myerson & Rydin, 2014, in Pellis et al., in press).

All in all, dealing with conflicts is much more complex than simply looking at, on one side, the how and why of the conflict’s emergence, and on the other side, searching for a solution to the conflict topic that will lead to the cessation of differences between involved actors, as more traditional actor-centred approaches tend to do.

## **2.2. Human-wildlife conflicts**

While conflicts generally concern those constituted through actor interactions, these do not necessarily always need to refer to human-human interactions. Likewise, interactions between humans and wildlife have the potential to materialise into conflicts. In this section the focus will lie on discussing the definition of human-wildlife conflict in the scientific literature, then to reviewing the existent literature regarding the different scientific perspectives through which human-wildlife, and the more specific human-wolf conflicts, are studied. Finally, the Luhmannian perspective to conflicts, as described in the section above, will be used as a lens through which to look at these specific types of conflict.

Conflicts between humans and wildlife are defined in many manners. It is an ancient social problem, and there is no universally agreed definition for it (Frank, 2016, Madden, 2004, Conover, 2002, IUCN, 2003). To begin with, a human-wildlife conflict can be considered to be an interaction between humans and wildlife that has negative impacts, either on humans and/or wildlife, leading to it being termed as a conflict. One definition would be the following one elaborated during the World Park Congress in 2003:

*“Human-wildlife conflict occurs when the needs and behaviour of wildlife impact negatively on the goals of humans or when the goals of humans negatively impact the*

*needs of wildlife. These conflicts may result when wildlife damage crops, injure or kill domestic animals, threaten or kill people.” (IUCN, 2003:185)*

In the abovementioned definition the presence of negative impact on both sides is clearly stated. However, authors such as Peterson, Birkhead, Leong, Peterson, & Peterson (2010) consider traditional definitions of human-wildlife conflicts to be problematic for several reasons. One reason is that it creates a human-wildlife dichotomy, implicating an antagonistic relation between humankind and nature. Furthermore, the definition limits the manner in which both the problem itself and its possible solutions become framed (Frank, 2016). For example, Peterson et al. (2010) explain that a human-wildlife conflict most commonly reflects a human-human conflict over wildlife management. Or, in the words of Madden (2014, in Frank, 2016:738), it can consist of “wildlife impacting humans, humans impacting wildlife, and conflicts between humans over wildlife”. Moreover, as it is framed as a human-wildlife conflict, people’s emotions and efforts may be directed towards the involved wildlife, and not towards other humans as opposite communicative systems. And finally, by using the term “conflict”, attention is focussed to the negative aspect of it, whilst it might be better to direct energy and resources at increasing the more positive relations of living in coexistence and with tolerance, as some authors suggest (Frank, 2016; Madden, 2004; Peterson et al., 2010).

Based on the abovementioned scientific literature, the more specific conflict between humans and wolves can be seen as the negative impacts that humans potentially undergo due to wolves, and vice-versa. From the existing literature it appears that the most important negative impacts leading to the human-wolf conflict are attacks on livestock (Boitani & Linnell, 2015), competition for common prey species and attacks on humans (Kellert, Black, Rush, & Bath, 1996; Woodroffe, Thirgood, & Rabinowitz, 2005).

When doing literature research on the human-wolf conflict, the majority of scientific articles looks at aspects such as people’s attitudes, emotions and perspectives towards wolves (e.g. Bright & Manfredi, 1996; Kellert et al., 1996; Drenthen, 2015), management strategies (e.g. Linnell, Salvatori, & Boitani, 2007), the effectiveness of solutions (e.g. Eklund et al., 2017), the quantification of damages (e.g. Steele, Rashford, Foulke, Tanaka, & Taylor, 2013), or wolf ecology and behaviour (e.g. Blanco & Cortés, 2002; Mech & Boitani, 2006). Although from a wide variety of perspectives, these studies generally share the common goal of attempting to solve, through the acquisition of new knowledge, what they frame as being a problem. That is, the conflict between humans and wolves. Acquisition of scientific knowledge is done from a

wide array of perspectives, as mentioned above, which gives place to a great amount of scientific research on the wolf. However, when searching further in the scientific literature, it appears that some authors believe the conflict might not be as straightforward as it appears at first sight. For example, Boitani & Linnell (2015) see the wolf as a source of social and political tensions, whereby the wolf is a political symbol representing a wide variety of social issues. Furthermore, Madden & McQuinn (2014) consider the visible manifestations of the conflict to originate from less visible social conflicts. Linking up with the current European context of rural depopulation and land abandonment, the wolf might be used as a scapegoat for all the hardships and struggles people have to cope with in rural areas (Kellert, 1996; Lopes-Fernandes, Soares, Frazão-Moreira, & Queiroz, 2016). More specifically in Asturias, the literature on the conflict there also mentions the role of politics and media (e.g. Llana, García, Palacios, & Martín, 2013; Llana, García, Palacios, & Rivas, 2011).

In addition, there are also a number of studies that explicitly indicate that a human-human conflict might underlie conflicts with wildlife (Dickman, 2010; Madden, 2004; Nyhus, 2016; Peterson et al., 2010), although they are few in number (Peterson et al., 2010). For example, Madden (2004:250) explains that human-wildlife conflicts frequently encompass conflicts “between people who have different goals, attitudes, values, feelings, levels of empowerment, and wealth”. Evidence exists that social factors play a bigger role in the conflict than the damage caused by wildlife itself, but this fact is mostly overlooked (Dickman, 2010). In relation to the definition of what a human-wildlife conflict is, Peterson et al. (2010) have found that there is scarce reflection upon its definition in the scientific literature. This would imply that it is simply taken for granted that human-wildlife conflicts always reflect an antagonistic relationship between humans and wildlife.

Having seen what is meant by the human-wildlife conflict in the scientific literature and different perspectives used to research it, now the Luhmannian perspective upon conflicts can be applied. Much energies and resources are dedicated to communicating about the conflict and solve it. However, this might lead to a paradoxical endurance over time as the conflict is possibly given more “fuel” to keep interacting as this or that human-wildlife conflict. Furthermore, by employing the term “conflict” it constrains the communications around human-wildlife interactions, attracting all the attention to only the negative aspects of the interactions, and thereby leading to a blind spot regarding other interpretations of the phenomenon. The same counts for framing the interaction as existing between humans on one side, and wildlife on the other. Moreover, underneath the human-wildlife conflict there might

be a (or multiple) deeper social issue(s), leading to confounding the conflict topic (i.e. human-wolf interactions) with the conflict reason (i.e. underlying social issue). Just as Andersen et al. (2003:4) explain, “conflicts are often juxtaposed against each other. In other words, a solution to one conflict may well exacerbate another conflict”. Therefore, it seems solutions applied to humans and/or wildlife may not lead to the definite resolution of the conflict.

### **2.3. Coping strategies to human-wildlife conflict**

The concept of coping strategies has, like the concept of human-wildlife conflict, many different definitions depending on the field of study, such as agriculture (Hardaker, Lien, Anderson, & Huirne, 2015), natural hazards and disasters (Brauch et al., 2011), migration (Roberts, 2011) and psychology (Ray, Lindop, & Gibson, 1982; Snyder, 1999). Simply said, a coping strategy can be seen as an “action directed at the resolution or mitigation of a problematic situation” (Ray et al., 1982, in Brauch et al., 2011:42). Such an action has the goal to reduce burdens both due to daily worries and major life events, on the physical, emotional, and psychological level (Snyder, 1999:5). It includes a broad variety of strategies, which can be categorised in many different manners, such as individual or social (e.g. Treves, Wallace, Naughton-Treves, & Morales, 2006), adaptive or maladaptive (Zeidner & Saklofske, 1996), and conscious or unconscious (e.g. Skinner & Zimmer-Gembeck, 2007).

In spite of the numerous ways of classifying coping strategies, it must be taken into account that the strategies are not static actions. Instead, they depend on many factors, such as age, gender, social group, religion and community (Chambers, 1989). Moreover, they change over time, thereby also changing their effectiveness to deal with the issue (Roberts, 2011). In order to carry out these strategies, “people or organisations use available resources and abilities [...], this involves managing resources, both in normal times as well as during crisis or adverse conditions” (UN/ISDR, 2004:16).

It is also possible to look at coping strategies from the field of communication. As Aarts & van Woerkum (2008) explain, oftentimes coping strategies are employed to deal with uncertainty. Since all humans are confronted with uncertainties, both in daily life and with major life events, attempts are made to reduce and/or avoid uncertainties by dealing in specific manners with these, that is, by using a wide range of coping strategies. Especially in a situation where there is a lot of indirectness and deviousness, uncertainties tend to increase (Aarts & van Woerkum, 2008). Paradoxically, uncertainties become more certain as we find ways to deal with them, although those actions can potentially also lead to new uncertainties. Examples of coping

strategies are given by Aarts & van Woerkum (2008). One of those is making certain information harmless, by ignoring it, interpreting it differently, or downplaying the information that poses a threat to what the actor perceives as a certainty. Another coping strategy would be stigmatising other actors when these are somehow perceived as threatening, or constructing identity frames of themselves and others. Moreover, shifting responsibilities can also occur, whereby it is asked who is responsible for the issue (Aarts & van Woerkum, 2008). A last communicative coping strategy that can be mentioned is framing. As Kpéra et al. (2014) explain, these can relate to issue frames (i.e. the problem, causes, consequences, solutions), characterization frames (i.e. the “others”), identity frames (i.e. frame of oneself), and power frames (i.e. who is in charge and who is accountable).

From a Luhmannian perspective coping strategies can be seen as communicative interactions carried out by actors involved in the conflict. The interactions can be both words and deeds which are uttered or carried out in order to deal with the uncertainties caused by conflicts, both on the short and long-term. In the case of the human-wolf conflict, the communicative interactions take place between both humans and wolves. Moreover, they also occur amongst humans themselves. Depending on the goal(s) of the actors in the field, different coping strategies are employed at different moments of time, and are both enabled and constrained by the path dependency of discourses. Strategies are expressed through the aforementioned communicative interactions, and might lead to the emergence and endurance of the conflict. This is because the people who are engaging with the conflict attempt to sustain business as usual, but the different coping strategies of other actors are a source of uncertainty in the social system. Moreover, contrasting coping strategies can serve as additional fuel to the conflict.

#### **2.4. Assembling the theoretical framework**

When putting together all the above, the framework emerges as depicted in image 6. Whilst Luhmann relates the Social Systems Theory to conflicts (Luhmann, 1995), this thesis goes beyond that, by linking it to a particular type of conflict, that is, human-wildlife conflicts. Through the lens of the Social Systems Theory it can be argued that the attempts to solve such conflicts actually lead to its endurance, as such communicative acts provide fuel for the conflict discourse. As conflicts, including those between humans and wildlife, generate uncertainties, actors react to it by employing coping strategies, which consist of words and deeds. Altogether these concepts constitute the theoretical framework through which can be looked at the communicative acts surrounding the human-wolf conflict in Redes Natural Park. In

consequence, new insights might be generated on how the conflict is constructed through communications, and what role coping strategies play therein.

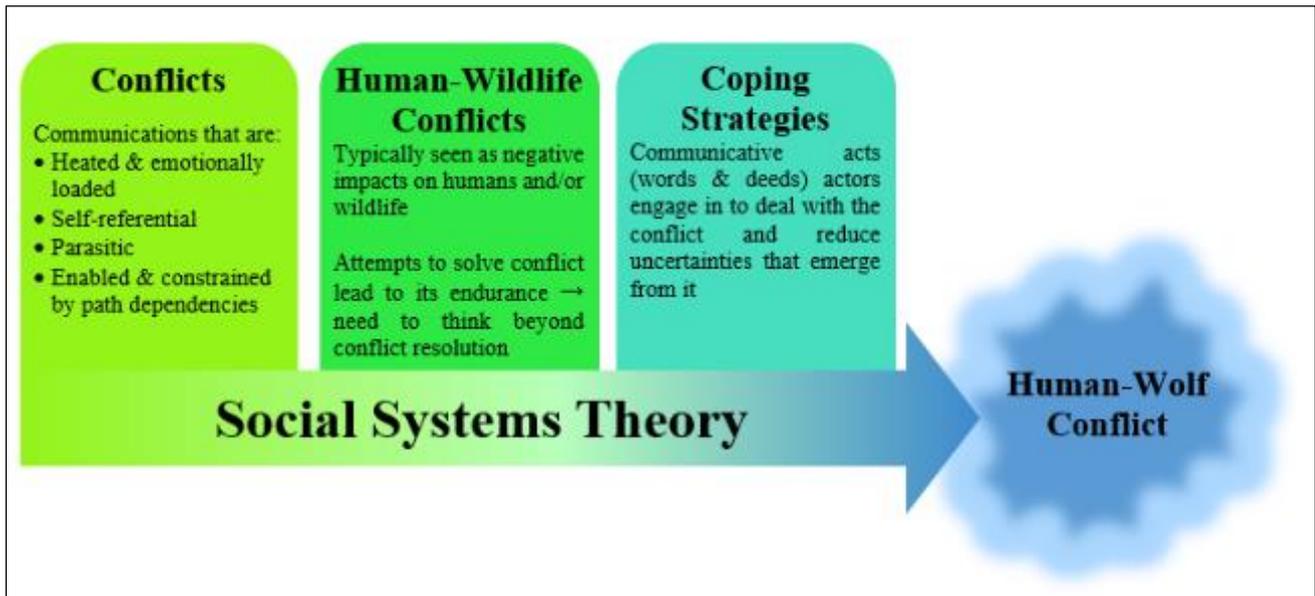


Image 6. The theoretical framework. Own elaboration, based on the work of Duineveld, Pellis & de Vries (forthcoming); Luhmann (1995); Malsch & Weiß (2000)

## CHAPTER 3. RESEARCH METHODS

This chapter presents the way the research was conducted. Firstly, a description is given for the setting, access and selection of respondents. Secondly, the data collection and analysis methods are explained. Last of all, a reflection is included on the quality of the research, by looking at researcher positionality and limitations.

### 3.1. Setting, access and selection of respondents.

The Redes Natural Park was recommended by a member of ASCEL, who in turn had consulted the Head Ranger of Redes about which place would be best for me to conduct research. Redes was eventually chosen due to the following reasons: Firstly, because it lies within wolf territory and a conflictive situation between the wolves and the inhabitants of Redes seems to exist. Secondly, by looking at the media it became apparent a conflictive situation does indeed exist. Lastly, there were many people willing to participate in the research. This area provided the main setting for the research, although I also ventured to several other sites in Asturias for data collection (thrice to Oviedo, once to Somiedo, and once to Lozana).

Access to the research population was acquired through two different sources. Firstly, the member of ASCEL who had aided in finding the appropriate site for fieldwork, put me in touch with the Head Ranger and two biologists. Especially the Head Ranger functioned as a valuable gate keeper, as he has an extensive knowledge of all the inhabitants of Redes. On the first day of fieldwork we met and, together with other park employees, elaborated a list of potential interviewees based on the preparedness of those people to participate. However, as they mainly pointed out people that were considered as being well-mannered and reasonable to talk with, potential bias when selecting participants might have occurred. Therefore, I also approached participants via another source. Through personal acquaintances I got in touch with a foreign couple living near Redes, who recommended a further group of people for me to interview.

From abovementioned initial contacts, I further selected participants through snowball and convenience sampling. Sometimes it was necessary to explain to the respondents that I was interested in getting in touch with people whom held all kinds of opinions, while at other times they by themselves came up with a whole list of names. To select respondents, I focused predominantly on selecting people who a) live(d) and/or work(ed) in the area of the Redes, and b) had different backgrounds (thereby not focusing only on e.g. shepherds or environmentalists). Regarding the first criteria, a few interviews were conducted with people outside that region due to the additional information they could provide. Regarding the second

criteria, it was both necessary and interesting to talk with people from different backgrounds. On one side because talking with similar people, such as shepherds, led to quick saturation, and on the other side because different people use diverse discourses regarding the human-wolf conflict, which I was interested in capturing.

Important to note is that I refrain from categorizing people into being pro- or anti-wolf throughout this thesis. While this categorization is frequently done in (scientific) literature on the human-wolf conflict, I consider it to be a simplistic way of dealing with the complexities of the site. In any case, there is a whole scale of aspects people can be for or against (e.g. whether the wolf belongs or not in the region, needs human intervention for control or not, if it is a threat or an opportunity), and rarely have I met someone who can be characterized as being purely pro- or anti-wolf.

Lastly, factors that might have influenced my access to people is the fact that I am easily identifiable as an outsider due to my North European appearance and non-local accent when talking Spanish. While this at times made it easier to gain access, as people tended to see me as a someone with a neutral stance in the conflict, it can also have limited the way people responded to me, as I was not one of them.

### **3.2. Research methods - Data collection and analysis**

The fieldwork consisted of a case study in Redes Natural Park, whereby the data collected is based on qualitative research methods. According to de Vaus (2001) a case study makes use of multiple data sources, allowing the phenomenon of interest to be studied in-depth, leading therefore to a richer understanding. In addition, a case study focusses on acquiring a holistic understanding of the phenomena in its natural settings, which is exactly what this research required. Moreover, by combining different data sources and data collection methods, the results can be triangulated, thereby hopefully increasing the quality of the data.

In Appendix C the full list of data sources can be found. This list is anonymous, whereby I refrain from calling the respondents by name, and instead have assigned them a number and given a short description of them (e.g. if they are local inhabitants or not, and their profession) without compromising their privacy. When including quotations from respondents in the findings chapter I refer to the respondent's assigned number. In other cases, when paraphrasing or presenting a point of view shared by multiple respondents, I mention the main sources.

### 3.2.1. Interviews

The main data collection method was through interviews, ranging from semi-structured interviews to informal conversations. Interviews were conducted in person with people who beforehand indicated they were prepared to participate. During seven and a half weeks of fieldwork, twenty-eight interviews were conducted, from which two people were interviewed twice, and seven interviews were with more multiple respondents simultaneously. I attempted to interview different actors, ranging from biologists, rangers and local inhabitants to hunters, shepherds, environmentalists and government officials. All interviews were conducted in Spanish and took place at different places to suit the interviewees' preferences, such as at bars, offices, homes and during walks. Interviews were conducted until the point was reached where saturation started to appear and I myself became dragged into the conflict.

The choice for semi-structured interviews was due to its explorative character, which leaves space for the emergence of unexpected information from the interviewees and the freedom to ask them additional questions. Before starting with fieldwork, I elaborated a semi-structured interview guide (see Appendix B). However, when conducting the first interviews, I quickly noticed that some questions could not be asked to everyone, and therefore the need emerged to adjust interview questions depending on the interviewee. The iterative adjustment of interview questions was done by annotating insights and questions that arose when transcribing interviews or elaborating fieldnotes, which served to phrase further questions for posterior interviews. This I normally did straight after conducting the interview in order to not overlook or forget anything that might be relevant.

In consequence, most interviews were conducted within the framework of the initial topic list, but with questions that I had prepared beforehand specifically for each interviewee. Therefore, as time passed by, the interviews became less comparable to each other, although always having the following central elements: the person's background and work, the wolf, the relation/experiences with the wolf, what the conflict is about, what the person and/or others do about it, and depopulation. This approach gave space to the emergence of interesting topics that might not have come up otherwise, and enabled delving deeper into topics until I acquired a better understanding of them. At the same time it allowed me to keep the main topics in mind to avoid too much divergence from the data I wanted to collect.

As mentioned above, some of the interviews were informal conversations, mostly during the events of participant observation or when encountering people around the villages. At these

occasions I did not have any questions beforehand, but gave the lead to the person and occasionally asked questions that were of interest for the research.

### 3.2.2. Participant observation

Another qualitative data collection method that has been used during fieldwork is participant observation. The opportunities to conduct this data collection method were during the following events: a visit from a ranger to a “ganadero”<sup>7</sup> after receiving a call of suspected wolf depredation on cattle<sup>0.1</sup>; visiting a ganadero who has lost a sheep to a suspected wolf attack<sup>0.2</sup> (Image 7); a wild boar hunt chase with rangers, hunters and ganaderos<sup>0.3</sup> (Image 8); and attending to the *Jornadas. El lobo en Asturias: La gestión de un conflicto* (in English, Conference. The wolf in Asturias: the management of a conflict. Henceforth, “Wolf Conference”) in Oviedo<sup>0.4</sup> (see Appendix D for the conference program). Although it would have been ideal to also conduct participant observation while accompanying ganaderos during their days in the field, and hang out at bars with locals, this was not possible due to practical limitations.



Image 7. Illustration of the second participation observation event. Some basic impressions. Source: Isabeau Ottolini



Image 8. Illustration of the third participation observation event. Some basic impressions. Source: Isabeau Ottolini

Oftentimes the participant observation events went together with informal conversations. Both the observations made at those occasions and the information collected through the informal

<sup>7</sup> A *ganadero* is typically a cattle rancher. Not the same as a shepherd, who stays with the livestock and tends to have fewer animals.

interviews conducted at those occasion were written as soon as possible in the research journal, and when withdrawing from the field full fieldnotes were further elaborated on the computer.

### **3.2.3. Data analysis**

From the 28 interviews, 22 were recorded, always with the permission of the interviewee. From those, 16 were fully transcribed. Due to the extension of the interviews (some ranging over 2 hours) and the difficulty to sometimes understand interviewees (e.g. being in a noisy space, interviewees having a heavy accent, different people talking at the same time), I did not use a strict verbatim style. As the interviews were all conducted in Spanish, transcriptions were also in Spanish, but when presenting quotes in this report I translated it into English. By doing so, I took the liberty to improve the formulation of the quotes in order to make them more understandable. A couple of interviews were not recorded, either because of practicalities or because interviewees indicated they preferred so. Of these interviews I took notes, mainly in English, although sometimes also mixing it with Spanish, which I further completed afterwards on the computer.

Once all data had been gathered and either transcribed or written down as notes, the next step was to analyse the data. The data gathered through the fieldwork has been analysed by conducting a content analysis, which, according to Kumar (2010:210) is the process of “analysing the contents of interviews or observational field notes in order to identify the main themes that emerge from the responses given by your respondents or the observation notes made by you”. Coding was done manually, without having coding categories that were previously informed by the theoretical framework. I started off with coding for the context, whereby I focused on those aspects that could aid me in answering my SRQs, but nonetheless were more background information than data directly related to answering the research questions. For the first SRQ I focused on what people mentioned to be the conflict with the wolf and all related issues that were brought up, marking those passages in the transcripts and notes, and later on annotating on the computer. Those were then clustered in several major issues that represent the conceptualization of the conflict. For the second SRQ the same procedure was followed, this time marking in the transcripts and notes those passages that referred to ways in which people expressed they or others dealt, deal, or propose to deal with the conflict. The coding process was an iterative one of trial and error, whereby I tried out several different forms of clustering data before eventually finding a satisfactory format that would provide answers to my research questions.

### **3.2.4. Ethics**

Ethics, as an important aspect of the research methods, has also been taken into account when conducting research. The human-wolf conflict is a sensitive issue, and talking with people about it can potentially trigger strong (emotional) responses or strengthen beliefs, which in turn might stir up the conflict. Therefore, it is important to consider the ethical responsibilities of the researcher. As Bernard (2011:167) explains:

“the first ethical decision you make is whether to collect certain kinds of information at all. Once that decision is made, you are responsible for what is done with that information, and you must protect people from becoming emotionally burdened for having talked to you.”

In order to ensure informed consent, all the participants of the research have been informed about the goal of the research and what the data is used for. Moreover, when approaching people, they were asked if they voluntarily agreed to participate, and if that was indeed the case, whether the interviews could be recorded. In addition, the possibility existed for interviewees to indicate they preferred to remain anonymous, which some indeed preferred. However, due to the nature of the research, which is focused on a conflictive situation, I made the decision to refrain from calling the respondents by name throughout this thesis. While I do sometimes give descriptions of the respondents, I have made sure that those whom indicated to remain anonymous cannot be traced back through these descriptions.

Concerning beneficence, I agreed with the participant who showed interest to share the final results with them. Moreover, I gave the participants a small gift, in form of some Dutch sweets, as a sign of my gratitude for their participation.

### **3.3. Quality of the research**

#### **3.3.1. Limitations**

A first limitation is related to the vast amount of data collected. Data collection took place between the 2<sup>nd</sup> of November and the 18<sup>th</sup> of December, during which time I have been entrusted with a large amount of information from many people. During this time, I gathered more data than strictly necessary, in an attempt to uncover the underlying issues of the conflict. Moreover, I acquired additional information both before and after the data collection period, either passively because people told me, or actively by finding scientific and news articles. Nonetheless, in order to cope with so much data a selection had to be made of what to include and what not. On one hand, I have decided to leave out the majority of additional information

found before and after fieldwork and stick to the timeframe previously established to collect data. On the other hand, I have attempted to give all the respondents a voice throughout my thesis in order to show the different discourses on the multiple issues surrounding the conflict. Nevertheless, eventually only a small part from all the collected data has made it to this report, but these choices have been made to avoid scope creep: no matter how interesting all the information is, it has been necessary to focus solely on answering the research questions.

Another limitation of the research has been that, towards the end of the data collection phase, I started to get pulled into the conflict. On one side this happened through the respondents, who wanted to find out what my opinion was on the topic and what solutions I proposed. On the other side, I started to get emotionally caught up in the conflict, due to continuous interaction with people who are involved in it one way or another. It is hard to refrain from empathizing with the stories told by the respondents, such as ganaderos who tell about how hard their life is (“poor ganaderos and livestock”), or defenders of the wolf who tell how much the species is in need of protection (“poor wolf”). Eventually all try to somehow convince you of their version of the truth and that they are the ones you should empathize with. Therefore, I made the decision to leave the field after seven and a half weeks, in order to avoid becoming more biased in my research.

