Convivial Constitutionality: Human-Predator Interrelations in Complex Social-Ecological Systems

1. Summary

This research project aims to not only fill an important gap in understanding environmental conservation from a social science perspective but also contribute to the wider understanding relevant across various disciplines on the role interaction between humans and non-humans plays in conservation. The proposal is related - and a response - to a research project funded by the Belmont Forum and NORFACE called Towards Convivial Conservation: Governing Human-Wildlife Relations in the Anthropocene (CON-VIVA) currently underway to answer critical questions around the most pressing issues facing conservation. CON-VIVA addresses the need ‘to move beyond currently dominant paradigms that promote nature-culture dualisms and market-based funding mechanisms’.

Intervening within the current debate concerning alternatives to conventional economic development strategies in conservation, the concept put forth by the convivial conservation project aims at reconciling the latest state-of-the-art conservation approaches with new ecological research findings that work towards integrating apex predators in diverse contexts, as these play a crucial role in maintaining healthy ecosystems (for further reading see also Büscher and Fletcher 2019, 2020). Since the presence of such (often large) carnivores poses a myriad of challenges, especially in terms of conflicts that arise with people, the project gathers data and looks for ways to successfully overcome human-nature divides. The SNSF proposal ‘Towards Convivial Constitutionality’ aims to address an important gap in the CON-VIVA project by exploring an issue it does not directly consider: how local groups perceive conviviality and how they would craft new institutions to make conviviality possible, based on the constitutionality approach that looks at elements for successful bottom-up institution building (Haller et al. 2016).

This will be done by comparative social anthropological research focusing on three agro-pastoralist contexts in three different countries, each with one case-study of a famous predator and its interactions with the local communities studied by three PhD students using an actor-oriented and bottom-up perspective. These case-studies include the following countries and animals: Colombia (Jaguar, South America), Romania (Wolf, Europe) and Kenya (Lion, Africa). Each of the three PhDs will cover one area of study in order to compare similarities and differences regarding institutional arrangements in specific conservation cases and relate the specific circumstances regarding convivial concepts between humans and predators to each other. The project can profit from already existing work in these areas but provides an important opportunity to contribute original research on the local heterogeneous perspective and ecological knowledge as well as innovative ideas concerning how to cope with challenges of conservation related to these often-dangerous animals. The project then addresses the important research questions of local perspectives regarding this mode of conservation, on power specific issues in the external crafting of conservation rules and options of bottom-up institution building (constitutionality), which will contribute to sustainable convivial solutions.

The project will be led by Prof. Tobias Haller (University of Bern, Switzerland, main applicant) with additional co-supervisors for the PhDs, who will also bring in additional topics: for the European case (Prof. Michaela Schäuble; Anthropology of Europe and Anthropology of Religion), Africa (Prof. Daniel Brockington, University of Sheffield, Anthropology of NGOs), America (Prof. Robert Fletcher, University of Wageningen, NL).

1 https://convivialconservation.com/ 18.03.2020
2. Research Plan

The project will build on a comparative study of three research areas where human-wildlife conflicts arise in the constellation between: agro-pastoralist societies, their understanding of cultural landscape and resource use; conservation organisations and their ecological approach to and understanding of sustainable land use; and the human and non-human actors interacting within these arenas of overlapping spaces. The projects reasons here for choosing agro-pastoralist societies confronted with conservation are mainly two-fold:

Firstly, the people and their culture as agro-pastoralists is closely intertwined with land-use, animal husbandry and interaction with the ecologies of their landscape. This entails dealing with predatory animals, whose interests might directly conflict with those of the humans, concerning the overlapping ecological niches. These areas of conflict are of interest for the study, since they offer a point of analysis at a directly measurable interaction point (e.g. the praying on livestock and damaging of property by predators on the one hand, and the encroachment of humans into predator-habitat, the (illegal) hunting of predators perceived as problem animals and the competition over resources overlapping with those needed by predators on the other hand). Additionally, the contexts offer higher probability for comparison between the three research areas. (Homewood 2008)

Secondly, the project focuses on the issue of local perception and local solution crafting to problems of conservation - issues often neglected in research - based on social anthropological findings that local actors have A) a large range of ecological knowledge, which presents itself however differently from western scientific knowledge (Berkes 1999) and B) have developed institutional arrangement in the past to deal with issues of predator-human interaction in practical and also spiritual ways (see Descola 2013, Haller et al. 2009).