A third limitation regards data collection. While collecting data, this often merely included what the respondent(s) literally said, therefore employing a rather positivist approach by which social reality has been reduced to audio and notes. I had little opportunity to focus deeper on the non-verbal communication of the respondents, or things happening in the surroundings, and can only rely on my memory for all this information as I seldom wrote down such additional observations. Noting down all the supplementary information would potentially have led to an excess of data to analyse, but aspects such as tone, body language, facial expressions, the physical settings and interactions between people could have been an interesting data source as it nonetheless forms part of communicative interactions.

The last limitation is regarding the conflict itself. By using Luhmann’s Systems Theory to research it, I agree with the paradox other authors also recognise (e.g. Pellis et al., 2015), which is that by conducting research on the conflict and communicating about it (through this thesis report but also talking with others about it), I myself become part of the ongoing conflict discourse and may possibly be adding fuel to it, thereby aiding the conflict to endure.

### 3.3.2. Positionality as researcher

A fundamental aspect of conducting research is to reflect upon the positionality one has as a researcher, as the personal background and experiences shape the lens through which the world is seen and interpreted. It is most likely my biases have influenced this work, but instead of attempting to achieve scientific objectivity on which the positivist paradigm is based on, I have accepted that subjectivity exists. In consequence, this section is an exercise in being aware and critical of my positionality as a researcher. In the following lines I present my positionality, in regard to the nature of knowledge, the human-wolf conflict debate in general, and the conflict in Redes.

My assumptions regarding how the world operates and knowledge is produced are closely linked to what O’Leary calls interpretative constructivism, which takes into account that “meaning does not exist in its own right; rather it is constructed by human beings as they interact and engage in interpretation” (O’Leary, 2004:10). This position has been influenced by my academic background, which consists of a social science master, and prior to that an overly natural science bachelor. As a consequence, I am familiar with the different epistemological views that exist in science. Based on this, I have chosen for a constructivist interpretivist perspective from which to research the topic, instead of employing more positivist theories that, in my humble opinion, limit the acquisition of knowledge by only considering one universal truth to exist.

Regarding my position in the human-wolf conflict debate, I am conscious of being in favour of the wolf and its conservation, considering it to be a species that has a right to exist, can autoregulate its own population and poses a potential opportunity to both nature and people. This standpoint emerges from having lived for many years in close contact with nature, studying Environmental Sciences, and being involved in nature conservation NGOs, which altogether has given me a strong emotional bond with nature. The favourable position towards the wolf is one I share with other people, like those who come from (urban) areas where there is no (direct) presence of wolves and therefore tend to romanticize the species, and nature in general (Blanco & Cortés, 2001). Having this personal bias has made it at times challenging to be critical to worldviews I feel identified with, and open to those that differ from my own. However, having lived in many different countries during my life and having been in contact with different cultures, I believe that I have learnt fairly well to be especially aware of personal biases and be open-minded to different positions. Whilst this does not eliminate bias, it has made me more self-aware of it.

Lastly, I want to reflect on my stance in the conflict at the research site. Although having heard of the situation previously via the media, and having my own personal opinions and beliefs, I have not been submerged into the conflict as deeply as those who experience it day after day, year after year. This was an aspect which many participants expressed as a positive asset, and gave people the feeling I was more neutral, and therefore also more trustworthy, than someone else from Asturias. This was positive, as it facilitated access to people, who opened up to me quite easily. However, there was also a danger in people believing I am neutral, while I too am biased, even though I have tried to limit it from distorting my findings. Moreover, at a certain point I became more biased by getting dragged into the conflict, and therefore made the decision to withdraw from the field.

Having said all this, I have attempted to reduce the influence of my personal biases by searching out critical articles on the topics related to the conflict, discussing with people who possess different standpoints, and making use of the feedback given by my supervisors and the thesis ring. Especially the time in the field and meeting so many different people with a broad range of worldviews have aided in questioning my positionality and be more aware of it.

## CHAPTER 4. CONTEXT

This chapter presents the basic context of the research site. The choice to dedicate a separate chapter on this is based on the fact that the context of Redes is unique and has undergone great changes in recent times. Therefore, the findings would make little sense without having ensured the reader acquires a basic understanding of the current background, based mainly on what respondents in Redes have explained during fieldwork. As such, this chapter commences with background information on the temporal and spatial evolution in the wolf population, and damages caused by this top predator. Secondly, the changes are presented in relation to natural resource management. Thirdly, an overview is given of livestock management and practices, both from the past and the present. Finally, the fourth section presents the traditional and present ways of managing the wolf.

### 4.1. Wolf population and damages. Spatial and temporal evolution

Whilst heavy debates exist amongst actors on the exact figure of wolf numbers, location and damages upon the livestock sector, I have chosen to limit this section to give an overview of the general tendency over time of these aspects. This choice is based on the intention to avoid fuelling the existing discourses on which data is truthful or not, as has happened on multiple occasions during fieldwork <sup>e.g. i.16, O.4</sup>.

Up till the 19<sup>th</sup> century the wolf could be found almost everywhere in the Iberian Peninsula, but during the 19<sup>th</sup> and 20<sup>th</sup> century the wolf population declined greatly, reaching its lowest point in the 1970's due to overhunting (Blanco, 2018; Blanco & Cortés, 2009). Nowadays the wolf population is making a comeback (see Image 9), and although no agreement exists on the exact figures, it is estimated that there are between 1500 and 2500 wolves spread out over northwest Iberia (Blanco, Sáenz, & Llaneza, 2007; Echegaray, 2014).

In Asturias the evolution of wolf populations has followed a similar tendency as the rest of the Iberian Peninsula. According to the monitoring efforts of the Asturian Government and scientists, it appears the wolf has made a comeback in the last few decades, and since a few years the population seems to have stabilized. As regards to the fieldsite, respondents recall the wolf always having lived in the higher parts of the mountains of Redes, and occasionally killing livestock there <sup>i.11</sup>. These wolves would only sporadically come down to villages at certain occasions, such as with heavy snowfall or when the wolf was either old or unable to hunt <sup>i.13</sup>. There are other places however where the wolf has not been seen for a long time and is now returning. These places can be on smaller scale, such as wolf packs approaching villages, or

larger scale, such as mountain ranges like the Sierra de Cuera and the northern part of Picos de Europa, and it is these places that are pointed out as being the most conflictive, as people are no longer used to coexisting with the wolf <sup>e.g. i.13, i.17, i.27</sup>.

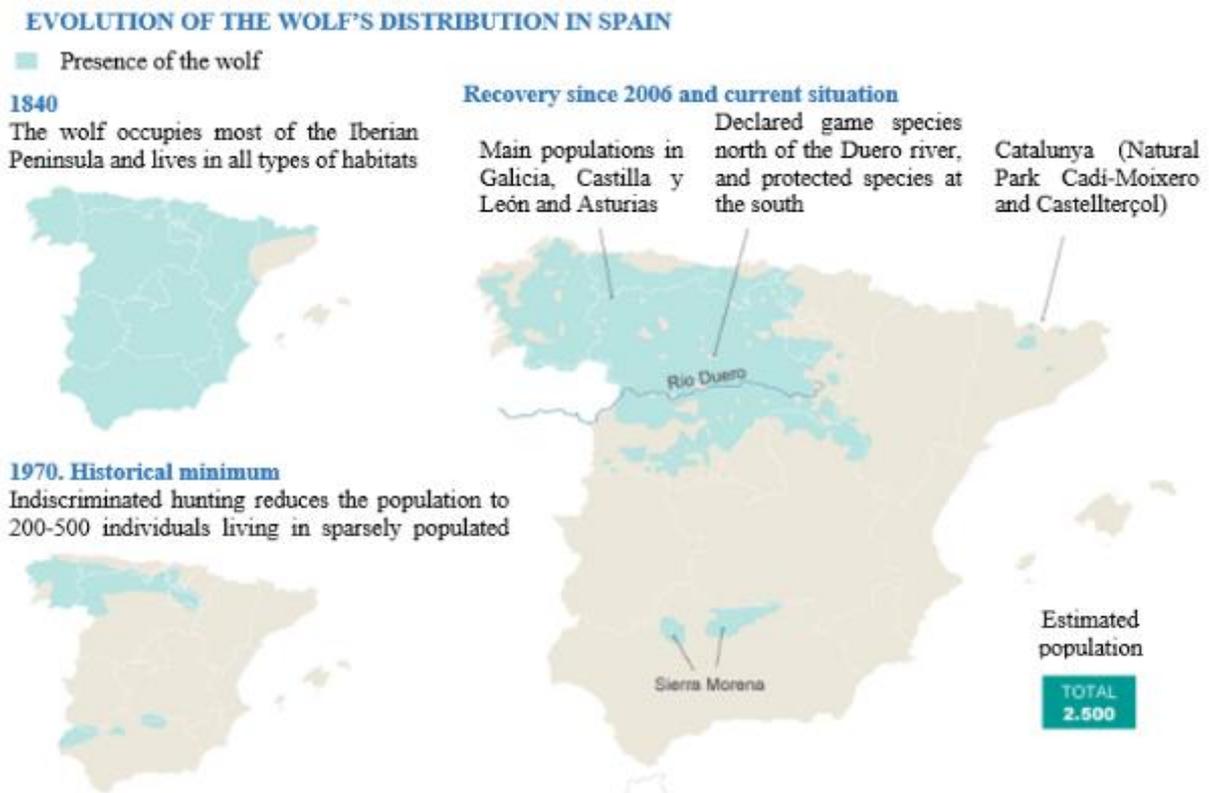


Image 9. Evolution of the wolf's distribution in Spain. Translated from Spanish. Source: El Pais (Méndez, 2012)

In regard to wolf damage, contrasting stories also exist, with some actors claiming it has increased over the years, and others that it has decreased. Nevertheless, when looking at existing data from the government and scientists, it appears that in the last years there is a general decline in wolf attacks on livestock in Asturias, although there are several places that suffer from an increase of damages. This occurs mainly in those areas where the wolf was gone for several generations and people have ceased to use certain practices related to coexisting with the wolf, such as the Picos de Europa region (Gobierno del Principado de Asturias, 2017).

#### 4.2. Changes in natural resource management of Redes

Since many centuries, the Cantabrian Mountain range with its jagged peaks and secluded valleys has been home to small farming societies. Those people lived from the resources the land provided them, the crops they grew, and the animals they herded. Meanwhile the people interacted with other inhabitants of the mountains, such as wolves, bears and wild boars. Such was also the case of Redes. As only few crops could grow on the steep slopes, such as maize or potatoes, people made use of the forestry resources <sup>e.g. i.8, i.11</sup>. Furthermore, each family would

have a certain amount of livestock, mainly sheep and goats, which provided for dairy products and wool. The management of livestock went hand in hand with the management of other natural resources of the territory, including the trees, the rivers, and animals such as the wolves e.g. i.5, i.8, i.11.

In the past natural resources were managed by the local people, such as through the “*ordenanzas municipales*” (i.e. municipal ordinances), for which people would gather when the church bells rang to discuss all matters related to natural resource management <sup>i.23</sup>. This enabled local inhabitants to be actively involved in the management of the territory. However, during the 20<sup>th</sup> century local inhabitants lost a great part of their autonomy as legislation started to come from outside the region. Starting with legislation from the national level, from 1978 onwards legislation also started coming from the regional level, and in 1986 from the EU <sup>0.3</sup>. Furthermore, the ratification of international conventions added up to the interwoven matrix of regional, national, European and international law that nowadays exists and shapes people’s lives <sup>i.21</sup>.

In regards to regional legislation, the Autonomous Regions were created in 1978 with the ending of Franco’s dictatorship in Spain. In consequence, these regions acquired certain liberty to give shape to national laws according to their own regional context. This can be seen clearly in the case of Redes, which underwent legal changes as Asturias became an Autonomous Region. While it was a “*Coto Nacional de Caza*” (National Hunting Ground) during the Dictatorship, it became a “*Reserva de Caza*”(Game Reserve) with the arrival of autonomous legislation. Then, in 1996 it became a Natural Park, between 2000 and 2003 it was included in the Red Natura 2000, and in 2001 it was proclaimed as a UNESCO Biosphere Reserve <sup>0.3</sup>.

Based on changes in the legislation and the legal status of Redes, the role of rangers has also varied greatly over the years. In the past rangers mostly accompanied hunters to ensure the right type and number of animals were hunted and no poaching took place <sup>0.3</sup>. However, in present day, the role of rangers, as government officials in the field, has become a much more diverse task <sup>i.1</sup>. Rangers have the task to solve all problems related to the environment at a local level, such as protected species and areas; hunting and fishing activities; permits and forest fires; and filing damage from wildlife <sup>i.1, i.4</sup>. In relation to the wolf, their work mainly consists of carrying out censuses, controlling the wolf populations through culling and filing cases of attacks on livestock so owners can apply for compensation payment e.g. i.1, i.4, i.8.

Nowadays, local people are management-wise much more disconnected from the region its resources, leading to lack of local and active participation in resource management <sup>i.23</sup>. This disconnection is in part due to the top-down implementation of many (environmental) laws that touch upon almost all aspects of people's lives, and thereby restrict their capacity to manage the land's resources <sup>i.17, i.23, i.25</sup>.

### **4.3. Livestock management and practices**

Livestock management and practices apply to several aspects. Since the 1960's and 1970's changes have occurred which led to the loss of the traditional practices in the rural areas. These changes are associated with the arrival of industrialization, mainly the mining industry, and changes in the legal framework <sup>e.g. i.17, i.23, O.3</sup>. This has led to the loss of management practices from the past, or otherwise being carried out differently, including those that served to reduce wolf attacks on livestock <sup>i.22</sup>. Historically the people of Redes predominantly had “*ganado menor*” (small livestock), which consist of sheep and goats, and just a few cows. From these animals mainly dairy products were obtained for own sustenance <sup>i.11</sup>. Only prosperous families had more than five or ten cows <sup>e.g. i.5, i.24</sup>. Livestock was managed through transhumance practices, whereby the animals were brought to different altitudes in the mountains depending on the season, and the shepherding families would often accompany these animals when brought to the higher summer pastures to live with them during the summer months. As such, not only livestock migrated, but part of the population too <sup>e.g. i.5, i.25</sup>.

However, in the last few decades the livestock sector has become more professionalized, whereby livestock is managed in a more intensive manner and no longer for own subsistence <sup>i.17, i.28</sup>. As such, there are no longer shepherds (i.e. people who accompany livestock everywhere they go) left in Redes. Instead, a new profession has arisen, that of “*ganadero*”, or professional (cattle) rancher. The predominant type of livestock is now the “*ganado mayor*” (i.e. cows and horses), and ganaderos usually have over a hundred cows, primarily for meat production <sup>e.g. i.2, i.18, i.20</sup>. Nonetheless, some characteristics of extensive animal farming are still conserved, like the transhumance practices of bringing livestock to the high mountain pastures in the summer months, and lowering the animals to the valleys in winter, although the owners no longer live together with the animals <sup>i.11, i.22</sup>.

Regarding preventive measures that have or are being used to prevent wolf attacks, many do not only have as goal to prevent wolf depredation, but to combine various aims in both livestock and natural resource management. For example, in the past, when livestock was in the

“majadas” (see Image 10) during the summer months, the smaller livestock (i.e. sheep, goats and calves) was penned up at night. The mother cows would walk around freely, but brought to the fenced area in the mornings and evenings to feed the calves, and to be milked if there was any milk left over. To bring the cows back to these areas at nightfall they would be attracted with salt and people calling for them, whilst in the morning the cows would be directed towards a certain direction, depending on where grazing was best <sup>i.5</sup>. Furthermore, the mere presence of more people in both the villages and the *majadas* has been pointed out to be a reason wildlife, including wolves, stayed away <sup>e.g. i.23</sup>. Not only did more people live in the area in the past, but also did people have many more children, who did not go to school but instead took care of the family’s livestock <sup>e.g. i.5, i.11</sup>. Besides penning up the animals most vulnerable to wolf attacks, people traditionally also used direct ways to scare off the wolf, people made use of the *mazapila*<sup>8</sup>, lighting fires or making loud noises at night with gunshots or firecrackers <sup>i.18</sup>



*Image 10. The Majada de Melordaña, one of the summer pastures where people in the past would spend the entire summer living with their livestock in the high mountains. Now most cabins, in which entire families lived, are little more than ruins. Source: Isabeau Ottolini*

Additionally, an important aspect of traditional agricultural practices was the use of fire. In the past, there was hardly any vegetation on the hills surrounding the villages, as it was eliminated with the help of small, controlled fires, mainly to burn shrubs. Once the pastures were cleared

---

<sup>8</sup> Device powered by the flow of water that is made to scare off animals by making repeated banging noises.

with the use of fire, the grazing sheep and goats would keep the shrubs at bay, therefore maintaining suitable pastures for the cows<sup>i.4</sup>. An additional benefit of clearing shrublands was that between the villages and the forests lay the meadows, where wild animals such as wolves and wild boars had scarce cover, thereby reducing wildlife-related damage. However, in present day fire is no longer a common practice, mainly due to changes in legislation that limit its use. As fire and small livestock are no longer used to maintain the pastures, forests grow and shrublands proliferate, which some people, in turn, relate to the increase of conflicts with wildlife, including the wolf<sup>e.g. i.14, i.13</sup>. Some people still recall the *veceria*<sup>9</sup>, which was a common practice consisting of gathering all the sheep of the village, and then people would herd the flock in turns, depending on the amount of sheep each had<sup>i.5</sup>. This way, people shared the workload of taking care of the village's animals. However, this practice has been lost, as there is nowadays a lack of associationism between the ganaderos<sup>e.g.i.4, i.21, i.26</sup>.

Nowadays, few preventive measures are taken against wolf attacks. Several reasons are given for this. One reason is that traditional measures are no longer effective as the wolf is not scared of humans anymore, and that therefore there is no point in keep taking ineffective measures<sup>i.18</sup>. Another reason is that the ganaderos have other work to do and taking preventive measures requires a lot of effort<sup>i.13</sup>. While in the past the entire family would help, and there was more associationism amongst all the ganaderos, nowadays it is just the owner, and maybe his partner, who takes care and carry out preventive measures for over a hundred cows<sup>e.g. i.3, i.4, i.21</sup>. This makes taking traditional measures like putting all the livestock in stables each night unpractical, and only in winter the animals are stabled, mainly to protect them from the cold and avoid the animals losing too much weight<sup>i.2, i.25</sup>. An additional reason can be that, as the ganaderos pay the government for letting the cattle graze on public ground, the government is held responsible for taking preventive measures against predators<sup>i.20</sup>.

The preventive measures that are used nowadays, and have been observed during fieldwork in Redes, are the following. Ganaderos sometimes sell their calves before bringing the herds up to the summer pastures, in order to ensure at least some income<sup>i.2</sup>. Others use donkeys to protect their sheep, as these have a natural tendency to fight when attacked, and wolves do not risk getting hurt<sup>i.10</sup>. But the most visible practice in the area seems to be owning mastiffs, having seen them on multiple occasions (see Image 11 and Image 12). Moreover, the Asturian government has offered help to ganaderos in protecting their livestock, through measures such

---

<sup>9</sup> Group of neighbours sharing the workload of certain tasks related to agricultural or livestock practices.

as mastiffs and electrified fences. However, it appears barely anyone ever applied for this government support program <sup>e.g. i.7, i.14</sup>.



Image 11. Walking with an adult and a puppy mastiff when visiting a ganadero. Source: Isabeau Ottolini



Image 12. A mastiff guarding goats in a fenced area. Source: Isabeau Ottolini

#### 4.4. Management of the wolf population and damages

##### 4.4.1. Traditional management

The wolf has never been legally classified as a game species in Asturias <sup>e.g. i.3, i.16</sup>. However, it was considered to be an “*alimaña*” (i.e. vermin) till 1970, that ought to be persecuted in any time of the year and for which many means were employed to kill it (Blanco, 2018). The use of venom, such as “*externina*”, was a common practice <sup>e.g. i.3 i.14 i.23</sup>. Other ways of killing the wolf were through the use of snares or “*chorcos de lobos*” (i.e. wolf traps, see Image 13).

In addition, there was a person, called the “*alimañero*” (i.e. vermin killer), who killed all types of so-called vermin species. This figure, which no longer exists as it became illegal since 1970, was highly regarded in the villages, as it freed the villagers of the troubles vermin species, such as wolves, foxes, martens and wildcats caused. At times *alimañeros* would search for the wolf’s den to kill the puppies, while at other occasions a wolf was hunted down and killed, after which the *alimañero* would drape the wolf’s skin over his shoulders while walking into the villages, where everyone would give something as a sign of gratitude <sup>i.11</sup>. Due to their work, *alimañeros* had extensive knowledge of the entire area, and in Redes a famous *alimañero* lived, Domingo Calvo Testón. A famous anecdote is that he owned a wolf, called Valdroguín, during several years, until it attacked him and he had to kill it <sup>i.23</sup> (see Image 14).



Image 13. Traditional wolf trap in Caín, León, to the East of Redes. Source: Isabeau Ottolini



Image 14. Domingo Calvo Testón, the famous alimañero of Redes, with his wolf, Valdroguín. Source: El Comercio (Ausín, 2015)

#### 4.4.1. Present management

In the 1970's and 1980's, due to changes in national and European law, the wolf ceased to be legally seen as an *alimaña*, the figure of *alimañero* disappeared, and means of killing such as the use of venom, traps and snares became illegal. Legal milestones that have aided in the protection of the wolf were the “*Ley de Caza*” (Hunting Law) in 1970, the prohibition of venom in 1983, the ratification of the Bern Convention in 1986, and the approval of the Habitats Directive in 1992 (Jiménez-Pérez & Delibes de Castro, 2005). Legally, in Asturias the wolf is currently not a game nor protected species. Nonetheless, to deal with the management of the wolf populations and the damages to livestock, the Asturian government has developed two key solutions in the past few decades: the compensation scheme and Wolf Management Plan.

##### *Compensation scheme*

The compensation scheme in Asturias exists since long and was the first of its kind in Spain<sup>i.3</sup>. When damage is caused to agriculture, livestock and forestry businesses by wildlife species, the Asturian government pays the owner a certain amount of compensation money, based on an official scale. One of the situations in which compensation money is paid is with wolf attacks on livestock<sup>e.g. i.4, i.6</sup>. However, compensation money is only paid under certain conditions, illustrated in the following schedule (see Image 15).

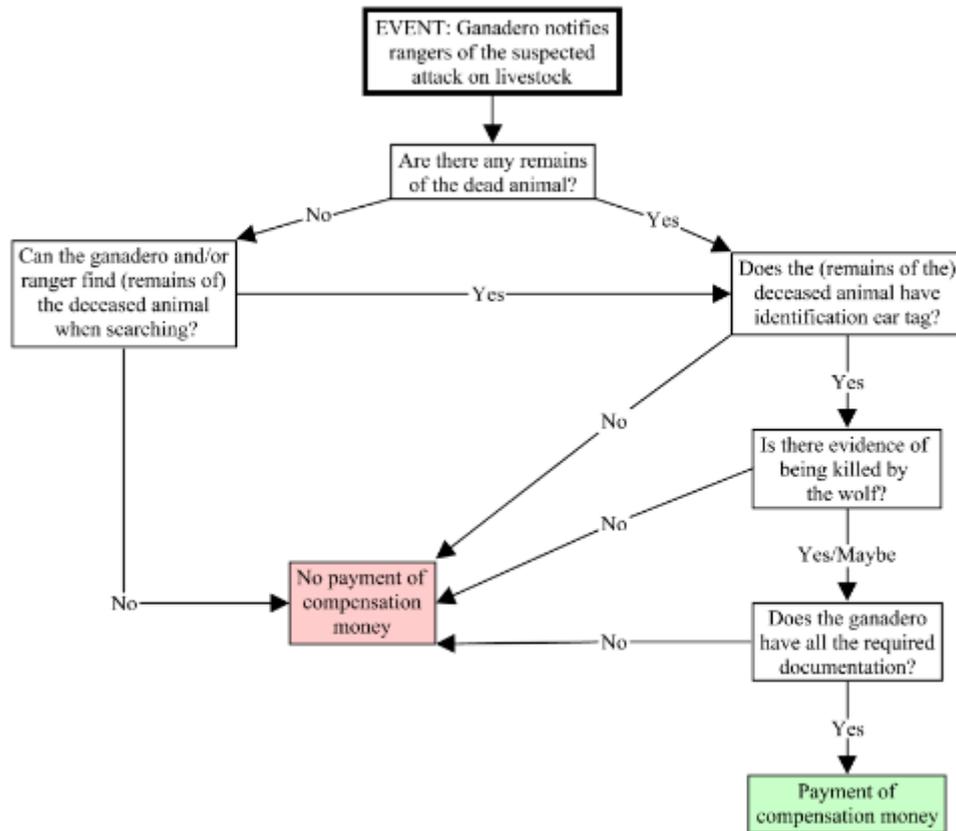


Image 15. Criteria for the compensation payment scheme. Source: <sup>i.1, i.3 i.4 i.6 i.21</sup>

The rangers, as government officials in the field, are in charge of verifying all conditions are met e.g. i.1, i.4, i.8. Once the rangers receive a call of (suspected) attack on livestock, the ranger who is on-call contacts the caller and, if possible, visits the site with the owner. Once arrived there, the ranger examines the cadaver (if it has been found), the site, and questions the animal's owner about things such as when the animal was last seen, when and where was it found, was there any evidence and if there have been any previous cases <sup>O.1, O.2</sup>. If all the evidence points towards the wolf having killed the animal(s), the height of the compensation money is calculated based on the “baremo” (i.e. pre-established scale)<sup>10</sup>, which takes in account various factors, such as the age, quality and breed to the animal e.g. i.1, O.1, O.2. Furthermore, the ganadero receives extra money for living in the Natural Park, and if it can be demonstrated that the animal is a genealogically pure breed <sup>o.2</sup>. The last step is to fill in the documents, called “*expediente de daños*”, for which the ganadero needs to bring all the required documentation, and both the owner and present ranger sign the document as agreement. In the case the ranger considers the

<sup>10</sup> The 2017 Baremo of the Asturian Government can be found on: [https://www.asturias.es/RecursosWeb/medioambiente/Baremo\\_indemnizacion.pdf](https://www.asturias.es/RecursosWeb/medioambiente/Baremo_indemnizacion.pdf)

case does not fulfil the criteria, this must be stated in the document, and again both the ranger and ganadero have to sign. Then the ganadero can recur to a second opinion (“alegaciones”).