Of interest is the fact that actual conservation projects often treat local and indigenous peoples rather as a problem than as a solution, despite the fact that predators all over the world have for centuries been co-existing with local humans and that the threat of extinction only came up between the 19th and the 20th century in a colonial and post-colonial context (Dawson 2016). This reflection, as well as the fact that local people often face what is called green grabbing (loss of territories for local groups because of conservation), leads to the need to scientifically focus on the impact of such top down conservation approaches and to conduct research on local solutions as well as on pitfalls of such initiatives from the perspective of a new institutional and political ecology approach. The project looks at the institutional change in areas where apex predators are problematized and how this change moved from being able to deal with these animals based on local worldviews to state and privatized conservationist control, removing the power from local actors to co-decide on the way human-predator relations shall be shaped, based on their own forms of knowledge. The project also includes the experiment of involving local heterogeneous actors in focus group discussion concerning their ideas on how to deal with apex predators with which they are or were experienced but no longer have a voice. Furthermore, the project addresses the fact that some sites are facing the re-emergence of these animals in contexts where humans previously enacted a predatory function in order to compensate. Switzerland is one of these sites: while wolves were finally extinct in the 20th century (see Manz 2017), hunting took over their function regarding the ‘natural’ limitation of the wild animal population. However, since these animals are internationally targeted for protection, they have changed their value and now include international, national and NGO-actors defining the conservation rules, often without including local actors. Focussing on local views and ideas or already existing solutions based on a bottom-up institution building process (constitutionality) in order to redress this oversight is thus at the core of this research project.
2.1. **State of the Art**

Current literature in social anthropology yields a variety of possible approaches to examine conservation. We propose to focus on three main debates surrounding the latest findings: the political ecology debate as put forth by political economy and poststructuralist scholars; the nature/culture debate as put forth by scholars of ontological and epistemological theory; and the commons debate in regard to institutional management structures relating to sustainable ecological and economic practices as put forth by economic anthropology.

### 2.1.1. Political Ecology Debate and the Post-Human Turn

The discursive distinction of nature as ‘essential’ or ‘pure’ is strongly debated in political ecology, since it negates the influence of ‘anthropogenic factors’, which, arguably, complicate efforts to develop holistic conservation politics and practices (Paulson et al. 2005: 25ff). Historically, initial efforts in the global north led to actual, physical separation of humans from what was thought to be a wilderness or ‘pure’ nature, leading to highly discriminatory intervention methods in these landscapes that were protected (see Robbins 2004; Galvin and Haller 2008). Although strides have been made since this early ‘fortress conservation’ (Brockington 2002) to redress these issues, the conservation landscape, distinguished today by forms of community based conservation (CBC) approaches (Galvin and Haller 2008, Chabwela and Haller 2010), has become a seemingly experimental playground where various international stakeholders have started to intervene using various techniques, whereby they are increasingly critiqued for their importation of problematic neoliberal policies (Fletcher 2010).

Important hereby are the implications discursive legitimacy and politically motivated action have on governance structures of protected areas and environments in general. This is because both national, state-based programs and privatised initiatives are found to be insufficient in many cases due to various shortcomings such as complex land management issues where actual conservation is not producing the intended effect (Brockington et al. 2008, Haller and Galvin 2011) also as outlined by global environmental bodies such as the UN’s Sustainable Development Goals (SDGs), especially SDG 15\(^3\), or other international conservation organisations (Haller et al. 2018 SDG paper). These developments also lead to further enlarging protected areas, interconnecting them and making them part of hegemonial land use planning by the state in the context of what Foucault has labelled ‘biopolitics’ based on the discourse of more space needed for conservation (see Bluwestein and Lund 2018).

One of the main remaining challenges in governance of this extension of space for conservation revolves around issues of integrating human and non-human entities within the same landscapes since conflict over resources between groups of humans as well as with animals both domesticated and non-domesticated are at the forefront of the discussion. From a more classical political ecology stance (see Blaikie and Brookfield 1987) this has to be interpreted as a result of increasing exclusion of local people within conservation contexts, creating more scarcity and increasing the likelihood of conflicts. What has disturbed this process further is the removal of cultural landscapes (see Haller et al. 2013) as a system of governance, which often cannot be managed by the state adequately, leading to the privatization and militarisation of conservation, exacerbating conflicts further (Büscher et al. 2018). The challenge of the vitally important apex-predator debate is that it is discussed in a great asymmetrical power context exhibiting increasing forms of violence. This presents great obstacles to convivial solutions that need to address the land and resource rights causes as well as the loss of trust in the state by local actors (Dowie 2009). Looking at the issue of locally based discussions of ways forward and researching local solutions and the conditions under which these are possible is a central element for the research on alternative

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forms of conservation. This means addressing the issue of so called ‘neoliberal environmentality’ and as well as land, commons and green grabbing (Fletcher 2010, Fairhead et al. 2012) and linking this to the new post-human debate. This debate runs the danger of asserting animals as more important than humans in a context of a greater legitimacy for top down conservation via area extension as demands of especially predators might be placed higher than the ones of local actors. This aspect brings us to the roots of the debate regarding the divide between culture and nature as in this view, this divide is at the basis of the conservation puzzle.