### *Wolf Management Plan*

Since 2002 there is the Wolf Management Plan (Plan de Gestión del Lobo, PGL henceforth) in Asturias, which consists of a regulatory framework to ensure a balance is achieved between wolf damages to livestock and the maintenance of a stable and viable wolf population<sup>i.7</sup>.

The first PGL was approved by the *Decreto* 155/2002<sup>11</sup>, and in 2015 the Asturian government approved the second PGL with the *Decreto* 23/2015<sup>12</sup>, due to, amongst others, changes in legislation and context, new scientific knowledge and the experiences gathered from the first PGL. Based on diverse criteria, management actions are planned annually for the different management zones in Asturias. The criteria for the control of wolf populations are:

- Evolution of the wolf population, based on a census of how many wolf packs there are and which of those are reproducing groups.
- Evolution of the damages, based on the filed cases of damages on bovine, caprine, ovine and equine livestock.
- Evolution of the social conflictivity, based on the number of news articles on the wolf.
- Estimation of potential prey species, based on a census of wild ungulate species.

Based on abovementioned criteria, an annual “*Programa de Actuaciones de Control del Lobo*”<sup>13</sup> (i.e. Action Program on Wolf Control ) is published, which announces the annual culling quota for each of the seven management areas<sup>e.g. i.1, i.27</sup>. Furthermore, there are the “*Areas Sin Gestion Especifica*” (i.e. areas without specific management) with an occasional presence of wolves, and where all wolves are allowed to be culled. See Image 16 for the seven different areas and the culling quota per area. In Redes, for example, a total of three wolves were allowed to be culled for the hunting period of 2017-2018<sup>i.1, O.3</sup>.

---

<sup>11</sup> The first PGL can be found on <https://sede.asturias.es/portal/site/Asturias/menuitem.1003733838db7342ebc4e191100000f7/?vgnnextoid=d7d79d16b61ee010VgnVCM1000000100007fRCRD&fecha=30/12/2002&refArticulo=2002-2230001&i18n.http.lang=es>

<sup>12</sup> The second PGL can be found on <https://sede.asturias.es/bopa/disposiciones/repositorio/LEGISLACION40/66/11/001U005I350001.pdf>

<sup>13</sup> The action program for 2017-2018 can be found on: [https://www.asturias.es/webasturias/GOBIERNO/TRANSPARENCIA/DERECHO\\_ACCESO/frecuentes/2017\\_06\\_07\\_programa\\_lobo\\_2017\\_18\\_opt.pdf](https://www.asturias.es/webasturias/GOBIERNO/TRANSPARENCIA/DERECHO_ACCESO/frecuentes/2017_06_07_programa_lobo_2017_18_opt.pdf)



Image 16. Wolf culling quota per management area in Asturias for the period 2017-2018. There are seven management areas, and the grey areas are the “Areas sin Gestión específica”. Source: LNE (Salas & Arias, 2017)

Up till recently, the control of wolf populations was carried out by the rangers, as only they have the legal authorization to kill wolves. Nevertheless, recent changes in the second PGL have given the opportunity for hunters to participate in the culling activities, by participating in certain “*batidas*” (i.e. group hunts), authorized by the Asturian government for the Action Program of 2017-2018 e.g. i.1, i.3, i.27 (Gobierno del Principado de Asturias, 2017).

Having presented the aspects that make Redes Natural Park unique, in the next chapter the findings in relation to the research questions are presented.

## CHAPTER 5. FINDINGS

In this chapter the findings of the research are described. Firstly, a brief overview is given on how people look back at the conflict with the wolf in the past, and how they used to deal with this large carnivore. This is followed by a description of the findings in regards to how the conflict is conceptualized in the present and the different coping strategies the actors use. The chapter concludes with an overview of what people think the future might hold in regards to living with the wolf. Hence, the findings of the fieldwork are presented in this chapter, and the analysis of these findings in relation to the theoretical framework is done in the next chapter.

### 5.1. The wolf in the past

For as long as people can recall, the wolf has always been part of the fauna inhabiting the rugged peaks and hidden valleys of Redes. From the dawn of time wolves have hunted wildlife, and since humankind has started domesticating animals, these animals have fallen to the predatory attacks of wolves. In response, just as the people of Redes acted upon their environment to secure and defend their livelihood, so did they act upon the wolf to protect themselves and their livestock. These actions varied from measures to prevent attacks, which were oftentimes integrated with other livestock practices (see subchapter 4.3), to killing wolves, which was seen as an *alimaña* (see subchapter 4.4). And so, humankind and wolf lived side by side.

From the past, stories are told of a ferociously smart animal, that ambushed people when staggering through snowstorms, tearing them apart in front of the eyes of beloved ones, or hunting them up into trees and patiently waiting for their victim to get down <sup>i.5, i.25</sup>. Also anecdotes are told of young shepherds bearing the heavy responsibility of caring for the family's livestock in times of famine, living with the animals during the summer months at the *majadas*, and occasionally finding a dead sheep or calf killed by wolves. These attacks were a part of life and seen as something normal <sup>i.23</sup>, as “*the wolf has traditionally been a competitor of humans ever since starting to have livestock*” <sup>i.6</sup>. As wolf populations declined due to overhunting and the use of venom, reaching its lowest point in the 1970's, many people recall wolf sightings being a rare event, especially up till the mid-1990's <sup>e.g. i.25, i.26</sup>. When seen, it happened mostly in remote areas high in the mountains, or with extreme snowfalls when the wolves came down to the valleys in search of prey <sup>e.g. i.13, i.21, i.25</sup>.

To sum up, the wolf in the past caused a certain level of trouble to people's lives, mainly due to livestock depredation. However, local inhabitants made use of various actions to either

prevent attacks or to deal directly with the species. As such, the wolf has historically been seen as a part of life that had to be dealt with, just like other issues such as the weather or diseases. This perception, as I will show next, has in part evolved into the present communications related to the wolf in Redes.

## **5.2. The wolf in the present**

The human-wolf conflict of present day cannot be summarised as easily as the conflict of the past, which actors express as being predominantly about the wolf eating livestock. In order to gain a fuller understanding of the present conflict, it is necessary to dive into the complexity of the field and look at the different dimensions of the conflict as they emerge throughout the discourses. As will be shown throughout this subchapter, in the present a broad range of aspects exist in relation to the conflict. However, even by looking at all those aspects it is not possible to get a clear-cut idea of what the conflict precisely is. The findings presented here show there are no clear limits to what the conflict is or not is. Rather, it is open to influences from the surrounding discourses the actors engage in, whereby the conflict is continuously formed and reformed. As such, only a rough sketch can be made of the dimensions that make up the conflict, and the related coping strategies.

### **5.2.1. Wolf sightings**

In recent years the wolf population in Redes has recovered from its all-time low, and wolf sightings have become more common (see Image 17). These sightings are experienced in varying ways. For some people it contains a traumatic element, for example when ganaderos see their sheep being killed by a wolf in front of their own eyes, or trying to scare off wolves which are attacking their livestock <sup>i.13, i.18</sup>. Other people experience wolf sightings as something very special. One interviewee mentions it is the main reason for living in the region <sup>i.16</sup>, whilst a ranger tells with pride that “*of all of Europe we’re one of the last places where the wolf exists*” <sup>i.4</sup>, and a local resident recounts that when he howled jokingly one night, wolf cubs howled back in reply <sup>i.22</sup>. Regardless of being in favour or against the wolf, one interviewee states that everyone feels “*something instinctive, when seeing a wolf*”, meaning it is an experience that evokes emotions in everyone <sup>i.23</sup>.



*Image 17. Sighting of an Iberian wolf in Redes. Source: Jose Díaz (2018)*

### **5.2.2. Wolf attacks. How big is the problem?**

Although there are now once again more wolves roaming the mountains of Redes, wolf attacks upon humans have become a thing of the far past. As such, even if you were to walk through wolf territory by yourself, people such as some biologists and rangers assure you there is no reason to be afraid. Oftentimes this is told based on their own (positively perceived) encounters with the wolf<sup>e.g. i.3, i.6, i.22</sup>, and some believe fear of the wolf is merely due to people's ignorance and inexperience<sup>i.3</sup>. Nonetheless, other people are not so sure about whether humans are safe from the wolf. Especially fear is expressed, both by local and non-local inhabitants, in regard to children's safety which could be an easy prey for a wolf passing through the village<sup>e.g. i.9, i.13, i.20</sup>.

In any case, whatever the future might or might not bring, the last attack of wild wolves on a person in Redes took place long ago. Nonetheless, wolf attacks on livestock continue to be a part of the daily reality of ganaderos in Redes. There are varying discourses on how big the impact actually is, referring thereby not only to the frequency of wolf attacks, but also aspects such as the number of killed livestock or the associated economic losses. Some people downplay the social and/or economic impact of losing livestock to wolf attacks, and often use (scientific) data to support their arguments<sup>e.g. i.1, i.3, i.14</sup>. For example, one biologist tells that “*wolf damages only affect 1% of all ganaderos in Asturias*”<sup>i.3</sup>, to which a ranger adds that “*if you have 30 calves, one dies and you're paid [compensation money] for it, then the wolf isn't*

*ruining you*”<sup>i.1</sup>. Moreover, it appears damages due to other wild animals, like wild boars, martens, foxes and deer, are both much more frequent and cost the Asturian government more money than wolf damages<sup>i.6, i.8</sup>. However, possibly the most surprising story was of a horse owner, who talked positively about wolves, making me think he had never had trouble with wolves. Nonetheless, he had occasionally lost several horses, but relativized it by saying it was his own responsibility it had happened, and that it is part of life<sup>i.22</sup>.

On the contrary, others claim all the ganaderos they know suffer from wolf attacks, and those few that have not are merely a coincidence<sup>e.g. i.17, i.18</sup>. Oftentimes personal testimonials are used to back up the arguments regarding the impact of the conflict, such as a ganadero telling there has not been “*the need to sell [lambs] the last few years, because [he has] been giving them to the wolves*”<sup>i.13</sup>. Besides using anecdotes, also data from the government, ganadero syndicates and the media is used<sup>O.4</sup>. Just as the cherry-picking of data is used to downplay the issue, so it is done to enlarge the issue.

To recapitulate, it does not seem possible to give a clear-cut answer to how big the problem surrounding the wolf really is, as different actors have varying ideas on, for example, whether the wolf is a problem in the first place, to whom it represents a problem, and in how far the wolf impacts people’s livelihoods, such as the livestock sector in Redes. In the next section reasons are presented of why the dimensions of the conflict are modified by the involved actors.

### **5.2.3. Reasons for changing the dimensions of the conflict**

There are contrasting ideas as to why the impact of wolf attacks are enlarged or downplayed by others. Some claim others make a bigger problem out of it for a variety of reasons: one could be that “*in these villages there is little else to talk about, except of livestock and [the ganadero’s] problems, such as the wolf*”, and another is that the economic crisis has left people more vulnerable to additional challenges to their livelihoods, such as the wolf<sup>i.3</sup>. A possible third reason, more accusatory by nature, is that ganaderos might make the issue larger than it is to ensure government subsidies and the compensation payment scheme continue existing<sup>e.g. i.26</sup>. In addition, ganaderos are often stereotyped. By some, they are called “llorones” (i.e. crybabies)<sup>i.6, O.3</sup> as they “*want to remove the wolves [from the area] so they can work comfortably*”<sup>i.6</sup>. Others label them as ignorant people, who destroy the rural environment, while the ganaderos consider themselves as the only true nature conservationists due to their age-old practices and knowledge of the land they live on<sup>i.17, O.4</sup>

To the contrary, some say there are people who downplay the impact of the wolf because these know little about rural life and are oftentimes stereotyped by local people as “*ecologistas*” or “*animalistas*”, which means nature/animal conservationists or environmentalists with a negative connotation. Often these are seen as outsiders, habitually from urban areas, who know little or nothing about the local inhabitant’s way of living. Being labelled as such can occur when, for example, telling ganaderos to protect their livestock so as to reduce damages, whereby the ganaderos feel you are against them, and in favour of the wolf, as several non-local interviewees told from own experience <sup>i.9, i.10</sup>. One local says environmentalists “*are like parasites [...], stirring and stirring to live at the cost of others*” <sup>i.13</sup>, and biologists from Oviedo University are seen as brainwashed environmentalists who are against the rural world <sup>i.17</sup>. This once again links up to the feeling local inhabitants have of being unwanted and undervalued, and to them mistrusting any (scientific) data presented by actors such as environmentalists and biologists <sup>e.g. i.17, i.20, i.23</sup>.

Both the dynamics of downplaying and enlarging the issue make it hard to get a grip on the dimensions of the conflict. The uncertainty caused by not knowing ‘the truth’ regarding how big or small the conflict is appears to be a great source of friction between the different actors, and furthermore hinder the creation and application of fitting solutions. The resulting friction, which goes together with actions such as stereotyping others and treating them with mistrust, became especially visible during the Wolf Conference in Oviedo, where different groups of actors (i.e. hunters, ganaderos, biologists, journalists, government officials, politicians and conservationists) had the chance to speak <sup>0.3</sup>. During the sessions, each group grasped strongly to their data as that which represents the ‘true’ dimensions of the conflict. Simultaneously concerns were expressed about data used by others, which in certain actor’s eyes made the conflict look bigger or smaller than they themselves perceived it to be. As a result, actors pointed out reasons why solutions are ineffective, because they considered them to be based on erroneous data <sup>0.4</sup>.

All in all, various reasons are given on why actors downplay or enlarge the conflict. It appears it is done to deal in different ways with the uncertainties, such as that of the ambiguity of information. However, an additional source of uncertainty consists of the changes that have occurred in Redes, as will be presented in the next section.

#### 5.2.4. What has changed, and why?

Whilst there are many contrasting discourses on the dimensions of the conflict, others touch upon the different changes that have taken place in Redes. For instance, current attacks on livestock are linked to a perceived change in wolf behaviour, including a higher rate of attacks, closer presence to villages and more wolves. Some local inhabitants consider both the increase of sightings and the places where these occur (e.g. close to villages) as abnormal. They say this is not the wolf “*de toda la vida*” (i.e. of always) they know and understand, but another type of wolf that must have been released by the government or environmentalists, and approach the villages because they are used to humans and don’t know how to hunt properly <sup>e.g. i.11, i.13, O.3</sup>. However, one biologist gives another explanation, which is that “*the wolves have not changed, but we have*”, referring to changes in people’s way of life and livestock management <sup>i.14</sup>.

As to why changes have occurred, there are contrasting explanations. Generally, the wolf is blamed by local inhabitants for the changes in livestock type, numbers and prevention measures <sup>e.g. i.18, i.23</sup> (see Image 18). For example, a local inhabitant tells that the change to bovine and equine livestock is because these defend themselves better from predators than sheep and goats <sup>i.17</sup>. In addition, the increase in bovine livestock is said to be done to cope with a combination of the low profitability of the livestock sector and the economic losses caused by the wolf <sup>i.23</sup>. However, other interviewees tell that actually cattle is harder to protect from wolves than sheep and goats <sup>i.3</sup>, and that sheep and goats are more cost-effective regarding workload and surface needed <sup>i.23</sup>. As one ranger tells, these changes are not attributable to the wolf, but to the fact that cattle are easier to take care of and give higher profits <sup>i.4</sup>.

However, changes do not only refer to livestock management. Nowadays there are less and less people living in the area. While not all respondents consider the wolf’s impact on the livestock sector as the direct cause for depopulation, it is mentioned as an additional factor <sup>i.23</sup>. Together with, on one hand, the lack of education, communication and health services, and on the other hand the prohibition of traditional practices, people are leaving the area <sup>i.20</sup>. As some believe, the problem of depopulation lies in the fact that, even if there are people who want to remain in the area, they do so living in worse conditions, such as the absence of basic services of education, access to internet or health services, and necessary income opportunities <sup>e.g. i.1, i.14, i.17</sup>.



*Image 18. Equine livestock. Whilst not a common livestock species in the past, it has become much more common in the last few years. Simultaneously, the number of horses killed by the wolf have increased <sup>e.g.i.5</sup>. Source: Isabeau Ottolini*

On the other hand, there are people who hold not only the wolf, but also the government responsible for the depopulation of the area <sup>e.g. i.17, i.23, i.24</sup>. A general impression of local people is that the government is not interested in solving their problems with the wolf, nor ensuring the well-being and survival of rural inhabitants and their traditions. As one inhabitant of Redes tells, *“the government is not interested in having us here, for them it’s cheaper to have us all concentrated in the cities, and that’s why they don’t solve our problems here”* <sup>i.17</sup>. Nature conservationists are oftentimes seen as the force behind the government for prohibiting traditional practices, such as the use of fire, traps and venom <sup>e.g. i.11, i.17</sup>. This to great indignation of local inhabitants, who see themselves as the real nature conservationists, because they take care of the animals and the land, and know how hard rural life is, in contrary to the nature conservationists, working from their city office, making up certain laws and implementing them without knowing how theoretical plans work out in the real world <sup>e.g. i.11 i.13, i.17</sup>. However, a ranger believes it is untrue to claim people are leaving because of the wolf: *“they can blame that the wolf is throwing us out. This is not true. What is true is that they leave, searching for work, for comfort, [...] for good education and good health services”* <sup>i.1</sup>.

To sum up, many people talk about changes that have taken place in Redes over time. These changes do not only concern those in wolf numbers and damages, but also in livestock type, number and practices, and the steady depopulation of the area. However, no agreement appears

to exist on what has caused such changes, and as such, it is hard to find actor(s) whom can be held responsible for the changes. So far, conceptualising the human-wolf conflict appears to be a challenging endeavour, and what emerges is not a sole definition that unmistakably delineates what the conflict is. Instead, as one advances through the field, more and more aspects emerge, which reveal the multiplicity of topics related to the conflict. In the next section reference is made to the role of politics and the media in the conflict, as aspects that further complicate understanding what the human-wolf conflict in Redes is.

#### **5.2.5. Politics, the media and the conflict**

Oftentimes a great deal of the conflict is attributed to the meddling of politicians and the use of the wolf conflict discourse for political ends <sup>e.g. i.4, i.28</sup>. As several interviewees explain, it seems the conflict worsens when there are major events occurring at political level, such as discussions on the Common Agricultural Policy (CAP), whereby the wolf is pointed out as the biggest problem of the rural world, while at the same time covering up other issues (e.g. unfair economic competition) <sup>e.g. O.4, i.27, i.28</sup>. This whilst many believe the wolf is by far not the biggest nor most urgent issue ganaderos face. As one local inhabitant tells, *“the wolf is the top of the iceberg, an additional problem, but the rural world has many more problems”* <sup>i.17</sup>. Moreover, a politician tells the wolf issue is used as political propaganda to gain votes from the rural communities <sup>i.28</sup>, as an interviewee illustrates by claiming to have heard a ganadero mention to *“vote whoever says to kill all wolves and gives most subventions”* <sup>i.6</sup>. Mainly the right-wing political parties are pointed out as involved in lobbying and increasing the wolf problem, by meeting with ganaderos and hunters; promising to cull more wolves; organizing frequent press releases; posing questions in parliamentary meetings; summoning ganaderos to report all livestock deaths as caused by the wolf; and criticizing other political parties <sup>e.g. i.4, i.28, i.24</sup>. For example, during the wolf conference several politicians from opposing parties said that if they were governing they would ensure more wolves being culled, to the dismay of other political parties who disregard it as a solution <sup>O.4</sup>. Altogether, it must also be said that many respondents mention Spanish politics lack a culture of dialogue and reaching agreements <sup>e.g. i.10, i.22, i.24</sup>.

On the whole, it appears the Asturian government “is between two fires”: on one hand is the environmentalist and/or urban population, which idealizes the wolf as an icon of wild nature, while on the other hand the ganaderos and /or rural population point out the wolf as their biggest enemy <sup>i.23</sup>. As a government official points out, this confrontation between strongly polarized groups is happening all around the rural world <sup>i.27</sup>, and with the government being in the middle,

it will always be criticized for whatever actions taken (or not), even if a balance between the interests of different actors is attempted to be achieved<sup>i.7</sup>.

Another actor that is also seen as standing in the middle and receives criticism from both sides is the media. The media is held responsible for worsening the conflict, oftentimes through sensationalistic stories<sup>e.g.i.3,i.8,i.16</sup>. Some believe that if the wolf topic would not appear so much in the media it would not be such a problem. One ex-ranger relates it to the current issues of Catalan Independence and the use of sensationalistic photos: *“all day long talking about the wolf, about Catalunya, and people turn something small into something big [...]. But as they are all day long putting photos of a wolf hanging from a tree and then a photo of a dead flock of sheep [...], you create controversy”*<sup>i.8</sup> (see Image 19 and Image 20)



Image 19. Dead sheep found near Orlé, in Redes. Source: El Comercio (Varela, 2017)



Image 20. Dead wolf hanging from a signpost in Teverga, Asturias. Source: FAPAS, 2017

The media is blamed, often by nature conservationists, for only giving voice to the ganaderos<sup>e.g. i.3, i.6, O.4</sup>, and leaving out other involved sectors<sup>i.3</sup>. Whilst it might be so that news comes more often from ganaderos narrating the negative side of the wolf, those who have more positive stories to tell, such as nature conservationists, lack the initiative to make it heard through traditional media such as the newspaper or the television<sup>i.24</sup>. Moreover, a biologist explains the government takes little initiative in using the media as a way to adequately inform people about the wolf conflict or to rectify false information before it starts gaining a life of its own and increasing the conflict<sup>i.3</sup>. Additionally, the media is criticized for the generalized lack of in-depth knowledge on the topic, as often lay people write about it, besides the incapacity to reflect upon the bigger picture of what is actually going on, therefore some propose news must

be told by people who know about the topic, narrate more positive stories, and do so without seeking sensationalism<sup>i.8, i.24</sup>.

In defence to abovementioned criticism, journalists at the Wolf Conference say the media serves as an expression of people's stories and emotions, including thereby the ganadero's stories when losing their livestock, and that whilst they do publish news on wolf attacks upon livestock, there are for sure many other ganadero's stories that are never told<sup>i.24, O.4</sup>. Moreover, to the question of what the media's role is in the conflict, the answer from journalists is that they are merely another actor in the conflict, and that they would just as gladly narrate on positive as negative news on the wolf, therefore saying they are not taking anyone's side but are merely a channel of expression<sup>i.24, O.4</sup>.

Summing up, the media and politics play a seemingly important role in the conflict, whereby these actors find themselves situated between polarised groups of actors, such as ganaderos and environmentalists, ganaderos and rangers, or urban and rural inhabitants. However, whilst journalists or politicians downplay their part in the conflict, other actors are very much convinced that their meddling influences, and even aggravates, the conflict. One of the ways in which the conflict appears to be influenced is through the solutions the Asturian government has proposed to resolve the conflict, as will be presented in the following two sections.

#### **5.2.6. Governmental solution I: Compensation payment scheme.**

Leaving behind the dynamics of changing the dimensions of the conflict, and discussions on what has changed and why, the fact remains that wolf attacks on livestock do take place. For those losses, the Asturian Government has a compensation scheme which consists of economically compensating the owner in case livestock is killed by the wolf. However, not all livestock find their death in the jaws of the wolf. As a ranger tells from own experience, livestock can die of all sorts of reasons: "*some die of anthrax, others of lightning, others fall from cliffs*"<sup>i.26</sup>, and even those cases where it seems to have been the wolf, there is still the possibility it was actually killed by one or multiple (stray) dogs. An illustration of this is the case of multiple attacks on livestock in the village Campo de Caso, about which various contrasting stories are told. One day I was guided around the village by a ganadero to see all the places livestock was killed and the wolf was seen. I was told the culprit for the killings had surely been the wolf, as several people my guide considered trustworthy had told him so, and in addition a wolf had been photographed with a trap camera<sup>i.13</sup>. However, from several other people I heard a different story. It appears several (stray) guarding dogs were suspected of

causing damages to livestock, especially after photographing dogs on several occasions near damage sites. Eventually, one suspected dog was culled, as no one claimed to know the dog's owner and the dog lacked the obligatory identification <sup>i.26, O.2</sup>.