Political Ecology debates on the issue of power when referring to this puzzle. Hereby there are two more classical definitions of power: the political economy power definition on creating marginalization and environmental destruction on the one hand and the constructivist Foucauldian view of nature as a hegemonic construction and discourse on the other. However, there is a third strand that argues that we are dealing with patriarchal power that also does not incorporate the non-human world and that what thus is needed is exactly a feminist and non-human perspective, in order to not only include human beings in the analysis of power. In fact, following a large set of social anthropological empirical literature and theoretical reflections by Descola (2013) many local and indigenous groups include such other ontologies and epistemologies demanded by this third strand of political ecology, which is helpful in order to combine New Institutionalism with the three strands of power definitions in political ecology (i.e. New Institutional Political Ecology (NIPE), see Haller 2019a, b for a summary).

To give more scope to this broad theoretical field, it is worth looking at the theoretical concepts of Animal Turn and Multispecies Ethnography (see Kirksey and Helmreich 2010, Harraway 2003, Ogden et al. 2013, Wenk 2016, Ritvo 2007). Multispecies ethnography allows a deeper understanding of the relationship between humans and large carnivores, helps to understand how attribution, characterization and narratives are developed and shows the extent to which large carnivores have their own agency (Ogden et al. 2013: 16). From this point of view, it can be argued that culture and tradition are not only subject to human influences, but also to animal influences (considering, for example, specific aspects of agro-pastoral societies and herd protection measures, which would not exist without the presence of large predators) (see Wenk 2016: 292). This seems particularly important for the study of agro-pastoral societies. Likewise, with a multispecies-oriented understanding the much-discussed and questionable separation between nature and culture appears even more unsustainable, for, as the above mentioned argumentation shows, the boundary between the sphere of life of the large predator (nature) and that of man (culture) becomes blurred and enters into an existence of mutual influence (see Wenk 2016: 288). The multispecies approach has a central analytical importance for our research when it comes to research question No. 1.2 ‘How are apex predators locally perceived and embedded in the social, religious and economic context?’ (see 2.2 Research questions and hypothesis). The nature/culture debate is also elementary for the theoretical basis of this research and will be discussed in the following chapter.

2.1.2. Nature/ Culture Debate

What has come to the forefront in recent social anthropological discussions surrounding the environment and environmental conservation is the problematization of treating the environment as being divided between the human, e.g. cultural, and the non-human, e.g. natural realm. To this end, anthropological, empirical collections that lead to the understanding of this divide have been provided by several scholars such as Escobar (1999) and Descola (2013) in critiquing the ontological and epistemological bias of this division. This problematization of the human/nature divide or what the west calls ‘nature’ has, by convergent results from various scholars (see
Brockington 2002; Chatty and Colchester 2002; Paulson et al. 2005; West et al. 2006; Galvin and Haller 2008), come to constitute an underlying premise in the debate surrounding political ecology. It has, by now, become quite evident that ‘nature’, also in its categorical distinction, is a historical and therefore social construction, which by its ideological distinction has also led to the political and practical separation between humans and non-humans in protected areas and other spheres (Fairhead and Leach 1996, Escobar 1999, Haller 2007). Descola (2013) argues that while ‘western’ understanding of this distinction may differ from other cultural forms of how the world is viewed, it is evident that humans universally, albeit quite multifariously, form understanding of their environment. This in turn necessitates not only understanding ‘nature’ as an historical production, but also one defined by the ‘anthropology of local knowledge’ (Escobar 1999: 6), whereby ‘nature’ becomes less clear as different ontologies combine environmental elements according to different valuations (Descola 2013). Descola for example indicates that in the Amazon, as in other areas inhabited by local groups attached to the environment, some have an animistic or totemistic rather than a naturalistic ontology. By this, he means that people do not make a separation of nature and culture but perceive what we call ‘nature’ as being inhabited by spiritual beings to which humans have several and often ritual forms of relations (animism) or to which they are related in the same way as they are related to other human kin (totemism). A naturalistic ontology, in contrast, would indicate a western view of fragmentation and mainly economic valorisation of elements within the ecosystem (2013). This is similar to Escobar’s (1999) view of so-called capitalist nature and it has become further evident that conceptions of nature situated within political constructions of the global north are articulated within capitalist valuation (See Emerton 2001; Brockington 2008; Ojeda 2011; Benjaminsen and Bryceson 2012; Fairhead et al. 2012). A similar line of argument is put forward by scholars like Fairhead and Leach (1996), Berkes (1999) and Haller (2007, 2013, 2016, Haller et al. 2013, Galvin and Haller 2008). Linking to the perspectives of Descola and Escobar, these scholars highlight that concerning local views in the global south there is a current misreading of landscapes as nature while in actuality these have been transformed into cultural landscape ecosystems for centuries (such as forests, floodplain ecosystems, savannahs and mountain areas etc.). Colonial and post-colonial ideologies labelled these as pure natures free of humans while humans not only have transformed these landscapes but also have the view that they are not the only ones living in these areas otherwise also inhabited by spiritual beings and ancestors with whom humans must maintain a positive relationship via rituals. Rather than perceiving this as a natural environment (German ‘Umwelt’) it might rather translate as ‘co-world’ (or German ‘Mitwelt’), which, however, can be transformed in a more extensive way (i.e. combination of grass cover in a savannah pastures) to a completely transformed forest with a high variety of planted trees, protective shrubs and food crops or mountain areas covered by terraces. (Haller 2007: 2013).