As such, it appears that (stray) guarding dogs are an additional source of trouble <sup>e.g. i.6, i.26</sup>. Many people have dogs to guard their livestock, but do not bother with caring for them, ensuring they are identifiable by microchip, or making certain they stay with their herd. In consequence, many guarding dogs walk freely around the “*monte*”, and oftentimes prey upon wildlife and livestock <sup>i.26</sup> (see Image 21). However, this leads to two issues. Firstly, if the dog is caught in the act, oftentimes it is not identifiable by microchip and everyone will say the dog is not theirs. In consequence, the dog's owner, whoever that may be, cannot be held responsible for another ganadero's loss <sup>i.26</sup>. Secondly, it is near to impossible to distinguish wolf prints from those left behind by dogs (see Image 22) <sup>e.g. i.4, i.25, O.1</sup>, therefore the wolf is often held responsible for the livestock's death because then at least the ganadero receives compensation money <sup>i.6, i.26</sup>. However, this does result in that many of the filed cases of wolf attacks upon livestock might actually be damages caused by dogs, therefore distorting government data on wolf attacks. Nonetheless, this distortion might again be levelled by those cases in which livestock disappears altogether and in consequence cannot be filed as wolf damage. So once again, ambiguity exists regarding the precise amount of damage caused.



*Image 21. Canid excrements with what seems to be wild boar hair and a hoof. I found this during a hike in Redes. Short before I heard barking (probably a dog). Was this from a stray dog feeding on wildlife? Source: Isabeau Ottolini*



*Image 22. During the same hike, I oftentimes saw tracks of a canid. Again, it is unclear whether this was from a dog or a wolf. Source: Isabeau Ottolini*

As to why ganaderos attempt to have dead livestock filed as wolf kill even if it was not killed by wolves, some people, like a government insider, explain this is due to economic interests: “as you know you have the right of being compensated [...] they [the ganaderos] call directly

[...] to see whether the government pays”<sup>i.6</sup>. Even more so, some claim there are stories of certain ganaderos who buy bad quality livestock, leaving it behind in wolf territory, and when these are killed call the rangers to receive the compensation money <sup>i.4</sup>. Alternatively, a ranger tells ganaderos leave dead livestock, that has died of varying causes, at the mountain pastures until wolves start scavenging from it, and only then call the rangers to inspect the corpse and file it as wolf kill <sup>i.4</sup>. Nonetheless, the ganaderos say in their defence that they don’t get paid for livestock that disappears and has surely been eaten by the wolf, and if they are paid, they consider the payment too low, coming too late, and doesn’t cover indirect costs <sup>e.g. i.13, i.17, i.20</sup>.

The abovementioned attempts of ganaderos getting compensation money put pressure upon the rangers: “as long as you act dumb and pay, you’re a good guy, but if you don’t pay, then you’re the bad guy” <sup>i.1</sup>. Others express the need to “be very professional, very neutral, and not allow mixing up one thing [personal opinion] with the other [work]” <sup>i.6</sup>, and “ the best is to shut up, do our work the best we can, [...] and not take sides. [...] We have to be stealthy and lie low”<sup>i.1</sup>, thereby illustrating the difficulties rangers face when interacting with ganaderos and trying to keep things peaceful.

Although mostly ganaderos accept it when rangers consider there is insufficient evidence to file the dead livestock as wolf kill, at times the dealings between rangers and ganaderos become tense. As a ranger explains, “some people shout, they threaten you, all sorts of things, even hurt you”, and even if they seem to accept not receiving payment, sometimes they go behind the ranger’s back and “create on social media a total sense of hate towards [you]” <sup>i.4</sup>. In the past it was even worse, whereby rangers would often suffer severe consequences when doing their job, such as social isolation, suffering the murder of their animals or burning of their crops, or even getting in fights and being killed themselves <sup>i.26</sup>. Although things are no longer that bad, rangers tend to recur to giving people the benefit of doubt and just pay in order to keep good dealings with the local inhabitants and avoid increasing the conflict with the wolf <sup>i.1</sup>. As some express, if ganaderos are not kept content through compensation payments, the conflict might escalate when people resume using venom and fire to chase species away, which could gravely affect the entire ecosystem of the park, including the emblematic brown bear <sup>e.g. i.8, i.25, i.26</sup>.

Nonetheless, the strategy of giving the benefit of doubt clashes with the intention to not needlessly spend public money on compensation payments when the wolf is not the culprit <sup>0.1</sup>. This balancing out of keeping people satisfied and simultaneously doing their work right leads

some rangers to be very concise when examining a suspected case of wolf kill<sup>O.1</sup>. By seeking out a variety of cues at the site where the animal is killed, such as tracks, excrements, ways in which the cadaver is positioned and eaten, besides questioning the owner, rangers attempt to reduce uncertainty about the cause of death. Then, based on found evidence and the person they are dealing with, the ranger takes what he deems to be the best decision, which is either to pay or not with all the consequences it entails<sup>O.1, O.2</sup>. However, the Head ranger does mention to not mind being insulted by the ganaderos, and that he would be much more worried if others talked positively about the rangers. As he sees it, this would mean rangers have the ganaderos in their pocket by conceding payments too often and too easily<sup>i.26</sup>.

Altogether the compensation payment scheme is a source of dissatisfaction and friction amongst different actors, especially with the ganaderos, as those who can potentially receive money when losing livestock, and the rangers, as the ones who evaluate the damage and decide whether or not to concede compensatory payment. As seen in Image 15, chapter 4, the ganadero is only paid for the loss of livestock if a series of conditions are fulfilled. For example, when lost livestock is not found, the owner is not paid, which the ganaderos express as great economic losses<sup>e.g. i.13, i.20, i.25</sup>. However, as the Head Ranger says, “*just because this man says he had 30 sheep I am not going to believe him. First I need to check if he had so many, and then check if they were really killed by the wolf*”<sup>i.1</sup>. An additional aspect mentioned by ganaderos is that the compensation payment is too low to compensate for the future market price they had in mind of the animal<sup>e.g. i.13, i.18, O.4</sup>. As one says, “*they pay you miserably, they don’t look if [the animals] are good or bad quality.[...] Does this seem normal to you?*”<sup>i.13</sup>. Furthermore, the payment does not cover indirect costs, such as a wounded animal needing treatment or eventually dying or a lamb that needs feeding after losing its mother<sup>e.g. i.13, i.18, i.20</sup>. However, as one interviewee points out, the money paid is a financial aid in compensating the loss of the animal, and the height of the payment is not calculated with the intention to fully cover the market price nor indirect damages<sup>i.6</sup>. Lastly, it can take time for the payment to be done, taking up to two years, according to some ganaderos<sup>e.g. i.13, i.17, i.18</sup>, although a government official tells it normally takes half a year, but that ganaderos often don’t realize they have already been paid as they receive so many government payments and subsidies<sup>i.6</sup>.

As such, it appears the compensation payment scheme is not as effective a solution to calm the conflict as is intended by the government. Therefore, some people mention improvements. One would be to ensure that ganaderos suffering from wolf attacks receive a higher amount of

compensation money if they make use of prevention measures, such as owning mastiffs, lock up the livestock at night, and go see them each day<sup>i.8</sup>. In addition, a separate expert team of rangers could be formed to carry out stricter damage evaluations of suspected wolf attacks on livestock<sup>i.8</sup>. However, doubt is also expressed whether compensation payment is a solution at all when trying to reduce the conflict, especially as it creates so much tension and mistrust between the ganaderos and rangers<sup>i.6, i.8</sup>. It seems that as long as there is money involved, the conflict will continue to be fed, as people will point out the wolf as the culprit for their dead livestock just to get the compensation money<sup>i.6</sup>.

In short, the compensation payment scheme relates to many more issues that go beyond the wolf attacking livestock. Aspects that get dragged in are, for example that payments are too low and too late, or not done at all, and that social pressure is used to obtain payments. Instead of solving the conflict and improving the relations between different actors, it appears the conflict is being sustained and fed by the issues emerging from this solution proposed by the government.

#### **5.2.7. Governmental solution II. Wolf Management Plan**

Whilst the compensation scheme is pointed out to have many flaws, it appears the other solution implemented by the Asturian Government, the Wolf Management Plan (PGL), is not free of shortcomings either. During the time in Redes much talk was about the recent permission hunters had acquired through the PGL to participate in culling wolves. Some people are in favour, as it involves hunters and ganaderos more in wolf population control while simultaneously aiding the government in complying with the annual culling quota of wolves<sup>0.4</sup>. However, it seems they are only in favour as long as the wolf is not an official game species, as this would legally imply the hunting associations, and not the government, having to pay for damages caused by the wolf<sup>i.3, 0.4</sup>. In addition, ganaderos generally tend to say that wolves “*shouldn't be exterminated, that's the worst thing there is*”<sup>i.13</sup>. Rather, they just want there to be fewer wolves and be left alone with their livestock, unbothered by both the wolves and the government<sup>e.g. i.11, i.13, i.20</sup>.

However, there are also people who are against the change in the PGL, such as several environmentalist groups, who claim it is illegal for hunters to kill wolves. This is because the wolf is not a game species and should therefore not be killed by anyone else but rangers<sup>i.3, i.14</sup>. As one biologist says, “*to me it seems clearly illegal [...] and we [ASCEL] will surely denounce them [the government]*”<sup>i.14</sup>. Furthermore, it appears there is no technical justification for using

culling as a way to decrease damage on livestock, as no research has ever been conducted by the government to evaluate the efficiency of this measure <sup>i.16</sup>.

In addition, some believe that when you allow something bad to be done in small amounts, you give people the wrong impression: *“it’s like with the fire: if you carry out population controls [of the wolf], somehow you are telling that killing wolves is okay”* <sup>i.4</sup>. It is believed that the Asturian government has allowed the changes in the recent PGL after being pressured socially by hunters and ganaderos and their respective syndicates, as these deem the rangers incapable of culling all the wolves the quota establishes <sup>i.3, 0.4</sup>. Nonetheless, one interviewee expresses his criticism regarding to using culling as a way of reducing attacks on livestock: *“you never kill the culprit [...] You don’t know if the culling is effective [...], it is only effective for the public opinion”* <sup>i.8</sup>, whilst a government official explains it is a quick fix to make people believe the government is working on solving the issue <sup>i.26</sup>.

It seems that many people doubt about the efficiency of culling, and believe it actually leads to more attacks on livestock, as culling members of the wolf pack lead to dislodging its social structure and thereby disabling the remaining members to go after bigger wild prey <sup>e.g. i.2, i.16, 0.4</sup>. At times, such as during the Wolf Conference, scientific data is used to support this opinion. However, when the representative of the conservationist group, Ecoloxistes n’Aición did so, he was heavily criticized, not only by ganaderos and hunters, but also by fellow conservationists and biologists, for being biased and cherry-picking data to back up his opinion on culling <sup>0.4</sup>.

On the other side, there are also people who are against the random culling of wolves done nowadays, but believe it is acceptable to cull specific troublesome individuals that predominantly eat livestock, as *“those wolf packs aren’t natural”* <sup>i.4</sup>. Nonetheless, shooting an arbitrary wolf is already hard enough, and it is seen as unviable to only shoot pre-selected troublesome individuals, because then the culling quota would never be fulfilled, as several rangers, biologists and government officials point out <sup>e.g. i.3, i.4, i.27</sup>. Another concern people raise regarding the PGL is how the culling quota is established. This relates to both the criteria and the data used for calculating the quota. In the first place, the criteria employed to establish the annual culling quota and additional measures are heavily criticized by some. One criticism is that despite having stable wolf numbers, and a decrease in damages, the culling quota keeps increasing through time <sup>i.14</sup>. It therefore appears there is little relation between the official criteria, and how many wolves are allowed to be culled annually <sup>i.16</sup>.

Independently of the criteria employed, many people mistrust the data itself upon which the PGL is based <sup>e.g. i.24, O.4</sup>, and one interviewee asks, “*what wolf plan do you have if there is no data to base it on?*” <sup>i.17</sup>. However, it appears there is data available, offered by scientists, the government or nature conservation NGOs <sup>e.g. O.4, i.27</sup>. In regard to this data, scientists appear to present themselves as neutral and unbiased, by telling they wish to avoid their work from getting intermingled with political questions regarding how many wolves are allowed, where, and how this is managed, besides presenting their work as being objective <sup>e.g. i.14, O.4</sup>.

Remarkably, both people for and against the current PGL mistrust data offered by others such as scientists or the government <sup>e.g. O.4, i.17, i.15</sup>. As to where this mistrust comes from, it seems that people don’t trust data that a) comes from a source they don’t consider to be trustworthy, and b) doesn’t fit with their own ideas of “how big” or “how small” the problem with the wolf is. Furthermore, some believe certain information is withheld intentionally. An ex-member of the regional group “*Con Lobos no hay Paraiso*” (i.e. With Wolves there is no Paradise) tells that “*it’s not relevant to know how many [wolves] there are, because then we keep busy speculating*” <sup>i.17</sup>. In addition, a journalist adds that the lack of data is what generates the contradictory discourses <sup>i.24</sup>.

Whilst in the past the government demanded extensive studies to be conducted by external consultants on wolves and the damages on the livestock sector, and appeared to be trusted more, a former consultant explains that nowadays “*the majority of the reports are done internally [by the government] and [...] it is done, but with a lot less details, less information, and biased*” <sup>i.3</sup>. In response to the perceived lack of trustworthy data, some demand reliable information to be collected by radio-collaring wolves <sup>e.g. i.4, i.26, O.4</sup>, or carrying out extensive censuses by local experts <sup>e.g. i.5, i.21, O.4</sup>. This data can then be used to answer questions that generally cause a great deal of uncertainty, such as how many wolves there are; where they are; when/where/how often will they attack; will they start attacking people; how much damage is caused; how many ganaderos suffer from damages and why/why not; is there enough prey in the area to sustain wolf populations and so forth <sup>e.g. i.17, i.23, O.4</sup>. Answering these questions are considered necessary for a correct PGL, besides aiding in filling up the perceived knowledge gap and finding solutions to the conflict. Especially numerical data on these questions is demanded, as a journalist illustrates, by saying that the “*neutral terrain [between actors] is a number [...] as this is indisputable [...]. Without a common base, in the end you*

*have discourses that do not connect with each other and therefore become ever extremer and more divided*”<sup>i.24</sup>.

In defence of the flaws of the PGL, one government official tells that “*the sensible thing to do is to have a plan, that may be planned better or worse, but that gives us a number and a goal*”<sup>i.7</sup>, while another adds that the annual program establishes a maximum culling quota, but that he does “*not know any plan that is ever fulfilled 100%*”<sup>i.27</sup>. Curiously, the latter did not say this to his defence when confronted by ganaderos during the Wolf Conference with their discontent at the annual culling quote not being met<sup>0.4</sup>.

Shortly said, the PGL, just as the compensation payment scheme, appears to set off new discourses, which, instead of cooling down the conflict, serve as additional fuel. Some of these discourses concern the mistrust in the data and criteria used to establish culling quota, and the legality, ethics and efficiency of culling wolves as a way of solving the conflict.

#### **5.2.8. Role of ganaderos**

As both the compensation scheme and the PGL appear to be unsuccessful in solving the conflict, some actors argue that the responsibility lies with the ganaderos in preventing livestock being killed by wolves<sup>e.g. i.1, i.10, i.9</sup>. However, this is easier said than done. In the first place, if one would suggest ganaderos to be more proactive about protecting their livestock, chances are big to be stereotyped as an ignorant *ecologista*<sup>i.10</sup>. Reasons are given for the ganadero’s lack of (re)taking preventive measures. One ranger says “*[the ganaderos] want to have their livestock in the monte, without having to take care of it*”<sup>i.4</sup>, while another person adds that the lack of workforce, which is related to concentrating livestock in fewer hands, makes it practically difficult to achieve<sup>i.3</sup>. In addition, many say the traditional preventive measures nowadays no longer work<sup>i.18</sup>. However, to the comments of some that guarding dogs are inefficient against wolf attacks, the Head Ranger explains that not by simply having dogs around will your livestock be safe from wolves: they need to be taken care of and trained properly<sup>i.26</sup>. Moreover, the lack of associationism also plays a role, while some indicate this is exactly what is necessary, not only to protect livestock from wolf attacks (e.g. accompanying livestock during the day and penning them up at night), but also by sharing material and resources (e.g. tractors and sheds), which could make it easier for the ganaderos to face the various difficulties they face<sup>e.g. i.4, i.21, i.26</sup>. Lastly, a biologist explains that the government announced to financially aid people in taking protection measures, but it appears ganaderos made scarce use of it as it is seen as an unacceptable meddling of the government<sup>i.14</sup>.

All in all, the scarce use of preventive measures used by ganaderos, while simultaneously receiving compensation payment when losing livestock to wolves, is seen by some with resentment. As one not-local resident says, as ganadero you should not expect the government to take care of all your problems<sup>i.10</sup>, whilst another adds how nice it would be if the government would pay him if his equipment, on which he depends to make a living, would break down<sup>i.12</sup>. Moreover, some relentlessly criticize ganaderos<sup>e.g. i.3, i.22, i.26</sup>. As one says “*the ganaderos have an enormous amount of economic aids, and becomes ever lazier, and take less and less care of their animals*”<sup>i.26</sup>. Moreover, it appears that modern comforts keep the ganaderos from living with their livestock at the *majadas* during summer months. For example, there are now access roads and many ganaderos are said to only visit their animals by car or quad every so often, whilst the rest of the time living somewhere else and doing other jobs<sup>i.5, i.21</sup>. This causes some to say that if ganaderos do not want to work full time with their livestock and meanwhile complain about how hard their work is, they should just get another job<sup>i.26</sup>.

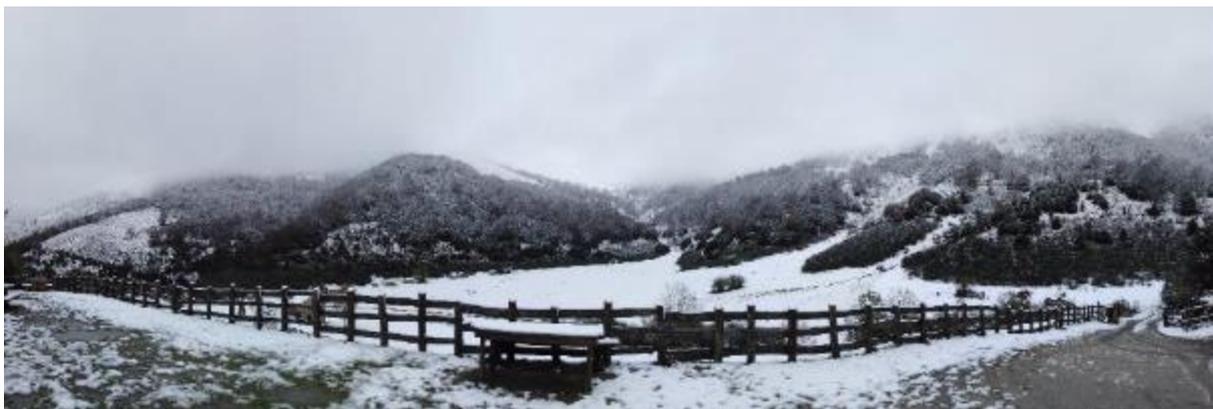
However, it is not so that everyone who is not a ganadero is immediately against them or considers it is solely the ganadero’s responsibility to cope with the wolf. Empathizing, showing understanding and giving people a voice also takes place. Some respondents tell they do understand that wolf attacks suppose an additional pressure to some ganaderos, makes life difficult when suffering repeated attacks on livestock upon which the ganadero depends economically<sup>i.4, i.8, i.9</sup>. Another recognizes that being a ganadero is very hard work and that few people are still prepared to do this kind of work, as most are unwilling to give up to the comforts of modern life<sup>i.8</sup>. Empathy is also shown when non-ganaderos interviewees express they would be in shock if their livestock would be killed, both due to the economic loss and because the animal is like family<sup>i.10</sup>. Furthermore, the media considers it their role to give a voice to the ganaderos<sup>o.4, i.24</sup>.

In sum, some actors point out the ganaderos as being responsible for reducing attacks on livestock, while other actors shift responsibilities and come up with reasons why ganaderos are both not responsible and also lack the resources to deal with the wolf.

### **5.2.9. Proposed alternative solutions**

Considering that the PGL and the compensation scheme are oftentimes seen as flawed, and (effective) prevention measures are not taken, the question emerges what can be done to solve the conflict. Many people in the field ask this to themselves and come up with a broad range of alternative solutions, as those described in this section.

One possible solution is more involvement of local people in the management of their territory, just as they did in the past, in contrary to the present top-down implementation of rules from the regional, national and European level. The current situation makes local residents feel they have no say over their way of living and are not understood by urban inhabitants<sup>i.23</sup>. These urbanites are seen as pro-wolf who dictate senseless legislation from their city office, based on a romanticized vision of nature, including the wolf, with which rural people do not feel identified with<sup>e.g. i.1, i.17</sup>. As one person says, *“prohibiting everything is not conservation”*<sup>i.20</sup>. Therefore, some propose a more participatory kind of management<sup>e.g. i.17, i.23</sup>. This has been done to some extent, for example, by involving local residents in culling wolves during last hunting season (see Image 23). However, some go even further, and propose that those who are pro-wolf should *“work during a year as ganadero and experience how it is to go each day to the pastures [...], trying to find livestock in the mist and when you find them see they’re dead”*<sup>i.23</sup>, before judging ganaderos for how they do things<sup>i.13</sup>.



*Image 23. One day I accompanied hunters, ganaderos and rangers during a group hunt of wild boar<sup>0.3</sup>. Whilst on this occasion there was no authorization for shooting wolves, the principle is the same: whilst participants form a large circle around a certain area (such as these mountains at the Majada de Brañagallones), they send out hunting dogs to chase wildlife. Then, if an animal appears for which they have authorization to hunt (during this day only wild boar, but occasionally it can also be the wolf), the animal is shot.*

Other people believe there is a need for local knowledge, especially for informed decision-making in relation to, for example, the PGL, which is the cause of much distrust amongst actors. The rangers are seen both by themselves and others as essential expert sources of local data<sup>e.g. i.1, i.21</sup>, as they know where the wolves tend to be, where there are stray dogs, which ganaderos are reliable and which tend to use the compensation system for own benefit. However, even in rangers mistrust exists, as many are seen as *ecologistas* or outsiders who either have no idea what they are talking about or are biased<sup>e.g. i.18, i.25, i.26</sup>.

In any case, several biologists, rangers and government officials point out the need for education as a solution to the conflict <sup>e.g. i.3, i.6, i.8</sup>. Environmental education, including anecdotes of the wolf's intelligence and compassion, might show a different, more positive, side of the story than that generally expressed in the media <sup>i.4, i.8</sup>. Amongst others, more awareness of the ecological value of the wolf can make people see that the wolf is a unique species in the European context <sup>i.4</sup>, and ecologically necessary in keeping other wildlife populations (e.g. wild boar) under control <sup>i.17</sup>, in turn avoiding other human-wildlife conflicts such as with the wild boar which is currently invading urban areas <sup>i.1</sup>. Interestingly, some rangers take upon themselves the role as educators, by using their knowledge in interaction with local inhabitants, for example to explain ganaderos about the wolf's social structure, capacity of autoregulation, and ecological functions, or asking "*if the wolf would become extinct today, would your problems end?*" so people reflect upon the issue and think whether the wolf is really their biggest problem <sup>i.4</sup>.

Giving the wolf an economic value through tourism is also seen as a possible solution to the conflict. This can be done by turning the wolf into a symbol of Asturian nature, just as is done with the brown bear, thereby making local inhabitants see the wolf in a more positive light, as many families will earn money from exploiting the species through tourism (e.g. hotels, restaurants, guiding tours, courses, conferences and souvenir shops) <sup>i.6, i.4, i.8</sup>. Nonetheless, there are obstacles to doing so. Firstly, few people consider the wolf as a touristic resource, because the region's economy was based on industry, and the older generations do not think in terms of exploiting nature through tourism <sup>i.6</sup>. Secondly, the wolf is very hard to see due to the type of landscape in Redes, in comparison to other places where there is already wolf-tourism (e.g. Sierra de Culebra or Riaño) <sup>i.8</sup>. Furthermore, it is necessary that the local people profit from the touristic activities related to the wolf, and not outsiders, in order to avoid further mistrust between rural and urban society <sup>i.14</sup>.

On the other hand, some people express not seeing any value (economic nor ecological) in having the wolf around, and that the only way it would be valuable for people would be if it became a game species people would pay for to hunt, as is done in other autonomous regions <sup>i.13</sup>. Even through conservationists might disagree with making the wolf a game species, it might make ganaderos say "*look, the wolf is worth so much money, it is not a worthless animal*" and therefore regard it more positively <sup>i.8</sup>.

Another solution to the conflict is the establishment of fairer prices for mountain produce. In order to produce milk and meat products of great quality, ganaderos need to dedicate much more effort, time and money compared to other places, leading to unfair competition on a global market and a narrow profit margin<sup>e.g. i.8, i.14, i.20</sup>. As one person says, *“the biggest wolf for the ganaderos is the economy”*<sup>i.24</sup> and if mountain produce (both meat and milk) would be valued more, for example by labelling such products as a Protected Designation of Origin or using ecological certification, ganaderos might focus less on wolf-related issues<sup>e.g. i.8 i.22, O.1</sup>. Nonetheless, some people doubt the ganaderos are really having such a hard time economically, either due to the wolf or other reasons. Several mention that the ganaderos have the biggest houses and the newest cars, bought from the subventions received from having livestock<sup>e.g. i.6, i.22, i.26</sup>. Moreover, it seems certain subsidies are not always used honestly<sup>e.g. i.8, i.13</sup>. While many ganaderos are retired and receive a government pension, they are legally only allowed to have a couple of cows for non-economic purposes<sup>i.6</sup>. However, many have larger herds which they put on someone else’s name, while receiving the subsidies for the animals and the sales profit. *“It’s a hidden economy everyone knows about”*<sup>i.8</sup>, which a local justifies by saying *“its extra money [...] I receive my pension, but it’s also good to have some animals [...], gaining more than if I would just hang in the bar all day”*<sup>i.13</sup>.

Lastly, when talking with ganaderos about alternative solutions to culling wolves, they come up with options such as capturing wolves and then releasing somewhere where the wolf is in danger of extinction<sup>i.17</sup> or putting all the wolves in fenced areas of the Natural Park<sup>e.g. i.11, i.18, i.20</sup>. It appears ganaderos are rather indifferent to how it is done, as long as the result is that there are fewer wolves around and they can calmly do their work<sup>e.g. i.17, i.20</sup>.

To summarize, actors come up with a broad range of solutions to the conflict. Nonetheless, few solutions are mentioned in direct relation to decreasing wolf attacks on livestock, but focus rather on the issues emerging around it. These issues relate to, amongst others, the need for more local participation, the need for more knowledge and education, the unfair prices of mountain produce and alternatives to culling. All in all it seems that actors recognise that the wolf is not per se the central actor in the conflict but that indeed other aspects also play a role. However, the aspects that have emerged throughout fieldwork are oftentimes framed in terms of the human-wolf conflict.

### 5.2.10. Use of social pressure

Although not as direct or conscious a solution as many of those mentioned above, actors often make use of social pressure to reach certain goals related to the conflict. Social pressure comes in diverse forms, and often the media is used for it, as a channel through which messages are dispersed quickly and thoroughly. One example is the creation of the group *Con lobos no hay Paraiso*, which had as goal “to pressure the government a bit to take more care [...] of the rural areas”. The name was used to draw attention, although some argue it might have been too radical, leading on one side ganaderos believing their biggest problem is the wolf, while on the other side scaring people off or awakening opposition <sup>i.16, i.17</sup>. However, other actors are also involved in employing social pressure for their interests. Whilst sensationalist stories in the media about the wolf causing great damage gain much support amongst the rural inhabitants, the conservationists attempt to acquire support from urban inhabitants, by, for example, making use of social media and online petitions. Curiously, people often fail to recognize the power they themselves have, and only ascribe power to other actors. For example, two biologists say the ganaderos have quite some power to gather and let themselves be heard <sup>i.3</sup>, while a local tells the environmentalists are the ones with a lot of power <sup>i.13</sup>. Nonetheless, a ganadero points out that social influence needs to be used correctly in order to achieve a certain goal <sup>i.11</sup>. For example, ganaderos tend to express their discontent about the wolf through protesting, organizing manifestations and contacting the press <sup>e.g. i.6, i.11</sup>. However, many of them merely limit themselves to making a lot of noise and insulting others, and back off when real action has to be taken <sup>i.11</sup>. On the other hand, rural inhabitants feel they have scarce political power. It is said their vote barely counts as only a small part of the Asturian population lives in rural areas <sup>i.23</sup>. However, other people say that rural votes actually weigh more in the elections than the votes of urban inhabitants, and explain this is done precisely to give the preferences of rural people more weight in the elections <sup>i.3</sup>.

In short, social pressure is used by different actors to achieve certain goals. Oftentimes this goes together with actors feeling they have little power or influence on certain aspects, and the only way to achieve what they want or need is by exerting pressure upon other actors. In consequence, further polarisation of contrary discourses takes place and the conflict is given even more fuel to endure.

### 5.3. The wolf and the future

Having explored what actors indicate to be the starting point of the conflict, and delved into the wide array of topics that have emerged from that point, this chapter ends with the vision people have of the future in Redes.

One biologist predicts some very bad years to come, not only for the wolf's conservation, but also for the coexistence between people due to further polarization amongst actors and the threats that are being expressed <sup>i.16</sup>. These threats can refer to the use of venom and fire to eliminate wolves, as was done in the past when the conflict heated up too much, or to the government finally giving in to hunter's wish to kill wolves anywhere <sup>i.3</sup>. On the other side, some predict a gloomy future for the rural inhabitants. One retired ganadero mentions a deep worry for the loss of traditions and the capacity for self-sufficiency the people used to have <sup>i.11</sup>, while another believes the conflict in the coming years might cease to exist, as "*the rural world as we know it will transform or disappear*" <sup>i.17</sup>.

Nonetheless, there is also the idea that the problem will solve itself, as new generations, with a different attitude due to their upbringing in more urban areas, will eventually replace the older generations <sup>i.1, i.22</sup>. Furthermore, initiatives such as the Wolf Conference are seen as a promising attempt to bring together opposing groups <sup>e.g. O.4, i.23</sup>. In addition, one interviewee expresses his hope that in the future ganaderos will gain a fairer price for their produce, and therefore the conflict will cool down <sup>i.14</sup>. Lastly, a biologist predicts that "*the conflict will change [...]. It is not the same now as a hundred years ago [...], and some things will solve while others will appear*". Moreover, this interviewee also points out the need for conflict, as "*a natural part of human society [...] what we ought to learn is how to manage it, and find in the conflict a source of solutions, enrichment and improvement*" <sup>i.15</sup>.

All in all, it is unclear what the future will bring, and even people living in Redes feel there is little to be certain about in the modern world of constant change. As such, it seems that the only way to find out how this story continues is to one day return to the beautiful mountains, valleys and villages of Redes and once again exchange stories and experiences with its inhabitants.

## CHAPTER 6. ANALYSIS

This chapter links the previous findings presented in Chapter 5 with the theoretical framework from Chapter 2. Firstly the conceptualisation of the conflict is analysed, and posteriorly the coping strategies employed by the actors in Redes.

### 6.1. The conceptualisation of the human-wolf conflict in Redes

As seen throughout the previous chapter, it appears that *the* human-wolf conflict does not exist. Thus, the conflict cannot be conceptualised as straightforward as is often done in the literature, that of an interaction between humans and wildlife which can lead to negatively impact humans and/or wildlife (see, for example, IUCN, 2003; Messmer, 2009). Because of the multiplicity of aspects, it must be taken into account that when I refer to the human-wolf conflict as ‘the conflict’, it encompasses much more than only depredation upon livestock. Whilst in the past there appears to be a less ambiguous vision of the conflict between humans and wolves, i.e. the wolf eating livestock (see Image 24), over the years the conflict has grown, contaminating other surrounding discourses and integrating these into the ever-larger conflict discourse, whereby “all attention and all resources are claimed for the conflict” (Luhmann, 1995:391).

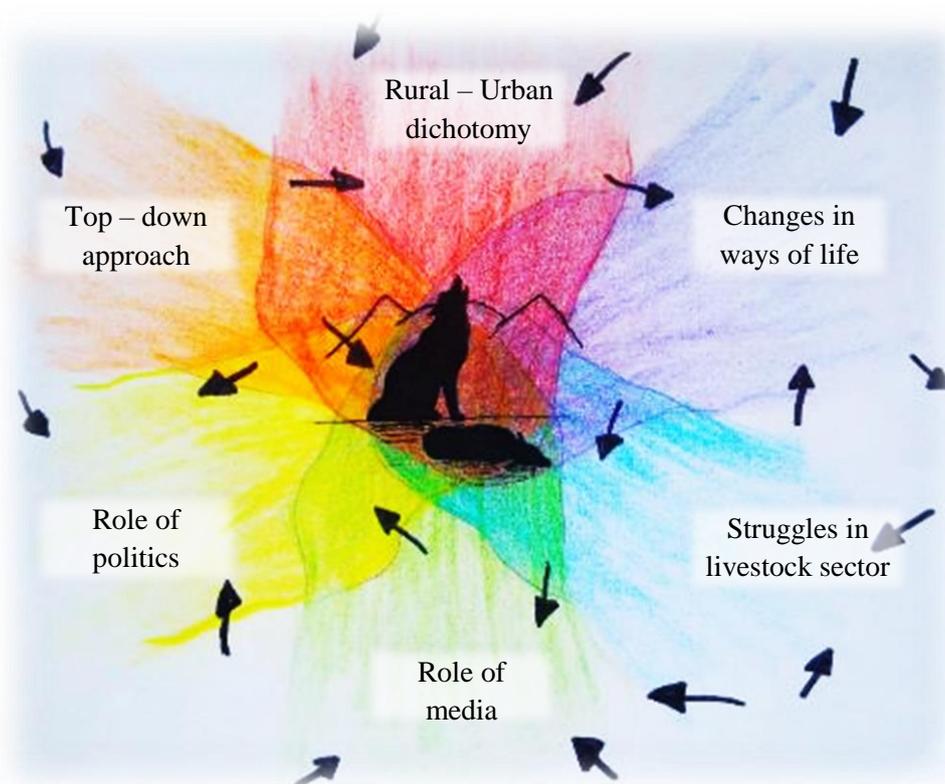


*Image 24. The conflict as seen in the past: wolf kills livestock. Source: Isabeau Ottolini*

The result of the infectious growth is that, whilst at the heart of the conflict might still lie a problem of wolf preying upon livestock, it is currently surrounded by a great number of other topics. These topics may or may not hold a direct relation to wolf depredation on livestock, but are nonetheless dragged into forming a part of the wider conflict discourse as the topics are reorganised in such a way that they become explained in terms of the conflict and serve as fuel. As such, it appears that conflicts gain a life of their own, independently of the original source and actors involved (Duineveld et al. forthcoming). Whilst its origin might once have been wolves eating livestock of the ganaderos in Redes, nowadays the conflict exists almost

autonomously from wolf depredation on livestock. As such, it is sustained and fed by communications exchanged amongst actors on topics that have been infected by a human-wolf conflict discourse. This links up with what Luhmann (1997, in Malsch & Weiß, 2000:14) explains, which is that “conflict systems often prefer to choose other topics and issues instead of directly addressing the reasons and attacking the roots of the underlying structural problem”.

Thus, when trying to uncover how the human-wolf conflict is conceptualised in Redes, a vast number of topics emerge, as seen in the previous chapter. Whilst it is hard to group those diverse, blurry and overlapping aspects, it appears the most prominent ones are related to the following: *rural-urban dichotomy*; *top-down approach*; *changes in ways of life*; *the role of the media*; *the role of politics*; and *economic struggles in the livestock sector*. In addition, these aspects surrounding the wolf are themselves encircled by a multiplicity of discourses, which are oftentimes opposing and reactive in nature as different actors communicate about the aspects whilst simultaneously attempting to cope with the conflict (Image 25).



*Image 25. The different topics surrounding the conflict in the present. These topics have blurry boundaries as they change over time and as the conflict is (re)conceptualised by the various actors in the field. Moreover, the topics overlap and find in the wolf their meeting point. On the other hand, the arrows represent the different perspectives actors have on these topics, and based on those perspectives the actors engage in different, often contrasting communicative interactions. Source: Isabeau Ottolini*

The *rural-urban dichotomy* refers to the multiple differences that exist between rural and urban regions and their inhabitants. On one hand are the different perceptions of the wolf, whereby urban inhabitants tend to be more in favour of the wolf than the rural population. Furthermore, the dichotomy also exists between different types of knowledge, whereby “expert” knowledge is often framed as knowledge proceeding from urban areas and is endorsed with a greater level of validity. This in comparison to “lay” knowledge, which is framed as what people in rural areas possess and is often ignored and undervalued for it has no recognised scientific basis. Additionally, the dichotomy relates to legislation and policies from urban areas being imposed upon rural areas, that is, the *top-down approach*. These dichotomies, existing between the rural and urban environments cause, for instance, mistrust, polarisation and antagonism. The resulting discourses, instead of bridging the gap between rural and urban areas, give fuel for ever more opposing positions.

Such clashes between rural and urban systems relate to the *changes in people’s ways of life*, many of which have occurred throughout the last few generations, whereby the region has transformed from being a small, semi-isolated system based on the autonomous management of natural resources to being integrated into a larger, more global and urbanised system. Such influences from outside Redes have brought along the loss of traditional forestry, agricultural and livestock practices, and the depopulation of the area. In turn, this influences the conflict. For example, now local people look at the past with nostalgia, and resent the changes, oftentimes coming from outside, that hinder them in living just as their ancestors did.

The mentioned changes link up to the *economic struggles of the livestock sector*. Whilst in the past people were predominantly self-sufficient, now the livestock owners are part of a larger system where they have to compete with more cost-efficient competitors on the global market. This makes people more valuable to additional challenges, such as that of wolves eating livestock, and might be one of the factors that lead people to enlarge the dimensions of the conflict: not because the wolf is actually creating that much problems, but because it is the only issue local actors feel they can actually act upon.

Lastly, the *politics and the media* also play an important role in the discourses surrounding the conflict. Firstly, in being framed as actors who are between those who are more in favour of the wolf and those who are more against it. Secondly, because whilst the politicians and the media tend to frame themselves as actors who just represent people’s interests or convey stories

to the public, their actions (e.g. the governmental solutions or frequent articles on wolf attacks), upon which in turn the surrounding actors act, further fuel the conflict.

Having presented the topics surrounding the conflict, a link can once again be made with the theoretical framework. Just as Malsch & Weiß (2000:9) explain, a conflict can be seen as “an outspoken opposition defined as the synthesis of two communications which contradict each other”. Through this research, various contradictions in the discourses surrounding the human-wolf conflict have become visible, and it is with these communicated contradictions that the discourses acquire their conflictive character. Moreover, seeing all the different topics that feed the conflict, I agree with Duineveld et al. (forthcoming), on that there is little sense in seeking out one source, or scapegoat, of the conflict, as it is fed by the broader surrounding context. Likewise, it is rather senseless to try uncovering why and how the conflict started in the hope such knowledge will facilitate its resolution, as it makes us blind to the processes on which conflicts are based (Pellis et al., in press). As my findings point out, applying solutions to the initial reason for the conflict, i.e. wolf eating livestock, does very little to actually sooth it.

For example, when one event occurs, such as the Asturian government allowing hunters to participate in culling the wolf in order to deal with (what they perceive to be) the problem, this awakens a whole series of other contradictory communicative actions, such as the conservationists calling it illegal, the hunters complaining about the participation conditions, and the mass media reporting about it. This, in turn, sets off even more communicative acts, fuelling the conflict, and eventually creating a whole new “cloud” of aspects to the conflict, that would never have materialized were it not for that one initial communicative act. Such an example illustrates how a conflict builds upon prior communications (Malsch & Weiß, 2000; Pellis et al., 2015). However, the conflict is not built upon random communications uttered or carried out by random actors. Instead, it seems a conflict’s evolution is simultaneously enabled and constrained by path dependency, that is, the events and decisions in which the actors are, and have been, involved in (Duineveld et al., forthcoming; Pellis et al., 2015). To go back to the example, the emergence of the subsequent discourses are enabled by that single event of the government giving permission for the hunter’s involvement. However, the successive communications are at the same time also constrained as they hold a certain relation to the initial event they stem from, that is, they are not arbitrary. All in all, conflicts are subject to change as they are fed both by internal processes and by the surrounding environment. However, based on my findings I disagree with Duineveld et al. (forthcoming) their opinion that such changes occur gradually. Whilst not witnessing abrupt changes myself during the

time in the field, events like the politicization and mediatization of the conflict in recent years have changed (at least part of) the conflict's character in a relatively short space of time. Furthermore, a future incident such as a wolf attack on humans might rapidly bring changes in the conflict discourse.

## **6.2. The coping strategies used to deal with the conflict**

The many-headed monster with the name of human-wolf conflict does not only encompass a multiplicity of problems surrounding the wolf, but also the different communicative actions the various actors in the field engage with (represented in Image 25 with the arrows). Such actions are carried out in an attempt to deal with the uncertainties the conflict brings along, just as Aarts & van Woerkum (2008) explain. As seen in the Findings Chapter, there are many uncertainties the actors in Redes need to deal with. Moreover, as the conflict changes, so do the uncertainties change. In consequence, the actors have to readjust their ways of dealing with it, which can potentially generate even more uncertainties. In the case of Redes, uncertainties can relate to a wide variety of aspects actors encounter. It can concern whether data from certain sources can be trusted on things like the number of wolves in Asturias and how big the economic impact is on the livestock sector, but also on questions such as when the next attack on livestock will occur, if humans will fall prey to wolf attacks, which actions other actors will undertake and so forth. As the conflict resembles a many-headed monster with all its interrelated topics and surrounding discourses it is not hard to imagine a great amount of uncertainties emerge when dealing with the conflict, and even more so when taking into account its changing character.

Searching for solutions and applying those is a very common way of consciously dealing with the conflict. This is done, for example, by the government coming up with the compensation scheme or the PGL, but it can also be done through applying traditional practices, or suggesting alternative solutions. However, as seen above, the conflict nowadays does not solely consist of damages caused by wolves. Therefore, when a solution is applied upon one topic of the conflict (e.g. culling wolves in the hope this decreases attacks on livestock), all other issues that nowadays form part of the conflict remain unaddressed. As such, it appears the conflict persists. This is not only because, as Malsch & Weiß (2000) explain, the difference between conflict reasons and conflict topics have become hard to distinguish, but also because the solutions potentially act as fuel to the conflict as they generate new contrasting discourses.

In any case, there are many additional ways of dealing with the conflict through communicative actions. Actors engage in a broad range of coping practices, and whilst I have not been able to categorize these actions into clear-cut categories, due to the absence of a previously established framework in the scientific literature, here are the most frequently found strategies:

- *Downplaying or enlarging information*, both from scientific and lay sources, to change the dimensions of the conflict. This leads to much uncertainty on the dimensions of the conflict, and therefore hinder people in what they perceive as successfully dealing with the conflict;
- *Holding onto legal documents or (scientific) data*, as these provide some level of certainty and provide a normative guideline. A consequence of this is that actors take rigid stances in the conflict and are unwilling to take into account (uncertain) sources of information;
- *Opposing*, both verbally or through physical acts, towards those actors who are framed as “others”. Examples of opposition can be blaming, stereotyping, exerting social pressure, shifting responsibilities, taking benefit of the situation and being distrustful;
- *Blaming* other actors of things that are considered to go amiss or are undesirable;
- *Shifting responsibilities* of certain events or circumstances towards other actors, thereby freeing oneself from all responsibility;
- *Stereotyping*, whereby others are framed in particular ways, often leading to a “we versus them” polarisation;
- *Exerting social pressure* to pursue certain individual or collective goals;
- *Taking benefit of the situation* for personal gain, oftentimes at the cost of other actor(s). This generates, amongst others, mistrust and further opposition;
- *Being distrustful* of “others”, including their intentions and knowledge;
- *Using avoidance* to not further worsen the conflict, by staying low, avoiding certain situations, being diplomatic, giving others the benefit of doubt, and keeping quiet;
- *Employing helplessness* by framing actor(s) as being powerless and voiceless and in need of another actor to defend the helpless actor’s interests. Oftentimes the actor’s role in the conflict is downplayed;
- *Victimising*, whereby actor(s) are framed as victims who neither have the responsibility nor the power to do anything against the situation;
- *Seeking solutions* as a way of actively trying to resolve the conflict and the uncertainties it brings along.

Thus, different strategies are employed based on what actors believe the conflict is about at a certain moment of time, and as such, it depends greatly on the actors their understanding of the conflict. In consequence, ways of dealing with the conflict change over time and one the same actor will often make use of diverse strategies to reduce uncertainties.

Many ways of coping can be found, and show the conflict its capacity to be performative, as mentioned by Duineveld et al. (forthcoming), whereby it shapes (new) social and material realities. Examples like these can consist of the creation of policies to manage the wolf and the damages it causes, or the materialisation of an anti-wolf group which frames the wolf as the biggest enemy of the rural world, which in consequence again generate new discourses. Additionally, other discourses can become marginalised, such as those related to depopulation, which is a pressing issue but is now being neglected as the discourse regarding the human-wolf conflict is much more present, not only in the minds of actors in the field, but also in the political and mediatic agenda.

## CHAPTER 7. DISCUSSION

In this chapter the relation between the human-wolf conflict, the rural-urban dichotomy, the use of top-down approaches in solving the conflict and depopulation is discussed by relating it to the wider scientific literature (see Image 26). Whilst all these aspects are interrelated and cannot be treated separately from one another, a division has been made into several subchapters for pragmatic reasons. Firstly, a description is given on the dichotomy between the rural and urban environments, whereby it can be argued that the ontological and epistemological aspects of the conflict play a role. Secondly, the current top-down approach, used for instance by the Asturian government to solve the conflict is discussed and the question is asked whether bottom-up approaches would not be better, as many actors in Redes believe it would be. Lastly, the role of depopulation is examined, as an underlying societal issue that holds relation to all the aforementioned aspects.

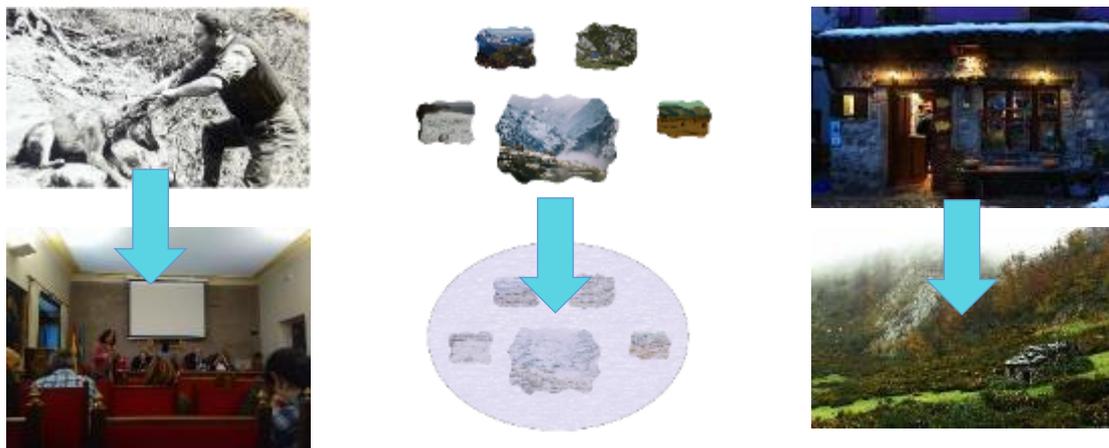


Image 26. Changes over time, related to the human-wolf conflict, the rural-urban dichotomy; the use of top-down approaches in solving the conflict; and depopulation. Source: Isabeau Ottolini

### 7.1. Rural-urban dichotomy. Ontological and epistemological aspects of the conflict

As Blanco & Cortés (2001) explain, tensions between rural and urban societies emerge from the different perceptions people have of nature. On one hand is the romanticized and idealized vision from the urban inhabitants, who use the rural regions as places of recreation and leisure, and see the wolf as a symbol for nature that has been destroyed by humankind. However, this clashes with the more pragmatic and utilitarian perspective rural habitants have of nature, as they depend on natural recourses to make a living, and see the wolf killed by the hunter as a symbol of justice for the unfair death of their livestock (Blanco, 2018; Blanco & Cortés, 2001). These opposing perceptions of the wolf give way to what Byrd (2000) calls the ontological conflict, and Blanco (2018) points out that the symbolic representations of the wolf, living in the mind of rural and urban inhabitants, must not be overlooked when managing the wolf made

of blood and bones. These multiple, ambivalent and culturally constructed meanings of the wolf have been identified by many other authors, such as Lopes-Fernandes et al (2016) and Hill (2015).

Nonetheless, whilst many authors do talk about a polarization of opposing views on the wolf, and studies have been conducted on which demographic groups tend to show a certain set of values in relation to the wolf (see, for example, Blanco & Cortés, 2001; Hermann & Menzel, 2013), they do not show how such polarization is expressed through communicative actions, nor reflect upon the ways in which such communications can potentially feed the conflict. That is one of the things that became clear from the results of this thesis: one contradictory communicative act upon another from (opposing) actors contribute to the divergence of the discourses surrounding the conflict. The polarization of such communications create an irreconcilable situation between contradictions, and lead to its endurance. This is not only happening in Redes, but in many places around the world where humankind and the wolf live side by side, and not enough attention is given to the communicative processes behind the conflict that lead to its endurance.

Additionally, Blanco & Cortés (2001) do not think the conflict merely consists of people having different ontological views on the wolf, and nature in general. They also signalize the existence of an epistemological conflict, whereby people make use of different data sources and logical reasoning. In the field this has occurred at multiple occasions, as different actors believe certain data sources to be trustworthy or not, and otherwise ignore or manipulate it by enlarging or downplaying it to fit with what is seen as the truth. As such, information that actors perceive as inadequate or incorrect can lead to distrust amongst them and stand in the way of conflict resolution (Madden, 2004). This is, for example, the case with the PGL, whereby different groups of actors mistrust the validity of the data and criteria employed to establish culling quota, leading to barely anyone trusting it to be an effective solution to the conflict. The result of the PGL is indeed not the resolution of what is framed as the problem, therefore reinforcing people's mistrust. And just as Byrd (2000, in Blanco & Cortés, 2001) experienced by seeing how the validity of data was continuously questioned during debates on the human-wolf conflict in Minnesota, so I have experienced the same during the debates at the Wolf Conference in Asturias. Nonetheless, Madden (2004) points out that it seems locals themselves already have a difficult time in fully understanding the issue, let alone those individuals and institutions who do not deal on a daily basis with the conflict but nonetheless are involved in gathering data on the conflict and in the business of solving it. As such, the possibility exists

that certain solutions do not match with the diverse understandings the different actors have of the conflict, and therefore are regarded as ineffective, incorrect and not acceptable to all actors involved (Blanco & Cortés, 2001; Hill, 2004).