One central element of these landscape ecosystems is the often not visible institutional context: Many of these areas are owned collectively by local communities and are managed based on common property institutions, which constitute a central element for resource management and also the interrelation with predators.

2.1.3. Commons Debate, Institutional Change and Constitutionality

Often protected landscapes are situated within complex land-rights issues (see Galvin and Haller 2008, Brockington et al. 2008), especially in cases where common pool resources (CPRs) such as pastures, forests, water and wildlife were sustainably managed under common property institutions but might lead to overuse of CPRs under institutional change with pluralistic and not robust institutional foundations (see the debate by Ostrom 1990, Acheson 1996, Agrawal 2002). This is especially true when common property systems are changed into state property or private property, also for protected areas (Chabwela and Haller 2010, Haller 2013, Büscher et al. 2014):
Fortress or top down participatory conservation leads to alienation of CPRs, which push local actors to lose sense of ownership and to an incentive to overuse CPRs. More importantly, however, states in the Global South often lack the financial means to monitor and sanction their institutions and therefore this leads to an open access situation prone to overuse, especially by national actors as citizens, claiming the resource as state property (leading to the paradox of the state being present or absent at the same time) (Haller 2010). Regarding apex predators the situation is related. Apex predators have been part of the pre-colonial resource management context; they were also part of the predator-prey system as humans were and are as well. So, these CPRs are not only used by humans but also by apex predators. While pre-colonial settings, for example in Africa, Latin America and Asia, indicate a not harmonious but locally regulated co-existence between predators and humans, conservation measures often contributed to human wildlife conflicts because predators moved out of protected areas (such as lions in Africa or tigers in Asia) and entered into the smaller remaining areas used by humans, whose livestock or loved ones are attacked without the option to defend themselves (see Galvin and Haller 2008, Mbeyale 2010, Meroka 2010). Today, as most predators are under centralized international protection, these conflicts remain, as does the damage to livestock without or at least not adequate compensation, as well as fear regarding safety (Hiedanpää et al. 2016, Skogen et al. 2017, Zangger 2018).

In this context, even in Europe, the moving of apex predators into human controlled areas can lead to the abandonment and degradation of commonly used pastures, as the case study of Törbel (Switzerland) shows (Zangger 2018). While in some of the areas proposed to be studied in this project there is a continued existence of predators, in most European areas, apex predators were ‘made extinct’ by state demand in the 19th century. In the 21st century, however, apex predators are now institutionally labelled as a protected species to be tolerated by law and thus a "new" phenomenon, as it is the case in Switzerland (Manz 2017 and Berner Konvention 1979). Research has shown that in situations of re-introduction or re-emergence, robust and participatory institutions have to be developed and thus there is an evident need of adapting former institutions and establishing an institutional process to deal with the new challenges. But also, in areas where apex predators have been living permanently there is a need to adapt institutional setting to the changing needs of the local people, especially in CBC environments, as found in East African models of conservation, where the goal is to return to an equilibrium within human integrated ecosystems (German et al. 2017). While Ostrom’s (1990) design principles could be used to assess whether local institutions manage resources and resource areas sustainably, this does not pay attention to historical, structural and power dynamics of actors involved. Therefore, the New Institutionalist approach of Jean Ensminger (1992) and her model of institutional change helps to understand the historic processes by which apex predators influence the relative prices of a socio-ecological systems: The new legal environment, increasing pressure on resources by land and resource grabbing dynamics and new technologies of more intensive land use, raise the relative price for protected areas and also flagship predators (for conservation agencies and for tourism) and reduce the bargaining power of local actors and their common property institutions radically, which are transformed into state property institutions, which are again legitimated by the discourse of expansion of commercial land use reducing predator habitats. However, as people have lost access to land and CPRs with increasing conservation on their areas, predators are competing more intensively with what is left for marginalised people. Furthermore, this process is leading to an unfair distribution of gains from conservation and tourism for the profit of foreign companies and