The mismatch between that what the conflict is considered to be and the solutions proposed to deal with it might be related to the idea of self-referentiality. This refers to the process whereby only elements from the surroundings are selected that match the system's reality (Van Herzele & Aarts, 2013). For instance, nature conservationists might point out the conflict exists because local inhabitants do not appreciate nor understand the wolf its unique ecological value. When trying to solve what they see as the problem, only those solutions are selected which fit within their problem frame, i.e., the social system's reality. As such, it is much more likely that nature conservationists mention educational campaigns as a solution, and rather unlikely that culling of wolves is considered effective in increasing the appreciation of the wolf's ecological role. However, the government does see the culling program as a solution, because of what they consider to be the problem. In consequence, contradictions exist between the problem and solution frames from the different social systems surrounding the conflict.

Whilst Blanco & Cortés (2002) mention the conflict exists mainly between those who use scientific knowledge and logical reasoning (e.g. scientific conservationists) and those who use the myths, pseudoscience, emotional perception or lack of knowledge (e.g. radical environmentalists), I argue differently based on a number of aspects. Firstly, lay knowledge can be just as valuable and relevant as scientific knowledge, especially for the people in the field. For example, the knowledge surrounding traditional practices is vanishing in places such as Redes, whilst it enabled people in the past to manage the area's natural resources. Even so, the value of lay knowledge is often ignored, especially from more positivist positions in the natural sciences, contributing to local inhabitants feeling undervalued, unheard and not understood. Hence, I agree with Lopes-Fernandes et al (2016), who suggest local knowledge should be valued more in the conservation of the wolf, something also people in Redes argue. Another aspect is that whilst scientific data is often presented as being the objective truth (e.g. the efficiency of culling for reducing livestock loss) by people (e.g. scientists or government officials) who claim to be neutral and unbiased, bias may nonetheless exist. This bias might be unconscious (e.g. the positivist position of the natural scientist), but it might also be because science is used "to legitimize normative positions" (Lackey, 2004 in Redpath et al., 2017:2161). This can lead people to mistrust scientists and "the credibility of the science being questioned" (idem). Especially during the Wolf Conference both the presenting evidence by

some as unbiased and mistrust of others in this evidence became apparent. Finally, in the field not only tensions emerge between the validity of “expert” and “lay” knowledge, but also between expert knowledge from different scientific sources. In such cases, it not only matters from which scientific discipline people come from, but also for which institution (e.g. universities or government) certain scientific knowledge is produced.

Along this subchapter two different ways of seeing the conflict have been used to discuss my results. On one hand, use has been made of the idea that the human-wolf conflict includes an epistemological and ontological conflict, in line with Blanco & Cortés (2001), based on the work of Byrd (2000). Whilst further literature on this does not exist, and I left out the third aspect mentioned by Byrd (2000), which is the use of the conflict as an instrument of power, taking into account such aspects of the conflict might aid in understanding why, for instance, the rural-urban dichotomy plays a role in the human-wolf conflict.

On the other hand, the concept “framing” has been mentioned along this subchapter. As Kpéra et al. (2014) present in their research, there are different types of frames (e.g. framing of the issue, the identity of the self, and identity of the “other”), which have been proved useful when researching human-wildlife interactions. The use of the concept of framing, and its different variations, is a very intuitive way of looking at the conflict, as we all engage continuously in framing. To the contrary, using Luhmann’s Social Systems Theory is a less intuitive approach to the conflict, as it focusses on communications and social systems, instead of actors.

## **7.2. Which approach to use when dealing with the conflict: top-down or bottom-up?**

The discrepancy between different sources of knowledge to make sense and solve the conflict, as seen in the previous subchapter, can be related to the lack of success of top-down solutions to solve the conflict (Redpath et al., 2017). Several authors express their doubt regarding the use of top-down approaches to solve human-wildlife conflicts (see, for example, Redpath et al., 2017; Redpath et al., 2013; Redpath, Bhatia, & Young, 2015). For instance, Redpath, et al (2015:224) recognize a tendency exists to focus on “top-down approaches, such as enforcing legislation on unwilling stakeholders”. In the case of Redes, this is for example legislation that affects traditional practices (e.g. *alimañeros* killing wolves, use of fire...), that in turn is said to reduce people their capacity in preventing wolf attacks. It is unlikely to lessen the possible human-human conflicts that might lie beneath, for example, because top-down approaches can marginalize or disregard involved actors (Redpath et al., 2013). Such marginalization or disregard can be related to the exclusion of local knowledge. However, I argue that it can also

refer to not taking into account the needs of local people and their wish to conserve traditions and culture, aspects the inhabitants of Redes oftentimes mentioned with concern.

Whilst it can be argued that the solutions in Asturias such as the compensation scheme and the PGL are already quite locally oriented (in comparison with European or national initiatives), my experience from the field is that each area in Asturias tends to have its own unique characteristics, and great differences exist between, for example, the Natural Park of Redes, the coastal regions and the National Park of Picos de Europa. As can be seen in Image 27, whilst in the past solutions emerged and were applied on the local scale by people who had local (and predominantly lay) knowledge, it is nowadays done from urban offices by people that, whilst being seen as experts, lack profound knowledge and understanding of the rural context. Therefore, Redpath et al. (2013:103) recommend top-down policies to give “local-level freedom to find local solutions within the wider frames of coordinated large-scale policy”. Such local solutions might form a better match with local realities and (partially) give people back their sense of autonomy.



*Dealing with the conflict in the past, in the field by people with profound knowledge of the place*



*Dealing with the conflict in the present, from an urban office, by people with scarce knowledge of the local context*

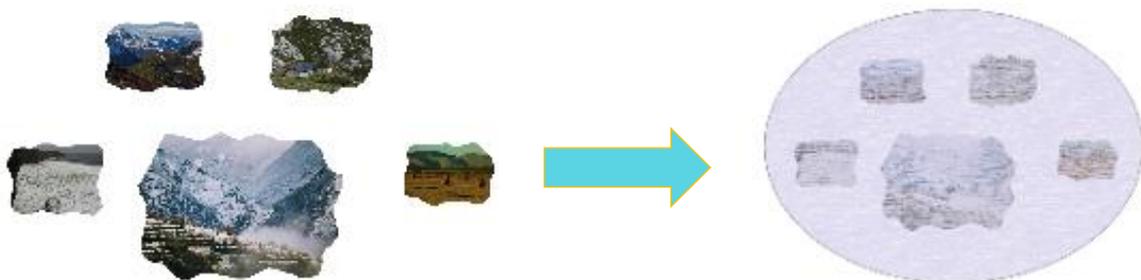
*Image 27. Representation of the change in dealing with the conflict over time. Source: El Comercio (image left), Isabeau Ottolini (image right)*

On the other hand, there are scientists who argue for the need of more top-down approaches (see, for example, Linnell & Boitani, 2011; Treves et al., 2017). Linnell & Boitani (2011:80) claim wolf management policies need to match the “biological scale at which wolf populations operate”, and Treves et al. (2017:265) explain that strong top-down approaches may be necessary to “avoid tyrannies of the minorities or majorities who may demand depletion of unpopular, native wildlife”. In line with my findings, Redpath et al. (2017) come to the conclusion that, whilst coercive top-down approaches might be necessary when the carnivore population is very low, it is better to change to a more collaborative and flexible strategy once the carnivore species is recovering and is increasing their impact upon people’s lives, or else the conflict will increase.

Altogether, there is much discussion in the scientific literature which approach, top-down or bottom-up, is most effective in solving or dealing with human-wildlife conflicts, and there are convincing arguments for both approaches. In this regards, it is unclear whether the Social Systems Theory can contribute to this discussion, as the focus does not lie in finding solutions or evaluating their efficiency in resolving conflicts.

### 7.3. The role of depopulation in the conflict

Beyond the human-wolf conflict in Redes, the top-down approach might also hold relation to the process of depopulation, whereby the influence from outside (i.e. urban environments) upon rural areas have increased over the years. Whilst in the past places like Redes used to be semi-isolated and autonomous systems, in the present it has become part of a bigger, more globalized system whereby it has lost big part of both its autonomy and identity (see Image 28). Whereas internal factors, such as the difficulty of rural areas to maintain their traditional equilibrium with the environment, have always played a role in the changing rural areas, several authors point out exogenous factors like the process of industrialization and the arrival of capitalism to have contributed to the greatest changes, and even deterioration, of such rural areas (Collantes, 2004; Romero, 2018). As Collantes (2004:12) explains, when rural economies are integrated into a larger economic system, its position becomes one of dependence and marginalization, as “the big economic and demographic transformations were adaptations that previously took place somewhere else”. That is, changes were preceded by those occurring outside the rural areas. As seen in Redes, such changes do not only refer to changes in traditional livelihoods or family structure, but also ways in which is dealt with issues, as no longer people from the field are entitled to solving territorial issues, but is now instead done by institutions from outside.



*In the past, Redes was a semi-isolated system with some influence from other equally semi-isolated systems*

*In the present, Redes, just like the other small systems, has become engulfed in the wider global system*

*Image 28. Representation of the incorporation of Redes into a bigger system . Source: Isabeau Ottolini*

In the past, things were organized very differently, as local inhabitants themselves would deal with issues by cooperating together and discussing matters during the village meetings, without

recurring to external institutions (Romero, 2018). For example, if the wolf caused havoc, people would lay down some venom, shoot the wolf, or ask a local *alimañero* to get rid of it (again, see Image 27). However, nowadays these same people with similar issues, are limited on all sides by superimposed legal frameworks and have lost the autonomy to take action by themselves.

Continuing with the above example, the use of venom is now prohibited, the figure of *alimañero* no longer exists, and hunting is either not permitted or can only be done under certain conditions. Traditional solutions are now all regulated by regional, national, European and international laws, and whilst these laws are necessary in, for example, protecting the environment, it has led to places such as Redes conceding much of their autonomy to superstructures like the Spanish State or the European Union. As Tacoli (1998) explains, and in line with the findings, local institutions tend to have difficulties to avoid the central government meddling in, and exerting control over, local affairs, and are thus limited in achieving autonomy. In addition, Tacoli adds that the inefficiency of centralized policies may lie in the fact that they do not consider local needs and priorities nor the “peculiarities and specifics of small towns and their regions” (1998:153).

However, the loss of autonomy is not only due to legal structures, but also to economic changes. Whilst Romero (2018) mentions rural Spanish societies of the past used to function based on cooperation and barter, the privatization of communal grounds and resources under the influence of capitalism has influenced in people losing autonomy over their land and natural resources. For example, transhumance shepherds, who depended on communal pastures to move their livestock around could no longer do so when these ground became privatized. Factors such as these seem to have led in Redes to the abandonment of the summer pastures and the cabins where people used to live in for months on end (see Image 29). As such, Romero (2018) claims the process of privatization plays a big role in rural depopulation, functioning as an expulsion mechanism of rural inhabitants, especially those most vulnerable. This includes actors such as those who depend on natural resources (e.g. livestock and forestry) for their livelihoods. In addition, Romero concludes that depopulation is caused by reasons such as:

*“the legal framework [... and] the institutional architecture of the Spanish State, with different scarcely coordinated levels [of public] administrations, very dissimilar territorial realities, and a superstructure like the EU that does not aid in maintaining certain scarcely competitive rural areas alive” ( Romero, 2018:218)*



*In the past, villages and the houses at the summer pastures were lively places*



*In the present, many places are falling to ruins, their owners long gone.*

*Image 29. Representation of the change Redes has undergone due to depopulation. Source: Isabeau Ottolini*

An additional aspect that must be taken into account when discussing rural depopulation in Spain is not only the substantial gap that exists between rural and urban regions due to legal and economic influences emanating from urban areas, but also the fact that urban inhabitants appear to look down upon the rural population and their “traditional” and “underdeveloped” ways of life. For example, rural economies are framed as backwards (Pinilla & Antonio Sáez, 2017), and their disappearance is sometimes justified as being necessary for economic development (Romero, 2018). Especially during the dictatorship of Franco, the myth of rural inhabitants (i.e. “*el mito del paleta*”) being primitive, violent, ignorant and stupid farmers opposing modernization was further reinforced, generally from urban environments that were considered as the benchmark of progress, rationality, efficiency and well-being (de Leon, 1996; Gallardo, 2011; Molino, 2016; Romero, 2018). As Romero (2018) explains, framing rural areas as wild, barren and inhospitable supported the typical regenerationist and progressive discourses in Spain during the late 19<sup>th</sup> and beginning 20<sup>th</sup> century, which denigrated rural areas and its inhabitants. Nonetheless, even now this image is still sustained by some actors. For example, it seems recently the National Spanish television interviewed rural inhabitants and, in doing so, presented an unreal and modified image of the rural world that is still locked in the past and loaded with prejudices, to the great discontent of the interviewees (Ruiz, 2018).

On the other side are the efforts made to revalue rural areas and revert, or at least halt, rural depopulation, and decrease the gap between rural and urban environments. This is done for example through the attempts to elaborate a national strategy against depopulation (Red Española Desarrollo Rural, 2018) and initiatives like the creation of ecovillages, the Slow movement, the Serranía Celtibérica initiative, and promoting land stewardship, besides the emergence of all sorts of associations related to the defence of the rural world (Romero, 2018).

All in all, there is a lot more going on in the rural areas of Spain than just the wolf eating the livestock people own and depend on for a living. As such, the idea emerges to, instead of following and becoming part of the conflictive discourses about the wolf creating havoc amongst rural inhabitants, the gaze ought to be turned to what might be underlying issues to the human-wolf conflict. In the past few years, several authors (e.g. Romero, 2018; Izquierdo, 2012; Molino, 2016), have pointed out rural depopulation, loss of traditions and societal changes as major challenges Spain is currently facing. Not only do multiple actors in the field point out such aspects as influencing the conflict, but also does the increasing scientific literature points out that many human-wildlife conflicts may contain underlying human-human conflicts (see, for example, Boitani & Linnell, 2015; Dickman, 2010; Lopes-Fernandes et al., 2016; Madden & McQuinn, 2014; Nyhus, 2016; Peterson et al., 2010).

## CHAPTER 8. CONCLUSIONS

### 8.1. Conclusion of the research

The aim of this thesis has been *to provide novel insights to the human-wolf conflict that may contribute to the coexistence between humans and wolves, by examining how such conflicts become shaped through recurrent communications*. By using a theoretical framework based on Luhmann's Social Systems Theory and its application to the concepts of human-wildlife conflicts and coping strategies, I have attempted to answer the general research question, which is: *How does the human-wolf conflict in Redes Natural Park (Spain) become constructed through communication, and what role do coping strategies play therein?* By dividing this question into two more specific research questions, I have been able to provide an answer by conducting a case study in Redes Natural Park.

#### **1<sup>st</sup> Specific Research Question – How is the human-wolf conflict conceptualized, both academically and by people in the field?**

Oftentimes it seems that the human-wolf conflict is conceptualised in science as an interaction between humans and wolves, which can negatively impact humans and/or wolves, although there are now more and more researchers who start to understand that humans play a big, if not key, role in the emergence and continuation of such conflicts. By conducting a case study, it has been shown that the conflict between humans and wolves go beyond the simple conceptualisation of wolf preying upon livestock, and can instead be seen as a 'many-headed monster', consisting of contrasting communications on multiple topics which feed into an observable conflict. The key aspects that have emerged during the research are the rural-urban dichotomy; changes in the ways of life; the role of politics; the economic struggles of the livestock sector; and the role of the media (see Image 25, Chapter 6.1).

#### **2<sup>nd</sup> Specific Research Question – What coping strategies are the people engaged with in coping with the human-wolf conflict, both at this moment of time and in the past?**

It seems that the ways of dealing with the conflict are just as varied and changing as the conceptualisations it is based upon. Actors cope with the conflict both willingly or unconsciously, individually or in groups. Moreover, strategies are combined in all kinds of ways, and change over time. The most frequently used coping strategies found through this research are the following: *Downplaying or enlarging information; Holding onto legal documents or (scientific) data; Opposing; Blaming; Shifting responsibilities; Stereotyping; Exerting social pressure; Taking benefit of situation; Being distrustful; Using avoidance; Employing helplessness; Victimising; Seeking solutions*. However, rather than being able to

solve the conflict, or reducing uncertainties that emerge from it, the use of all these coping strategies leads to the continuation of the conflict by providing plentiful fuel for the conflict discourse to proliferate over time.

**General Research Question – How does the human-wolf conflict in Redes Natural Park (Spain) become constructed through communication, and what role do coping strategies play therein?**

A step can be made beyond looking separately to conceptualizations on one hand, and coping strategies to the conflict on the other. It appears the conceptualisation of the conflict (answered through SRQ1) and the ways of coping (answered through SRQ2) are very much related to one-another through the communications they are based upon. As actors conceptualise the conflict through their communicative acts, different coping strategies emerge, proliferate or perish. These coping strategies, in turn, can again give form to a conceptualizing of conflicts. Therefore, through the continuous mechanism of feedback between conceptualization and coping strategies, the conflict discourse itself changes shape, size and contents over time, seemingly in a never-ending dance, just as clouds rolling over the Asturian mountains (see Image 30).

Moreover, just as cloud formation depends on aspects such as topography, air currents, temperature and humidity, so does the conflict also depend on a larger context than just that a wolf eating livestock. The ever-changing and capricious character of the conflict entails, firstly, that there is no such thing as *'the conflict'*. Secondly, it adds up to the difficulty to solve the human-wolf conflict, as uncertainties are sustained over time. Nonetheless, it might be that just as quickly as the conflict has proliferated in the past few years, it could cool down again under certain circumstances. Whilst it is mere speculation and more research is necessary, the cooling of the conflict might occur if other discourses surrounding the wolf would no longer employ the wolf as the protagonist.



*Image 30. The conceptualisations of the conflict, and the ways actors deal with it, enable and constrain one another, and are in a continuous process of change. Source: Isabeau Ottolini*

## **8.2. The relevance of the research**

Throughout this thesis, I have presented my theoretical framework, the findings in the field, and the relation between those findings, the theoretical framework and the wider scientific literature. Having done all this, now the scientific and social relevance of the theoretical framework can be discussed.

As stated in the first Chapter, the hope exists that by looking at the human-wolf conflict through a Luhmannian perspective new knowledge emerges. Considering the findings and the posterior analysis in the light of the employed framework, it has indeed resulted in novel insights on the conflict. Communications are a fundamental, and up till now mostly overlooked and undervalued, aspect of conflicts. Furthermore, many of the findings can be corroborated, as done in the discussion chapter, with the wider scientific literature. Mentioned aspects such as the existence of the rural-urban dichotomy, issues emerging from top-down approaches, the friction between different types of knowledge and the link with depopulation have been extensively researched by other scientists.

As such, the theoretical framework used for this research has the potential to be applied to other conflicts in an attempt to understand them better. Not with an aim to resolve them, but rather to understand how they evolve over time and across different places, and what role

communications have in the emergence and endurance of a conflict. This can include similar human-wolf conflicts in other places, such as the one that might soon emerge in those places where the wolf is now returning after being absent for long, such as The Netherlands. Furthermore, the theoretical framework could also be used to other types of conflicts on different scales. On a national level it could be used to study, for example, the conflict arising from the Catalunya Independence process, which has been heating up and cooling down in the last few years. Likewise, at local level it can be used, for example, to gain an understanding into why the recent events of poisoning domestic and wild animals in my hometown have become a heated conflict in which seemingly unrelated topics are rapidly being sucked into the discourse to form a part of it and give it even bigger dimensions. In other words, this re-conceptualization of conflicts based on the Social Systems Theory may be used in wide notions of conflict.

Regarding the social relevance of this research, by being conscious of the influence communications have upon conflicts, we can all become much more self-aware and critical of what we say and do, and how this in turn influences conflicts we as actors are immersed in. In addition, the understanding of conflicts and their workings is not only important for academics, but also, or even more so, for the people who engage with the conflict on a daily basis. However, it must be noted that with new knowledge there is also risk. The danger exists that, when there is an understanding of how to decrease one's influence upon a conflict through communicative acts, those same insights might be used to feed the conflict so as to pursue certain interests. This can be done by all involved actors, such as by political parties, who wish to gain votes from certain sectors of the Asturian population, by ganaderos, to ensure subsidies will not be halted, or by conservationists, to further protect the wolf.

### **8.3. Further research**

Finally, this thesis ends with some ideas for future research. During the process of doing this thesis many interesting research topics emerged. However interesting it would have been to also research these topics, they were beyond the scope of this research. Some of the topics have a more theoretical character, whereby the focus is on the nature of conflicts and the surrounding communicative acts (including coping strategies) when seen through the lens of Luhmann's Social Systems Theory. However, others have a more practical dimension that would make it interesting to conduct further research, either in Redes or at other sites where the human-wolf conflict exists. From all the emerged topics, I have made a selection of five possible topics for future research:

- Some actors have mentioned the need for a neutral platform that permits open dialogue on the human-wolf conflict, as a way of finding solutions for all involved actors. However, *what characteristics would such a platform require? And in what ways could it contribute to the resolution of the conflict? Would these additional discourses on the wolf serve as additional fuel to the conflict, and in what way would this occur (or not)?*
- Oftentimes the media and/or politics is pointed out as key factors contributing to the conflict's endurance and worsening over time. *What is the role of the media and/or politics in the human-wolf conflict? In how far do the media and/or politics influence the conflict, and is its influence as important to the conflict as some actors say it is? What actions could the media and/or politics engage in to decrease their influence in the conflict? How would, for instance, a guide to good practices or an ethical code make any difference?*
- A major issue that emerged throughout the research is that there seems to be a perceived lack of trustworthy information, on aspects such as the number of wolves, where they are, how much damage they cause and so forth. So, *why is there a lack of trust? Which actors lack trust in whom or what? And how could the trustworthiness of information be increased from, for example, the government and science? How would a possible increase in the trustworthiness of knowledge influence the conflict?*
- From the conducted research it seems there are several aspects underlying the more visible human-wolf conflict. Further research, both in Redes and at other sites with similar contexts might be interesting to answer questions such as: *What might the underlying structural reasons be to the current human-wolf conflict? Can these be addressed, and in which manner, to cool down the human-wolf conflict? Or will our attempts to solve the underlying issues escalate into new/different conflict discourses? And will such discourses still have the wolf as the protagonist, or will another (possibly unaware) actor become the central character of the conflict? What is the role of coping strategies in the performativity of a conflict?*
- A last topic could be to research the path dependencies of the conflict. While I have uncovered some of the changes the conflict has undergone over time, many questions

still remain. For example, *when did the conflict start? What reasons(s) do actors nowadays point out as the cause(s) of the conflict? Which discourses emerged/diverged/converged/disappeared over time? What aspects enabled or constrained the conflict, and in which manner did this occur?* In addition, it would be interesting to return to Redes in a few years' time with these same questions, to research if what is said about the conflict in the past has changed. This could show whether the present conflict is capable of infecting the communications about past conflicts.

## Appendices

### Appendix A. Detailed map of Redes Natural Park

Below, in Image 31, a more detailed map of the Redes Natural Park can be found. As can be seen, the Park is surrounded by high mountains, with the Nalon river meandering from the southeast to the northwest, gathering water from adjacent river basins, from Orlé, Alba, Caleao and Monasterio, and bringing it to the two water reservoirs of Tarna and Rioseco (López Fernández et al., 2006).