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4 Formal institutions can be understood in terms of established state institutions (executive, legislative and judicial), there can also be informal institutions found in more localised arrangements such as ‘customary law’. Furthermore, individuals’ and groups’ lives and human actions and interactions are structured by institutions, which incorporate rules and regulations, laws, constraints, norms and values, as a whole making up the ‘rules of the game’, influencing economic activities, collective action and sustainable resource use (Haller 2007: 29).
NGOs, externalizes costs on local people and reduces their access to their former common property. This process again undermines their willingness to participate in the protection of predators (see Galvin and Haller 2008, Haller 2010). Therefore, the claim for convivial conservation is not an easy undertaking, given the structural alienation of land that has been called green grabbing and in which context local actors do not seem to be involved at all.

We thus propose to use approaches that stem from the study of (successful) bottom-up institution building processes and make them fruitful for bringing in a more participatory approach we call constitutionality (Haller et al. 2016). This approach argues that there is a need for another form of examination of institutional change, enabling analysis of a process of bottom-up institution-building. The argument is that participatory approaches as well as decentralization attempts to sustainable development and governance have earned a range of critique. Therefore, the study proposes an institution-building process termed constitutionality, highlighting natural resource management from below, as it analyses ‘community members’ views on participation, the strategies they employ in negotiating such initiatives, and the extent to which they can develop a related sense of ownership in the institution-building process for CPR management’ (Haller et al 2016: 69). Based on several case studies, the study identified six preconditions necessary in the formation of institutions that have a potential for long-term sustainable use. These preconditions are: (a) emic perception of need of new institutions, (b) participatory processes addressing power asymmetries, (c) pre-existing institutions, (d) outside catalysing agents (fair platform), (e) recognition of local knowledge, and (f) higher-level state recognition’ (Haller et al. 2016: 69).

The concept of constitutionality seems evident in the contexts where apex predators influence local resource management and livestock breeding: while in the case study of Törbel the state of Switzerland owes a complex institutional setting which doesn’t fit perfectly, the local people are in need to change and adapt their institutions and also feel a sense of ownership in the institution building process (Zangger 2018). The research done by Zangger forms at the same time our State of the Art as it is the most important single case to date for the general discussion on robust common property institutions by Netting (1981) used by Ostrom for her Nobel prize winning publication (1990), and because the case study of Törbel will be our point of reference for the whole research project. Furthermore, there hasn’t been any other research, except this one, applying the concepts of Constitutionality (Haller 2016 et al.) and Ensminger’s institutional change (1992) to the subject of apex predator conservation.

We are aware of the ongoing SNSF-funded research currently being carried out at the ISEK in Zurich called “Wölfe: Wissen und Praxis. Ethnographien zur Wiederkehr der Wölfe in der Schweiz” (for further reading see also Heinzer 2016, Heinzer and Frank 2019a, Heinzer and Frank 2019b, Heinzer et al. 2019, Frank 2020a (forthcoming), Frank 2020b (forthcoming)). The study conducted by Nikolaus Heinzer and Elisa Frank deals with the wolf in Switzerland as a whole and will produce various ethnographies on different topics. The theoretical basis includes other concepts as our planned research, which is why Zangger’s master’s thesis is given here as the state of research. So far, there is no other research in the Swiss context that combines the wolf issue with concepts of the Commons debate, institutional change and the constitutionality approach.

Zangger’s research (2018) shows how such a bottom-up institution building process can look like in the context of convivial constitutionality and has inspired this research project greatly: By the end of the 20th century Switzerland had no more wolves as a consequence of a state induced extinction of the predators. It was not until 1995 that the first wolves came back from Italy and settled down permanently, respectively created the first wolf pack in 2012 in the Calanda Region (Manz 2017: 13, Kora 2019). Therefore, for the last five years, Törbel has faced several challenges concerning the increasing wolf presence and the settling down of a wolf pack in 2016.
This led to a significant increase of wolf attacks and subsequent killing of sheep and goats (Kora 2017a). Besides wolves, Törbel is also home to a high number of the traditional Valais black nose sheep: a breed which stands for the local forming of identity and prestige among the farmers and holds high importance for the village bonding and of course the landscape care (Zangger 2018: 46, Niederer 1993). The farmers of Törbel work mostly fulltime in industrial companies in the valley (Lerjen 1998) and therefore have little spare time for farming activities and especially for the implementation of herd protection measures. This is one point of conflict concerning the dealing with wolves. Another point of conflict concerns the commonly used Moosalp, where the local sheep, goats and cows spend the summer grazing. Subsequently it wasn’t possible any more to leave the sheep and goats alone on the summer pastures - for this reason the first shepherd project was launched in 2015 in collaboration with the neighbour community and the local herd protection officer. Finally, a woman was hired with a sheep dog and although she had experience in shepherding, she lacked experience concerning sheep and wolves (Zangger 2018: 35ff, 55ff). During the project implementation there were various disagreements between the local farmers and the herd protection officer regarding the implementation of herd protection measures (Night pen and herd protection dogs). After many heavy attacks by wolves leading to high losses of 10% of the herd, the shepherd project was ended before the end of the Alpine season (Zangger 2018: 55ff). After this, frustrated local farmers refused to bring their animals to the pasture again, which was then left unused and which led to a rapid lowering of the quality of the pasture due to increased shrub growth. Individual strategies of bringing animals elsewhere or putting them in the village’s pastures and thereby overusing them was no solution in the long run (Zangger 2018: 64ff).

In summer 2017 the community decided to launch another shepherd project, this time without the local herd protection officers but instead with a farmer from the neighbouring village who provided the idea of a new project: a wolf-experienced shepherd, from a country with a long existing wolf presence, should be hired. The decision finally fell on a young Romanian, who brought his own Carpathian herd protection dogs and cared for the installation of the night pen (Zangger 2018: 76). While the first shepherd project involved around 450 sheep, only about 64 sheep could be raised in the second. This did not detract from the success of the second project: despite three wolf attacks, not a single sheep was injured (Zangger 2018: 76ff). Despite the positive end result, however, the project has not been continued since then. The reasons lie within several caveats by the local sheep farmer concerning: the critical attitude towards the night pen and herd protection dogs, fear of sheep losses and loss of confidence towards state institutions and organisations, financial questions, high amount of work, questions of infrastructure on the alp, and finally because of the high social pressure by other sheep farmers and the tendency of wolf opponents to demonize herd protection projects (Zangger 2018: 81ff, 59).

The presented case study of Törbel is an example for bottom-up institution building processes (Haller et al. 2016) whose outcome, however, is uncertain and not yet fixed. But to summarize: the community of Törbel including the mayor and the local sheep farmers felt the need to change their institutions (emic perception of need of new institutions and pre-existing institutions) concerning the summer grazing on the Moosalp. They realized that the previous institutions were insufficient as they don’t withstand the wolf’s presence. Further, the second shepherd project enabled the complete participatory collaboration of the local sheep farmers and made the implementation of herd protection measures possible according to their own ideas (participatory processes addressing power asymmetries and recognition of local knowledge). The farmer from the neighbouring village, who had the idea with the wolf-experienced shepherd, acted as a so-called “outside catalysing agent” and brought important and innovative inputs. What remains uncertain is how far the state would have recognized or supported the adapted
institutions (higher-level state recognition) (Haller et al. 2016: 69). Given this intriguing case, it seems important to find other examples of bottom-up institution building processes concerning the dealing with apex-predators and to compare them. This enables researchers to do a comparison and to see what has worked in one case and why it didn’t work in another and finally to draw conclusions and new insights.

While the CON-VIVA project also aims to find new ways for conservation to ‘enable humans to sustainably 'live with' (con-vivire) other species and ecosystems’ it doesn’t directly investigate the perceptions of conviviality by local communities, potential processes of bottom-up institution building to make conviviality possible and the necessary local knowledge systems as well as anticipating power relations and institutional changes in an area (see Haller et al eds. 2019). This is where we see our contribution. We suggest that there are already manifold ideas on how to deal sustainably with apex predators present in many contexts. Hence it is not a question of how to get new conservation strategies introduced, but to learn from what exists already locally or what local ideas and perceptions of the issue exist.

2.2. Research questions and hypothesis

1. How is the socio-ecological system of every case study structured?

   1.1. How are apex predators embedded and legitimated within the local socio-ecological system of agro-pastoralist societies?

   1.2. How are apex predators locally perceived and embedded in the social, religious and economic context?

   1.3. Can humans and their (hunting)-institutions effectively compensate for non-present or underrepresented apex predators or is a combination of human hunters and predators needed for a diverse cultural landscape ecosystem?

2. How does value attribution to apex predators work and how does this change the local dealing practices and the international conservation practices?

3. Which were the key drivers that lead to endanger these key species?

   3.1. When and why did the endangerment of apex predators happen?

   3.2. Who is responsible for this process and what has changed since then?

   3.3. Is there any orally transmitted knowledge on the local level that helps to understand the processes of endangering and human-predator conflicts? How would local actors conceptualize possible solutions from their perspectives?