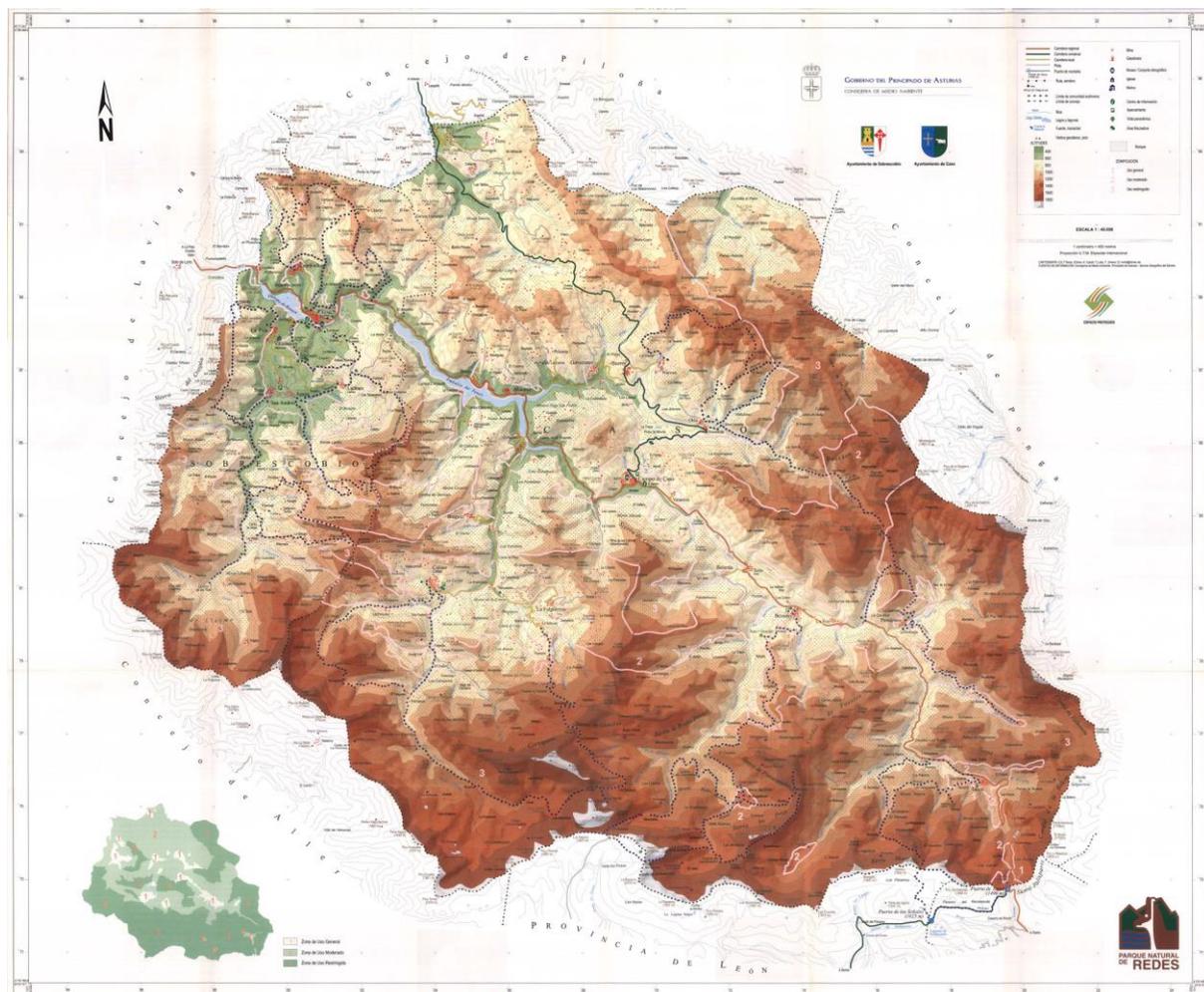


Image 31. Detailed map of Redes Natural Park Source:  
<http://www.taxusmedioambiente.com/redes/rutas/Mapa%20rutas.pdf>

An additional map can be found on the following online folder of Redes:  
[http://naturalezadeasturias.es/upload/Folleto\\_RB\\_Red.es.pdf](http://naturalezadeasturias.es/upload/Folleto_RB_Red.es.pdf) which includes more information on the park.

## Appendix B. Material for data collection

### BASIC INTERVIEW GUIDE (Spanish)

#### Puesto en marcha

- Soy isabeau ottolini, un estudiante del master Desarrollo Rural en los países bajos. Estoy aquí para hacer mi TFM sobre la relación entre lobos y humanos en el medio rural. Elegí ese tema porque he oído hablar mucho de la situación conflictiva en Asturias y quiero aprender más sobre ello. Por eso me gustaría aprender cuál es su experiencia con el lobo.
- La entrevista tardará 1-1:30h. Usted tiene tiempo ahora para responder algunas de mis preguntas?
  - Si → seguir
  - No → cuando tendría tiempo?
- La participación es voluntaria, y se puede retirar en cualquier momento.
- Puedo grabar la entrevista?
  - Si → [enciende grabadora] muchas gracias por poder grabarlo. Usted prefiere quedarse anónimo o puedo usar su nombre en mi investigación?
    - No anónimo → de acuerdo. Me puede decir su nombre y el empleo al que se dedica?
    - Anónimo → de acuerdo. Procuraré de conservar su anonimidad. ¿aun así puedo usar lo que usted me cuenta para mi investigación?
  - No → Puedo tomar unas notas entonces? [= sobre anon+confid]

#### Intro al entrevistado.

Me gustaría **saber más sobre usted.**

- Eres de aquí?
  - No → Cuanto tiempo has vivido aquí? Donde viviste antes?
- Me has dicho que tu trabajo es [...], ¿me puede explicar en qué consiste? Siempre has hecho ese trabajo?

#### El lobo

- Alguna vez ha **visto un lobo**?
  - Si → Donde lo viste? Que pensaste cuando lo viste?
  - No → alguna vez ha visto huellas de lobo?
    - Si → Donde lo viste? Que pensaste cuando lo viste?
    - No → /
- Hay lobos por aquí? Por dónde están?
- Que piensas de la presencia de lobos aquí?
- Usted conoce a otros quien han visto el lobo?
  - Que piensan ellos sobre el lobo?
- Hay **problemas** aquí con el lobo?
  - En qué consiste el problema?
  - El problema solo es ..., o también hay algo más?

- El lobo también trae beneficios? Cuales?
- Cuando comenzaron los problemas con el lobo?
- El problema ha cambiado a lo largo de los años? Que cambió? Porque?
- **Qué hace usted** en relación al problema?
  - Siempre ha hecho eso?
- Hay otros quien sufren del mismo problema? Quien?
  - Que hacen ellos en relación al problema?
- Que haría falta para solucionar el problema?
- Cual sería para usted la situación ideal?
  - Que obstáculos existen para alcanzar esa situación ideal?
- Un tema sobre la cual también me gustaría saber más es la **despoblación**.
  - Es un problema aquí?
  - En que se nota que se está despoblando?
  - Que se necesitaría para frenar la despoblación?
  - Usted cree que la despoblación está relacionado con las problemas con el lobo?

**Para finalizar**

- Creo que tengo toda la información que necesito. Si tengo preguntas, ¿le podría llamar? Aquí está mi tarjeta de contacto por si usted quiere contactarme.
- Me podrías recomendar alguien más a quien podría entrevistar?
  - Ese persona comparte la misma opinión que usted sobre el lobo? Hay alguien con quien usted no comparte la misma opinión?
- Ha sido un placer hablar con usted. Aprecio el tiempo que usted tomó para responder a mis preguntas. Tengo un pequeño regalo para usted, son unos dulces de Holanda.

## Appendix C. List of data sources

The abbreviations of *i.(number)* and *O.(number)* are used in the report to refer to the specific data sources, either of interviews (i) or observations (o). In Table 1 below a description of the interviewees is also given. For those who expressly asked to remain anonymous I have given a description that cannot be traced back to them, while those who did not mind being named have received a description that can potentially be traced back to them.

Table 1. List of data sources

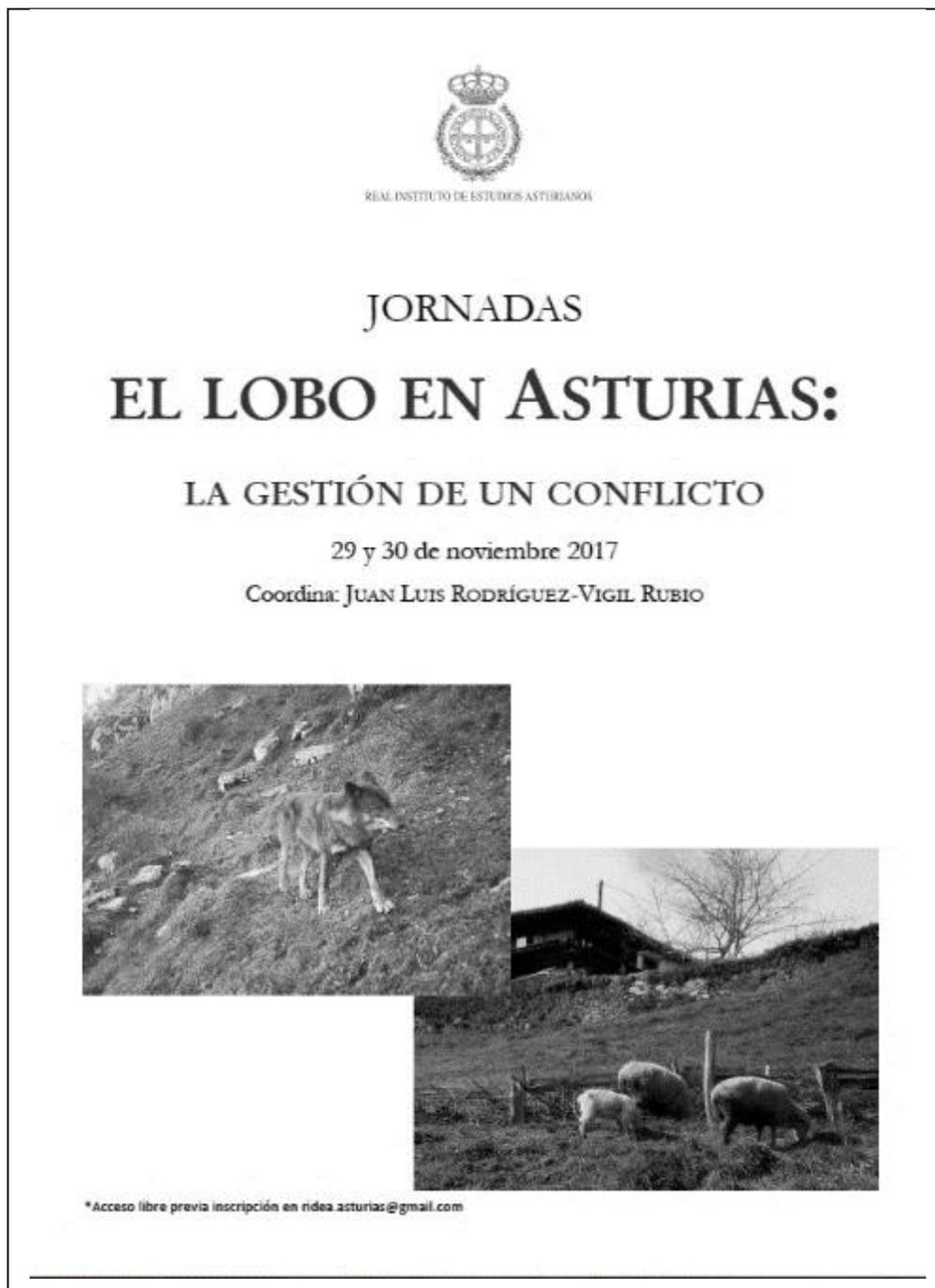
Date	Abbreviation used in report	General description of the respondent	Type of data collection	Duration	Transcription
2/11/2017	i.1	Head ranger of Redes Natural Park	Semi-structured interview	1.02	Yes
3/11/2017	i.2	Local herder and mountain guide	Informal conversation	n/a	No
4/11/2017	i.3	Two interviewees: Non-local biologists, wolf experts.	Semi-structured interview	1.37	Yes
4/11/2017	i.4	Non-local ranger	Semi-structured interview	1.12	Yes
6/11/2017	i.5	Two interviewees: - Non-local biologist (same as i.3) - Local ex-ranger/hunter	Informal conversation	n/a	No
8/11/2017	i.6	Non-local government insider	Semi-structured interview	1.28	Yes
8/11/2017	i.7	Non-local Director of the Redes Natural Park	Semi-structured interview	0.32	Yes
9/11/2017	O.1	Two participants: - Local ranger - Local shepherd	Participant observation+ informal conversation	The entire morning	No
13/11/2017	O.2	Two participants: - Ranger - Local herder and mountain guide	Participant observation+ informal conversation	Part of the morning	No
14/11/2017	i.8	Non-local ex-ranger and bear guide	Semi-structured interview	1.15	Yes
15/11/2017	i.9	Non-local mountain climber	Informal conversation	n/a	No
16/11/2017	i.10	Two interviewees: Non-local, Dutch couple	Informal conversation	n/a	No
16/11/2017	i.11	Two interviewees: Local elderly shepherd couple	Informal conversation	n/a	No
16/11/2017	i.12	Baker	Informal conversation	n/a	No
20/11/2017	i.13	Local ex-mine worker and shepherd	Semi-structured interview	1.22	Yes

<b>21/11/2017</b>	i.14	Biologist, ASCEL member	Semi-structured interview	0.59	Yes
<b>21/11/2017</b>	i.15	Biologist, ASCEL member	Semi-structured interview	0.59	Yes
<b>21/11/2017</b>	i.16	Biologist, ASCEL member	Semi-structured interview	1.21	Yes
<b>22/11/2017</b>	i.17	Local municipality functionary, ex-member of Con lobos no hay Paraiso	Semi-structured interview	1.07	Yes
<b>22/11/2017</b>	O.3	20+ participants, including local and non-local hunters and ganaderos	Participant observation+ informal conversation	Entire day, from 8 am till 11 pm	No
<b>27/11/2017</b>	i.18	+7 interviewees, all local professional ganaderos	Informal conversation	n/a	No
<b>28/11/2017.</b>	i.19	Local professional shepherd	Informal conversation	n/a	No
<b>29-30/11/2017</b>	O.4	70+ participants, including local and non-local hunters, ganaderos, environmentalists, biologists, functionaries, politicians	Participant observation+ informal conversation	Two full days, from 9am till 8pm	No
<b>29/11/2017</b>	i.27	Government official Wolf Management Plan	Semi-structured interview	0.21	Yes
<b>29/11/2017</b>	i.28	Representative PODEMOS	Informal conversation	n/a	No
<b>4/12/2017</b>	i.20	Local professional shepherd	Semi-structured interview	0.50	Yes
<b>5/12/2017</b>	i.21	Local ex-ranger/hunter (same as i.5)	Informal conversation	n/a	No
<b>6/12/2017</b>	i.22	Non-local horse owner	Informal conversation	n/a	No
<b>12/12/2017</b>	i.23	Local Geography PhD student	Semi-structured interview	1.00	Yes
<b>14/12/2017.</b>	i.24	Non-local journalist from El Comercio	Semi-structured interview	1.21	Yes
<b>15/12/2017</b>	i.25	Two interviewees: - Local ex-head ranger - Son of abovementioned, shepherd	Informal conversation	n/a	No
<b>18/12/2017</b>	i.26	Local head ranger (same as i.1.)	Semi-structured interview	1.10	Yes

## Appendix D. Wolf Conference program.

In the following Table 2 the program can be found of the Wolf Conference, that took place between 29 and 30 November, 2017 and that was part of my fourth participant observation event.

Table 2. *Wolf Conference Program - 29 & 30 November, 2017. Source: Real Instituto de Estudios Asturianos (2017)*



## PRESENTACIÓN

El paulatino crecimiento de la población de lobo de los últimos años y el avance de sus áreas de campeo y cría desde los territorios más naturalizados hacia los espacios urbanos y periurbanos de la región nos obligan a reflexionar sobre las estrategias de gestión de una especie cuya relación con el hombre a lo largo de la historia fue casi siempre conflictiva.

Desde un punto de vista biogeográfico y socioeconómico nos encontramos, por una parte, ante una relación de coexistencia compleja y conflictiva entre un gran depredador y los intereses de los territorios y comunidades rurales —que hasta ahora han sido las principales afectadas por la depredación del lobo a los rebaños—, en una región eminentemente ganadera, y, por otra, ante una realidad actual que nos sitúa ante un proceso expansivo que hace que el lobo llegue a merodear por los bordes de las aldeas, villas e incluso ciudades, lo que abre un escenario inédito en la relación de la sociedad con la especie.

Desde un punto de vista ecológico, el lobo es una especie de interés naturalístico, oportunista, con gran capacidad de adaptación a distintos hábitats, que forma parte de algunos ecosistemas de la región y que goza de un status legal de protección y gestión orientada a la conservación de sus poblaciones y hábitats.

Y, desde un punto de vista social, es objeto de aprecio divergente: por una parte, es alabado y ensalzado por amplios sectores de la población urbana y, por otra y por lo general, es denostado y temido por los habitantes del medio rural vinculados a la cría de ganado, que padecen las consecuencias más negativas del conflicto.

Esa compleja realidad que se entreteteja sobre el lobo, con repercusiones de carácter conservacionista, político, patrimonial, cultural, ecológico, económico, biogeográfico y social, nos obliga inevitablemente a buscar soluciones y formas de actuación ante un conflicto que conviene gestionar con rigor para garantizar la conservación del lobo, evitar los riesgos inherentes a su expansión y dar proyección de futuro a las prácticas de la ganadería extensiva en Asturias.

## OBJETIVOS

Las jornadas se plantean con los siguientes objetivos:

- Avanzar en la comprensión del conflicto con el lobo.
- Conocer diferentes experiencias de gestión encaminadas a conservar la especie y minimizar los daños.
- Aproximarse a las visiones del conflicto desde distintos puntos de vista: conservacionistas, ganaderos, cazadores, medios de comunicación, sociedad urbana, sociedad rural...
- Reflexionar sobre el papel multidisciplinar de la ciencia aplicada a la resolución del conflicto.
- Tratar de buscar propuestas concertadas para la gestión del conflicto.

## DESTINATARIOS PRINCIPALES

- Alcaldes y concejales de municipios con presencia de lobo
- Ganaderos
- Gestores de espacios y especies protegidos
- Técnicos de agricultura y desarrollo rural
- Cazadores
- Conservacionistas
- Investigadores
- Estudiantes
- Responsables de los partidos políticos
- Organizaciones agrarias
- Habitantes de zonas con presencia de lobo
- Público en general

Programa provisional  
MIÉRCOLES, 29 DE NOVIEMBRE DE 2017

10:00-10:15 INAUGURACIÓN

Juan Luis Rodríguez-Vigil Rubio  
Coordinador de las jornadas

Benigno Fernández Fano  
Viceconsejero de Medio Ambiente del Gobierno  
del Principado de Asturias

10:15-11:00 DISCURSO DE APERTURA

*El lobo en Asturias: bases para orientar la  
gestión de un conflicto*

Benigno Fernández Fano  
Viceconsejero de Medio Ambiente del Gobierno  
del Principado de Asturias

11:00-11:30 PAUSA

11:30-14:00 PRIMER BLOQUE

*La posición de los grupos parlamentarios de  
la Junta General del Principado de Asturias*

La visión de los grupos parlamentarios de la Junta  
General del Principado es fundamental en orden a  
establecer una mayor estabilidad que permita una  
buena gestión de la especie y una menor influencia  
negativa sobre las actividades ganaderas en  
extensivo

Marcelino Marcos Lández  
Grupo parlamentario Socialista

Luis Miguel Venta Cueli  
Grupo parlamentario Popular

Paula Valero Sanz  
Grupo parlamentario Podemos Asturias

María José Miranda Fernández  
Grupo parlamentario de Izquierda Unida

Carmen Fernández Gómez  
Grupo parlamentario Foro Asturias

Nicanor García Fernández  
Grupo parlamentario Ciudadanos

Moderat: Benigno Fernández Fano  
Viceconsejero de Medio Ambiente del Gobierno  
del Principado de Asturias

16:30-18:00 SEGUNDO BLOQUE

*La visión de los representantes de los ganaderos*

Los ganaderos son los principales afectados en el conflicto, al ver sus rebaños y sus animales los que sufren principalmente los daños. Su opinión, y su papel en el manejo del monte, es fundamental para la búsqueda de acuerdos y soluciones, tanto para hacer viables sus modelos de gestión ganadera como para la conservación del lobo

María Ángeles González García  
Secretaría General de la Asociación Agraria de Jóvenes  
Agricultores de Asturias (ASAJA)

Mercedes Cruzado Álvarez  
Secretaría General de la Coordinadora  
de Organizaciones de Agricultores y Ganaderos  
(COAG-Asturias)

José Ramón García Alba, "Pachón"  
Secretario General de la Unión Campesina de Asturias  
(UCA)

Moderar: Sonia Avellaneda Caselles  
Periodista

18:00-18:30 PAUSA

18:30-20:00 TERCER BLOQUE

*La visión de los representantes de los cazadores  
y el papel de la caza en la gestión del lobo*

El lobo tiene la consideración de especie cinegética en algunas regiones. La caza, por activa y por pasiva, es una actividad que, bien regulada, puede contribuir tanto a conservar la especie como a disminuir la conflictividad

Isaac Díaz Montes  
Presidente de la Asociación de Guardas de Cotos de  
Asturias (ASGUCA)

Amador Rolán Hidalgo  
Presidente de la Asociación de Cazadores de Lena

Luis Fernando Villanueva González  
Director de la Fundación Artermisan

Moderar: Belarmino Fernández Fervienza  
Alcalde de Somiedo

JUEVES, 30 DE NOVIEMBRE DE 2017

09:30-11:00 CUARTO BLOQUE

*La perspectiva conservacionista*

Las entidades y grupos conservacionistas han mantenido una posición reivindicativa a favor de la conservación del lobo. Sus campañas mediáticas y su influencia en la sociedad, en especial en la urbana, han sido decisivas para conformar una opinión muy favorable al lobo en la ciudad que, sin embargo, no ha tenido el mismo efecto en los territorios rurales de orientación ganadera.

Representante de colectivo conservacionista

Fructuoso Pontigo Concha  
Portavoz de la Coordinadora Ecoloxista d'Asturies

Guillermo Palomero García  
Presidente de la Fundación Oso Pardo (FOP)

Moderador: Luis Miguel Rebusiello  
Periodista

11:00-11:30 PAUSA

11:30-13:30 QUINTO BLOQUE

*La perspectiva científica*

El conocimiento científico sobre el lobo y sus interacciones con el territorio y la sociedad rebaza los aspectos puramente biológicos de la especie y nos introduce en otros ámbitos de las ciencias sociales. Las distintas ramas de la ciencia están llamadas a cooperar más allá de su especialización académica para entender todas las dimensiones del conflicto y orientar la búsqueda de soluciones.

Orencio Hernández Palacios  
Biólogo de la Dirección General de Biodiversidad,  
Gobierno del Principado de Asturias

José Vicente López-Bao  
Biólogo de la Universidad de Oviedo

Luis Llaneza Rodríguez  
Biólogo en ARENA, S. L.

Jesús Ruiz Fernández  
Geógrafo y Director del CECODET de la  
Universidad de Oviedo

Moderador: Jaime Izquierdo Vallina  
Consejería de Infraestructuras, Ordenación del  
Territorio y Medio Ambiente, Gobierno del  
Principado de Asturias

16:30-18:00 SEXTO BLOQUE

*El papel de los medios de comunicación*

El papel de los medios de comunicación, tanto los clásicos como las nuevas redes sociales, en la información sobre el lobo resulta decisivo en la conformación de un estado de opinión ciudadana sobre la especie

Eduardo Lagar Fernández  
Periodista de *La Nueva España*

Ramón Muñiz Abad  
Periodista de *El Comercio*

Esther Martínez Álvarez  
Corresponsal de *La Voz del Trubia*

Modera: Óscar Rodríguez Buznego  
Sociólogo

18:00-18:30 PAUSA

18:30-20:00 SÉPTIMO BLOQUE

*La gestión del lobo desde los gobiernos regionales y del Estado*

Las comunidades autónomas de la Cordillera Cantábrica y del noroeste peninsular albergan prácticamente la totalidad de la población de lobos en España. En esta mesa se tratará de conocer las características, y los aspectos comunes y de colaboración, que tienen las distintas administraciones regionales y el Estado en la gestión del lobo

Representante del Ministerio de Agricultura, Pesca, Alimentación y Medio Ambiente

Antonio Javier Lucio Calero  
Director General de Montes y Conservación de la Naturaleza

Representante de la Dirección General del Medio Natural de la Junta de Castilla y León

Representante de la Dirección General de Conservación de la Naturaleza de la Xunta de Galicia

Manuel Calvo Temprano  
Director General de Biodiversidad del Gobierno del Principado de Asturias

Modera: Juan Luis Rodríguez-Vigil Rubio  
RIDEA

20:00 CLAUSURA

Ramón Rodríguez Álvarez  
Director del RIDEA

Fernando Lastra Valdés  
Consejero de Infraestructuras, Ordenación del Territorio y Medio Ambiente del Gobierno del Principado de Asturias

## INFORMACIÓN GENERAL

**FECHAS:**

29 y 30 de noviembre de 2017

**LUGAR:**

Salón de actos del Real Instituto de Estudios Asturianos  
Plaza Porlier, n.º 9, 1.ª planta. 33003 - Oviedo

**SECRETARÍA:**

**RIDEA**  
Plaza Porlier, n.º 9, 1.ª planta. 33003 - Oviedo  
Tfno.: 984182801

**INSCRIPCIONES:**

E-mail para inscripciones: [ridea.asturias@gmail.com](mailto:ridea.asturias@gmail.com)  
(solo se aceptarán inscripciones por este medio)

Plazas limitadas: 70 personas

**ORGANIZA:**

Real Instituto de Estudios Asturianos (RIDEA)

**COLABORA:**

Consejería de Infraestructuras, Ordenación del Territorio y Medio Ambiente



DL: AS 03697 -2017

## Bibliography

- Aarts, N., & van Woerkum, C. (2008). *Strategische communicatie. Principes en toepassingen*. Assen: Koninklijke van Gorcum B.V.
- Andersen, R., Linnell, J. D. C., Hustad, H., & Brainerd, S. M. (2003). *Large predators and human communities in Norway A guide to coexistence for the 21st century*. Trondheim. Retrieved from [http://www.nina.no/archive/nina/pppbasepdf/temahefte/25\\_eng.pdf](http://www.nina.no/archive/nina/pppbasepdf/temahefte/25_eng.pdf)
- Assche, K. Van, Beunen, R., & Duineveld, M. (2014). *Evolutionary Governance Theory An Introduction*. Heidelberg: Springer. <https://doi.org/10.1007/978-3-319-00984-1>
- Ausín, A. (2015, February 19). La fascinante historia de Valdroguín, el lobo de Caso | Campo y playu - Blogs elcomercio.es. *El Comercio - Blogs*. Retrieved from <http://blogs.elcomercio.es/campoyplayu/2015/02/19/la-fascinante-historia-de-valdroguin-el-lobo-de-caso/>
- Bernard, H. R. (2011). *Research Methods in Anthropology - Qualitative and Quantitative Approaches* (5th ed.). AltaMira Press.
- Blanco, J. C. (2018). La gestión del lobo en España. Controversias científicas en torno a su caza. *Arbor*, 193(786), 418. <https://doi.org/10.3989/arbor.2017.786n4007>
- Blanco, J. C., & Cortés, Y. (2001). *Ecología, censos, percepción y evolución del lobo en España: análisis de un conflicto*. Málaga: Sociedad Española para la Conservación y Estudio de los Mamíferos (SECEM).
- Blanco, J. C., & Cortés, Y. (2009). Ecological and social constraints of wolf recovery in Spain. In M. Musiani, L. Boitani, & P. C. Paquet (Eds.), *A new era for wolves and people: wolf recovery, human attitudes, and policy*. (pp. 41–66). Calgary: University of Calgary Press.
- Blanco, J. C., Sáenz, M., & Llana, L. (2007). Ficha del *Canis lupus* (Linnaeus 1758). In L. J. Palomo, J. Gisbert, & J. C. Blanco (Eds.), *Atlas y Libro Rojo de los Mamíferos Terrestres de España*. (pp. 272–276). Madrid: Dirección General para la Biodiversidad, SECEM, SECEMU. Retrieved from [http://www.mapama.gob.es/es/biodiversidad/temas/inventarios-nacionales/inventario-especies-terrestres/inventario-nacional-de-biodiversidad/ieet\\_mamif\\_atlas.aspx](http://www.mapama.gob.es/es/biodiversidad/temas/inventarios-nacionales/inventario-especies-terrestres/inventario-nacional-de-biodiversidad/ieet_mamif_atlas.aspx)
- Boitani, L., & Linnell, J. (2015). Bringing Large Mammals Back: Large Carnivores in Europe. In H. M. Pereira & L. M. Navarro (Eds.), *Rewilding European Landscapes* (pp. 67–84). Springer International Publishing. [https://doi.org/10.1007/978-3-319-12039-3\\_4](https://doi.org/10.1007/978-3-319-12039-3_4)
- Brauch, H. G., Spring, Ú. O., Mesjasz, C., Grin, J., Kameri-Mbote, P., Chourou, B., ... Birkmann, J. (2011). *Coping with global environmental change, disasters and security: threats, challenges, vulnerabilities and risks*. Berlin: Springer Science & Business Media.
- Bright, A. D., & Manfredo, M. J. (1996). A conceptual model of attitudes towards Natural resource issues: a case study of wolf reintroduction. *Human Dimensions of Wildlife*, 1, 1–21. <https://doi.org/10.1080/10871209609359048>
- Byrd, K. L. (2000). *Wolf as social indicator: An analysis of wolf public information meetings in Minnesota*.
- Ceaușu, S., Carver, S., Verburg, P. H., Kuechly, H. U., Hölker, F., Brotons, L., & Pereira, H. M. (2015). European Wilderness in a Time of Farmland Abandonment. In *Rewilding European Landscapes* (pp. 25–46). Cham: Springer International Publishing. [https://doi.org/10.1007/978-3-319-12039-3\\_2](https://doi.org/10.1007/978-3-319-12039-3_2)

- Chambers, R. (1989). Editorial Introduction: Vulnerability, Coping and Policy. *Institute of Development Studies*, (IDS Bulletin No. 2), 1–7.
- Collantes, F. (2004). *El declive demográfico de la montaña española (1850-2000). ¿Un drama rural?* (Ministerio). Madrid.
- Collantes, F., & Pinilla, V. (2011). *Peaceful surrender : the depopulation of rural Spain in the twentieth century*. Newcastle upon Tyne: Cambridge Scholars. Retrieved from [https://books.google.nl/books?hl=es&lr=&id=3hArBwAAQBAJ&oi=fnd&pg=PR7&ots=ekX0iiaxae&sig=irq0Hi1jIDTrs9CnlyLkdqS70\\_M#v=onepage&q&f=false](https://books.google.nl/books?hl=es&lr=&id=3hArBwAAQBAJ&oi=fnd&pg=PR7&ots=ekX0iiaxae&sig=irq0Hi1jIDTrs9CnlyLkdqS70_M#v=onepage&q&f=false)
- Conover, M. (2002). *Resolving human-wildlife conflicts : the science of wildlife damage management*. Boca Raton, USA: CRC Press.
- de Leon, M. (1996). La ciudad y el campo: las imagenes opuestas de “el otro.” In *El campo y la ciudad:(sociedad rural y cambio social)* (pp. 13–44). Servicio de Extensión Agraria. Retrieved from [http://www.mapama.gob.es/ministerio/pags/Biblioteca/fondo/pdf/2742\\_4.pdf](http://www.mapama.gob.es/ministerio/pags/Biblioteca/fondo/pdf/2742_4.pdf)
- de Vaus, D. (2001). *Research design in social research*. SAGE.
- Díaz, J. (2018). Blog de José Díaz Martínez · Redes de Ensueño. Retrieved April 23, 2018, from <http://www.josecaleao.com/blog.php>
- Dickman, A. (2010). Complexities of conflict: The importance of considering social factors for effectively resolving human-wildlife conflict. *Animal Conservation*, 13(5), 458–466. <https://doi.org/10.1111/j.1469-1795.2010.00368.x>
- Drenthen, M. (2015). The return of the wild in the Anthropocene. Wolf resurgence in the Netherlands. *Ethics, Policy & Environment*, 18(3), 318–337. <https://doi.org/10.1080/21550085.2015.1111615>
- Duineveld, M., Pellis, A., & de Vries, J. (n.d.). Heet en niet te blussen . Conflicten als ontbarend en productieve communicaties ( kladversie ).
- Echegaray, J. (2014). Censos de lobos en España. Las estimaciones de la población de lobo ibérico no se basan en datos fiables. *Revista El Ecologista*, (83), 53–55. Retrieved from [https://s3.amazonaws.com/academia.edu.documents/36493015/Censos\\_Lobos\\_Espana\\_Ecologistas\\_83\\_53-55.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1522655228&Signature=kDgjGy6eK1%2Bm8BQHfr1SVsxn0xc%3D&response-content-disposition=inline%3B filename%3DCen](https://s3.amazonaws.com/academia.edu.documents/36493015/Censos_Lobos_Espana_Ecologistas_83_53-55.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1522655228&Signature=kDgjGy6eK1%2Bm8BQHfr1SVsxn0xc%3D&response-content-disposition=inline%3B filename%3DCen)
- Eklund, A., López-Bao, J. V., Tourani, M., Chapron, G., & Frank, J. (2017). Limited evidence on the effectiveness of interventions to reduce livestock predation by large carnivores. *SCIENTIFIC REPORTS*, 7(2097), 1–9. <https://doi.org/10.1038/s41598-017-02323-w>
- FAPAS. (2017). OTRO LOBO MUERTO COLGADO EN LA CARRETERA EN ASTURIAS. Retrieved March 2, 2018, from <https://twitter.com/FAPASSPAIN/status/835805807178625024>
- FEMP. (2017). *Población y despoblación en España 2016*.
- Fischer, J., & Lindenmayer, D. . (2000). An assessment of the published results of animal relocations. *Biological Conservation*, 96(1), 1–11. [https://doi.org/10.1016/S0006-3207\(00\)00048-3](https://doi.org/10.1016/S0006-3207(00)00048-3)

- Frank, B. (2016). Human–Wildlife Conflicts and the Need to Include Tolerance and Coexistence: An Introductory Comment. *Society & Natural Resources*, 29(6), 738–743. <https://doi.org/10.1080/08941920.2015.1103388>
- Frerks, G. E., de Graaf, B. A., & Muller, E. . (2016). *Conflict - Over conflict en conflictbeheersing*. Deventer: Wolters Kluwer.
- Gallardo, M. (2011). La escuela de contexto rural:¿de la diferencia a la desigualdad? *Revista Iberoamericana de Educación*, 55/5, 1–10. Retrieved from <http://dialnet.unirioja.es/servlet/articulo?codigo=3688154&orden=304188&info=link>
- Gobierno del Principado de Asturias. (2017). *Programa de Actuaciones de Control del Lobo 2017-2018*. Retrieved from [https://www.asturias.es/webasturias/GOBIERNO/TRANSPARENCIA/DERECHO\\_ACCESO/frecuentes/2017\\_06\\_07\\_programa\\_lobo\\_2017\\_18\\_opt.pdf](https://www.asturias.es/webasturias/GOBIERNO/TRANSPARENCIA/DERECHO_ACCESO/frecuentes/2017_06_07_programa_lobo_2017_18_opt.pdf)
- Gore, M. L., Knuth, B. A., Scherer, C. W., & Curtis, P. D. (2008). Evaluating a conservation investment designed to reduce human-wildlife conflict. *Conservation Letters*, 1(3), 136–145. <https://doi.org/10.1111/j.1755-263X.2008.00017.x>
- Hardaker, J. B., Lien, G., Anderson, J. R., & Huirne, R. B. M. (2015). *Coping with risk in agriculture: applied decision analysis*. CABI. <https://doi.org/10.1079/9781780645742.0000>
- Hermann, N., & Menzel, S. (2013). Predicting the intention to support the return of wolves: A quantitative study with teenagers. *Journal of Environmental Psychology*, 36, 153–161. <https://doi.org/10.1016/j.jenvp.2013.07.017>
- Hill, C. (2004). Farmers’ Perspectives of Conflict at the Wildlife–Agriculture Boundary: Some Lessons Learned from African Subsistence Farmers. *Human Dimensions of Wildlife*, 9(4), 279–286. <https://doi.org/10.1080/10871200490505710>
- Hill, C. M. (2015). Perspectives of “Conflict” at the Wildlife–Agriculture Boundary: 10 Years On. *Human Dimensions of Wildlife*, 20(4), 296–301. <https://doi.org/10.1080/10871209.2015.1004143>
- Höchtel, F., Lehringer, S., & Konold, W. (2005). “Wilderness”: what it means when it becomes a reality—a case study from the southwestern Alps. *Landscape and Urban Planning*, 70(1–2), 85–95. <https://doi.org/10.1016/J.LANDURBPLAN.2003.10.006>
- Instituto Nacional de Estadística. (2018). Alteraciones de los municipios en los Censos de Población desde 1842. Retrieved April 23, 2018, from <http://www.ine.es/intercensal/inicio.do>
- IUCN. (2003). WPC Recommendation V. 20: Preventing and Mitigating Human-Wildlife Conflicts. In *Recommendations*, 185–186. Retrieved from <http://cmsdata.iucn.org/downloads/recommendationen.pdf>
- Izquierdo, J. (2012). *La casa de mi padre: manual para la reinserción de los territorios campesinos en la sociedad contemporánea*. Retrieved from <https://www.casadellibro.com/libro-la-casa-de-mi-padre/9788483673812/1975056>
- Jiménez-Pérez, I., & Delibes de Castro, M. (2005). *Al borde de la extinción, Una visión integral de la recuperación de fauna amenazada en España*. Valencia: EVREN, Evaluación de Recursos Naturales.
- Keenleyside, C., & Tucker, G. (2010). *Farmland Abandonment in the EU: an Assessment of*

*Trends and Prospects. Report prepared for WWF.* London.

- Kellert, S. R. (1996). *The value of life : biological diversity and human society.* Island Press [for] Shearwater Books.
- Kellert, S. R., Black, M., Rush, C. R., & Bath, A. J. (1996). Human Culture and Large Carnivore Conservation in North America. *Conservation Biology*, 10(4), 977–990. <https://doi.org/10.1046/j.1523-1739.1996.10040977.x>
- Kpéra, G. N., Aarts, N., Tossou, R. C., Mensah, G. a., Saïdou, A., Kossou, D. K., ... van der Zijpp, A. J. (2014). “A pond with crocodiles never dries up”: a frame analysis of human–crocodile relationships in agro-pastoral dams in Northern Benin. *International Journal of Agricultural Sustainability*, 12(3), 316–333. <https://doi.org/10.1080/14735903.2014.909637>
- Kumar, R. (2010). *Research methodology : a step-by-step guide for beginners* (3rd ed.). SAGE publications.
- Lackey, R. (2004). Normative science. *Fisheries*, 29(7), 38–39. <https://doi.org/10.1260/0958305053516181>
- Linnell, J. D. C., & Boitani, L. (2011). Building biological realism into wolf management policy: the development of the population approach in Europe. *Hystrix, the Italian Journal of Mammalogy*, 23(1), 80–91. <https://doi.org/10.4404/hystrix-23.1-4676>
- Linnell, J., Salvatori, V., & Boitani, L. (2007). Guidelines for population level management plans for large carnivores in Europe. *European Commission*, (May), 78.
- Llaneza, L., García, E. J., Palacios, V., & Martín, M. (2013). *Aspectos sociales en la gestión y conservación del lobo en el Parque Nacional de los Picos de Europa. 2011-2012.*
- Llaneza, L., García, E. J., Palacios, V., & Rivas, O. (2011). *Aspectos sociales en la gestión y conservación del lobo en el Parque Nacional de los Picos de Europa 2008 - 2010.*
- Lopes-Fernandes, M., Soares, F., Frazão-Moreira, A., & Queiroz, A. I. (2016). Living with the beast: Wolves and humans through Portuguese literature. *Anthrozoos*, 29(1), 5–20. <https://doi.org/10.1080/08927936.2015.1060056>
- López Fernández, A., Ramos López, J. E., & León Suárez, B. (2006). *El agua y los bosques de Redes, La esencia del PARAÍSO NATURAL.* (Consejería de Medio Ambiente del Principado de Asturias, Ed.). Prisma Gabinete de Diseño. Retrieved from <https://www.asturias.es/medioambiente/publicaciones/ficheros/REDES.pdf>
- Luhmann, N. (1995). *Social systems.* Stanford, CA: Stanford University Press. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/24825721>
- Luhmann, N. (1997). *Die Gesellschaft der Gesellschaft.* Frankfurt: Suhrkamp.
- Madden, F. (2004). Creating Coexistence between Humans and Wildlife: Global Perspectives on Local Efforts to Address Human–Wildlife Conflict. *Human Dimensions of Wildlife*, 9(4), 247–257. <https://doi.org/10.1080/10871200490505675>
- Madden, F., & McQuinn, B. (2014). Conservation’s blind spot: The case for conflict transformation in wildlife conservation. *Biological Conservation*, 178, 97–106. <https://doi.org/10.1016/j.biocon.2014.07.015>
- Malsch, T., & Weiss, G. (2001). Conflicts in social theory and MAS. [https://doi.org/10.1007/0-306-46985-5\\_4](https://doi.org/10.1007/0-306-46985-5_4)

- Malsch, T., & Weiß, G. (2000). Conflicts in social theory and multiagent systems: on importing sociological insights into distributed AI. In *Conflicting agents. Conflict management in multi-agent systems*. Kluwer Academic Publishers (pp. 111–149).
- Mech, L. D., & Boitani, L. (2006). *Wolves : behavior, ecology, and conservation*. University of Chicago Press.
- Méndez, R. (2012, March 23). Bruselas frena el intento de Cañete de ampliar la caza del lobo ibérico | Sociedad | EL PAÍS. *El País - Sociedad*. Retrieved from [https://elpais.com/sociedad/2012/03/25/actualidad/1332693965\\_033377.html](https://elpais.com/sociedad/2012/03/25/actualidad/1332693965_033377.html)
- Messmer, T. A. (2009). Human–wildlife conflicts: emerging challenges and opportunities. *Human-Wildlife Conflicts*. Utah State University - Berryman Institute. <https://doi.org/10.2307/24875682>
- Molino, S. (2016). *La España vacía : viaje por un país que nunca fue*. Retrieved from <http://www.turnerlibros.com/book/la-espana-vacia.html>
- Myerson, G., & Rydin, Y. (2014). *The language of environment: A new rhetoric*. Abingdon, Oxon: Routledge.
- Navarro, L. M., & Pereira, H. M. (2015). Rewilding Abandoned Landscapes in Europe. In *Rewilding European Landscapes* (pp. 3–23). Cham: Springer International Publishing. [https://doi.org/10.1007/978-3-319-12039-3\\_1](https://doi.org/10.1007/978-3-319-12039-3_1)
- Nyhus, P. J. (2016). Human–Wildlife Conflict and Coexistence. *Annu. Rev. Environ. Resour.*, 41, 143–71. <https://doi.org/10.1146/annurev-environ-110615-085634>
- O’Leary, Z. (2004). *The Essential Guide to doing research*. London: Sage Publications Ltd.
- Pellis, A., Duineveld, M., & Wagner, L. (2015). Conflicts forever. The path dependencies of tourism conflicts : the case of Anabeb Conservancy , Namibia. In *Tourism Encounters and Controversies Ontological Politics of Tourism Development Proof* (pp. 115–138). <https://doi.org/10.13140/RG.2.1.3286.3843>
- Pellis, A., Pas, A., & Duineveld, M. (n.d.). The Persistence of Tightly Coupled Conflicts. The Case of Loisaba, Kenya, 1–33.
- Perez, R. (2018, January 25). La despoblación vacía media España. *ABC*. Retrieved from [http://www.abc.es/sociedad/abci-despoblacion-vacia-media-espana-201701290210\\_noticia.html](http://www.abc.es/sociedad/abci-despoblacion-vacia-media-espana-201701290210_noticia.html)
- Peterson, M. J. N., Birckhead, J. L., Leong, K., Peterson, M. J. N., & Peterson, T. R. (2010). Rearticulating the myth of human-wildlife conflict. *Conservation Letters*, 3(2), 74–82. <https://doi.org/10.1111/j.1755-263X.2010.00099.x>
- Pinilla, V., & Antonio Sáez, L. (2017). *Rural depopulation in Spain : genesis of a problem and innovative policies* (Vol. 2). Zaragoza.
- Ray, C., Lindop, J., & Gibson, S. (1982). The concept of coping. *Psychological Medicine*, 12(2), 385. <https://doi.org/10.1017/S0033291700046729>
- Real Instituto de Estudios Asturianos. (2017). EL LOBO EN ASTURIAS: LA GESTIÓN DE UN CONFLICTO. Retrieved April 23, 2018, from <http://ridea.org/actualidad/agenda-ridea/135-el-lobo-en-asturias-la-gestion-de-un-conflicto#.Wt322YjFJPY>
- REDER. (2017). Dieciséis organizaciones unidas para frenar el despoblamiento rural y luchar contra los incendios «REDER. Retrieved October 24, 2017, from

<http://www.redestatal.com/2979-2>

- Redpath, S., Bhatia, S., & Young, J. (2015). Tilting at wildlife: reconsidering human–wildlife conflict. *Oryx*, 49(2), 222–225. <https://doi.org/10.1017/S0030605314000799>
- Redpath, S., Linnell, J., Festa-Bianchet, M., Boitani, L., Bunnefeld, N., Dickman, A., ... Milner-Gulland, E. J. (2017). Don't forget to look down - collaborative approaches to predator conservation. *Biological Reviews*, 92(4), 2157–2163. <https://doi.org/10.1111/brv.12326>
- Redpath, S. M., Young, J., Evely, A., Adams, W. M., Sutherland, W. J., Whitehouse, A., ... Gutiérrez, R. J. (2013). Understanding and managing conservation conflicts. *Trends in Ecology & Evolution*, 28(2), 100–109. <https://doi.org/10.1016/J.TREE.2012.08.021>
- Roberts, R. (2011). Palestinians in Lebanon: Refugees Living with Long-Term Displacement. *Journal of Refugee Studies*, 24(2), 416–417. <https://doi.org/10.1093/jrs/fer015>
- Romero, L. (2018). *Despoblación y Abandono de la España Rural. El Imposible Vencido*. Tirant lo Blanch.
- Ruiz, M. (2018, January 24). España indirecta Relato de una España inventada: cómo Televisión Española crea una visión bucólica y adulterada de la realidad rural. *El Salto*. Retrieved from <https://www.elsaltodiario.com/medios/segovia-rural-tve-espana-directo-vision-indirecta>
- Rural, R. E. de D. (2018, March 23). La Comisión de Agricultura del Congreso aprueba una moción para revertir el proceso de despoblación y potenciar el desarrollo del medio rural en España. *REDR*. Retrieved from <http://www.redr.es/es/cargarAplicacionNoticia.do?texto=&identificador=30657&fechaDesde=&idCategoria=0&fechaHasta=>
- Salas, M. G., & Arias, S. (2017, September 1). Los cazadores apoyan las batidas de lobos para aliviar la presión sobre la ganadería - La Nueva España - Diario Independiente de Asturias. *LNE*. Oviedo. Retrieved from <http://www.lne.es/asturias/2017/09/01/cazadores-apoyan-batidas-lobos-aliviar/2157099.html>
- Schepers, F., & Jepson, P. (2016). Rewilding in a European Context. *International Journal of Wilderness*, 22(25). Retrieved from [http://www.geog.ox.ac.uk/staff/Schepers\\_Jepson\\_Aug2016IJW.pdf](http://www.geog.ox.ac.uk/staff/Schepers_Jepson_Aug2016IJW.pdf)
- Skinner, E. A., & Zimmer-Gembeck, M. J. (2007). The Development of Coping Coping. *Annual Review of Psychology*, 58, 119–44. <https://doi.org/10.1146/annurev.psych.58.110405.085705>
- Snyder, C. R. (1999). *Coping : the psychology of what works*. Oxford University Press.
- Steele, J. R., Rashford, B. S., Foulke, T. K., Tanaka, J. A., & Taylor, D. T. (2013). Wolf (*Canis lupus*) Predation Impacts on Livestock Production: Direct Effects, Indirect Effects, and Implications for Compensation Ratios. *Rangeland Ecology & Management*. Society for Range Management. <https://doi.org/10.2307/42569151>
- Sylvén, M., & Widstrand, S. (2015). *A vision for a wilder Europe* (2nd editio).
- Tacoli, C. (1998). Rural-urban interactions: a guide to the literature. *Environment and Urbanization*, 10(1), 147–166. <https://doi.org/10.1177/095624789801000105>
- Taxus Medio Ambiente. (2007). Parque Natural de Redes. Retrieved April 23, 2018, from

<http://www.parquenaturalderedes.es/>

- Terres, J. M., Nisini, L., & Anguiano, E. (2013). *Assessing the risk of farmland abandonment in the EU Final report*. <https://doi.org/LB-NA-25783-EN-N>
- Treves, A., Chapron, G., López-Bao, J. V., Shoemaker, C., Goeckner, A. R., & Bruskotter, J. T. (2017). Predators and the public trust. *Biological Reviews*, *92*(Predators and the public trust.), 248–270. <https://doi.org/10.1111/brv.12227>
- Treves, A., Wallace, R. B., Naughton-Treves, L., & Morales, A. (2006). Co-Managing Human–Wildlife Conflicts: A Review. *Human Dimensions of Wildlife*, *11*(6), 383–396. <https://doi.org/10.1080/10871200600984265>
- Ubalde, J. M., Rius, J., Poch, R. M., & Poch, R. M. (1999). Monitorización de los cambios de uso del suelo en la cabecera de cuenca de la ribera salada mediante fotografía Aérea y S.I.G. (El Solsonès, Lleida, España). *Pirineos*, *153–154*(0), 101–122. <https://doi.org/10.3989/pirineos.1999.v153-154.108>
- UN/ISDR. (2004). *Living with risk: a global review of disaster reduction initiatives*. (New York – Geneva: United Nations). Retrieved from <http://www.unisdr.org/we/inform/publications/657>
- Ursino, N., & Romano, N. (2014). Wild forest fire regime following land abandonment in the Mediterranean region. *Geophysical Research Letters*, *41*(23), 8359–8368. <https://doi.org/10.1002/2014GL061560>
- Van Herzele, A., & Aarts, N. (2013). “My forest, my kingdom”-self-referentiality as a strategy in the case of small forest owners coping with government regulations. *Policy Sciences*, *46*(1), 63–81. <https://doi.org/doi:http://dx.doi.org.ezproxy.uned.es/10.1007/s11077-012-9157-7>
- Varela, M. (2017, August 29). Los ganaderos de Caso afirman que el lobo mató más de 200 reses en Redes | El Comercio. *El Comercio - Cuencas*. Retrieved from <http://www.elcomercio.es/asturias/cuencas/ganaderos-afirman-lobo-20170829001557-ntvo.html>
- Wikipedia. (2018). Asturias. Retrieved April 23, 2018, from [http://www.asturias.es/Asturias/descargas/imagen\\_institucional/dia\\_asturias.pdf](http://www.asturias.es/Asturias/descargas/imagen_institucional/dia_asturias.pdf)
- Woodroffe, R., Thirgood, S. J. (Simon J. ., & Rabinowitz, A. (2005). *People and wildlife : conflict or coexistence?* Cambridge University Press.
- Zeidner, M., & Saklofske, D. (1996). Adaptive and maladaptive coping. In M. Zeidner & N. S. Endler (Ed.), *Handbook of coping: Theory, research, applications* (pp. 505–531). Oxford, England: John Wiley. Retrieved from <http://psycnet.apa.org/record/1996-97004-022>