Hypothesis

   a) We suppose that common property institutions are the basis for sustainable management methods to connect the natural and cultural landscapes if newly adapted.

   b) We assume that there are already manifold ideas, based on local knowledge systems, on how to deal with challenges in managing interaction with apex predators that can contribute to strategies for convivial conservation. However, these need to be rediscovered and locally discussed so that a sense of ownership in the institution building process takes place. In order to let such exchange happen in a participatory way, local experimental discussions are needed.

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c) We suppose that ideas for novel means of generating financial resources through non-market transactions are already present in many cases and can be scaled up to support effective conservation. Existing payment schemes in many places, including payment for environmental services and cash transfer programmes, often function as de facto redistribution mechanisms despite their framing as market-based instruments. We suspect that these or similar schemes operate in our research sites as well but however these will not suffice as long as local views on how to cohabit with predators are not addressed and local knowledge, power relations and potential green grabbing issues are not addressed.

In order to address the research questions and the hypothesis, data on the following information shall be collected by the PhD candidates (appreciations give information on methods to be used to gather data, see below):

- Local religious and non-religious views and local knowledge on predators and their relationship between predators and humans, embedded view of cultural landscape ecosystems and the relation of humans, predators with the other elements of this system from a local perspective (L, B, OI, OH, FD, CA)
- Pre-colonial customary institutions regulating access to land and related common pool resources for agro-pastoralism (L, OI, OH, PO, B)
- Local political and economic systems related to the ecological but as well colonial and post-colonial political economy conditions (incorporation in the local state and in a global market system, specifically expansion of agricultural frontier, relation state – agro-pastoralism, heterogeneity within groups, position of the area within the national regional and global economic system (i.e. for conservation or for other market-oriented production (agriculture, mining, infrastructure etc.)) (L, B, OI, FD, PO)
- Transformations of general and tenure systems/common property institutions based on changes in relative prices in an area that in turn are again influenced by external factors (social, environmental, political-legal, economic as well as demographic and technological, see Ensminger model of institutional change). This includes collecting data on the institutional change regarding ownership and governance of areas and predators from pre-colonial times until now (L, SI, B),
- Impact of a specific conservation programme on the already transformed human-animal constellation and its consequences for the livelihoods, food security, and human-wildlife conflict issues as well as other issues relevant) (FD, NI, PO)
- Coping strategies of local groups and discussion of alternative institutions for regulation human-predator relations (PO, CA, EFR, OI, OH, FD)

2.3. Methods

In this project we prefer an inductive approach of research, this means we will prefer methods that do not promote existing assumptions but allow for a thoroughly unbiased view. Therefore, we will refer to different social anthropological methods such as

1) Participant Observation (PO): allows the researcher to take part in the everyday life and activities, presupposes the learning of the local language and helps to investigate discourses, perceptions, narratives and the conversation culture. Further the PO enables the formation of relationships between the researcher and his informants/local communities and promotes closeness and trust (Hauser Schäublin 2008: 37ff)

2) Open Interviews (OI): carried out with different informers (e.g. Members of Interest groups, state actors/officials, NGO’s) (Johnson et al. 2012).
3) Focus group discussions (FD): to create a basis for discussion in order to evaluate local knowledge systems referring to a specific topic (e.g. dealing of apex predators at local level) (ibid.).

4) Literature research (L): including scientific research about the topic, grey literature (Reports, NGO material etc.), archive research, social media activities etc. (Johnson et al. 2012).

5) Oral History/ Biographies and narrative interviews (OH/ B/ NI): enables the insight into (the construction and development) oral history combined with the individual narratives and biographies of an informant. This appears to be important for a holistic approach (Johnson et al. 2012 and Schlehe 2008).

6) Multi-sited ethnography: since no region in the world can’t be seen as isolated or untouched by the rest of the global community, we need to take into account the globally transmitted influences, also by way of value-chain analysis. Multi-sited ethnography allows the researcher to follow certain topics across national borders (e.g. conservation practices and value attribution) and to draw conclusions about their origins (Marcus 1995).

7) Constitutionality Approach (CA): as a guideline for bottom-up institution building processes (Haller et al. 2016). This means focussing on using all other methods in order to determine what happened to the process, but also, if constitutionality is not happening, to generate a platform for local discussions.

8) A last consideration should be made for the use of an ethnographic futures research (EFR) method at least to the extent of exploring alternative scenarios together with a local platform. This relates well to the constitutionality approach. Such a method, as described by Teclt (1995) for interview techniques, but also more generally by Steinmüller (1997), is well suited for exploring possible institutional alternatives with a heterogeneous group participating in the discussion on scenario-based focus group discussions and interviews (1997: 45). As Wallman (1992: 2-3) argues, an approach including ideas or visions about the future rather than offer any predictions, does lend itself for exploring present ideas and scenarios about the future on the local level and how they may influence political decisions and policy. These in turn can be compared to other ideas about the future across the spectrum of current state of the art conservation strategies, while also allowing for cross-comparison between the three case studies.

2.4. State of own Research

Prof. Dr. Tobias Haller, University of Bern, Institute of Social Anthropology

Prof. Dr. Tobias Haller holds a PhD in Social Anthropology, University of Zurich, and a Habilitation, and is Professor at the University of Bern. He has specialized in economic, ecological and political anthropology and works on institutional theories in anthropology and related disciplines. He did research on food production and risk-coping strategies in African peasant communities with a focus on climate change and adaptation to market forces (Cameroun, PhD study).

Further comparative research was on common pool resource management and institutional change of common property in African Floodplain Areas (the African Floodplain Wetlands Project (AFWeP) with 6 case studies). His own research in this study was in the Kafue Flats, Zambia, where he studied institutional change, the management of fisheries, pasture and wildlife, and problems regarding conservation policies. Prof. Haller has developed a socio-historical institutional analysis framework based on New Institutionalism in Social Anthropology with a focus on institutional change as influenced by power dynamics and ideology. He has used this in several comparative studies on common pool resource management, conservation and Large-Scale Land Acquisition research. In 2011 he received the Environmental Research Award from the University of Bern for his work on institutional change of common pool resource management and land tenure.
He has led several research projects funded by the SNSF and the SDC in the NCCR North South on participatory conservation and sustainable coffee production. His latest research projects focused on the issue of land grabbing and gender in Africa (disciplinary SNSF project 2014-18), on Food Sustainability (R4D with the Centre for Development and Environment (CDE) 2015-2021) and institutional change in the Swiss Commons Systems (SNSF interdisciplinary project SCALES (Sustainable Commons Adaptations to Landscape Ecosystems in Switzerland).

Since 2012 he has been developing a new approach on participatory bottom-up institution building based on his research in Zambia on the development of by-laws in the fisheries and other research on the development of local institutions for common pool resource management. This constitutionality approach, which is also used for the presented project, was further developed by him and his colleagues in several papers (Haller et al. 2016, 2018) and a special section for the journal Human Ecology (Haller et al. 2018). Constitutionality and the critical research on the problems of participatory community conservation are of core interest to the main applicant of this project and his experience in the lead of several comparative projects on conservation and common pool resource management makes this application a logical continuation of his research. It combines present core issues in conservation discourses and the study of local perceptions and potential bottom-up institution building, which is missing in other research and as well in the partner project Convivial Conservation (see below). In addition, he is interested in participatory and collaborative research designs and interaction with local communities, which is vital for Convivial Constitutionality. This approach was further developed by him in a recent edited volume on The Commons in a Glocal World (Haller et al. eds 2019) in a concept paper developing a New Institutional Political Ecology (NIPE) theoretical framework that addresses issues of power relations in the interrelation between external economic pressures and internal local context selection and legitimation of resource management and conservation as well as newer work on constitutionality and identity (see Eid 2019, Lätsch 2019, Landolt 2019, same volume). This volume and the referred papers enable to discuss contexts in which convivial constitutionality can take place. Lastly and most recently, he co-edited a volume with Claudia Zingerli on collaborative research processes in African environments called ‘Towards Shared Research’ (Haller and Zingerli eds 2020).

3. Detailed Research Plan

3.1. Team

Table 1 gives an overview of the study team, the research fields and their main subjects. The Project will include case studies from three countries with the aim to compare similar contexts (agro-pastoralist societies and apex predators). In order to compare the case studies, not only will the researchers employ the same methods and similar research questions, but the case studies will be compared to the case study of Törbel (Switzerland) in order to evaluate the happenings comparatively as well as the respective country of every PhD-Candidate. Furthermore, this project is working collaboratively with the CON-VIVA project to provide a thematic, scientific exchange and to create synergies. The CON-VIVA project will also provide the third PhD candidate, who will conduct research in Colombia, the possibility for exchange with other researchers in the country.
3.2. Collaboration

As previously mentioned, this proposed project is very closely connected to another current project ‘Towards Convivial Conservation: Governing Human-Wildlife Relations in the Anthropocene’ (CON-VIVA), funded by the Belmont Forum and Northface. A main collaborator on the project proposed here, Prof. Dr. Fletcher of Wageningen University, is one of the project leaders of CON-VIVA and so will provide a direct link between the two projects. This proposed project complements CON-VIVA by focusing on the local, bottom-up initiatives developed to co-exist with wild animals while CON-VIVA focuses on more state-level and political economic dynamics. In order to capitalize on this synergy, if this project is funded the two initiatives will run side by side and collaborate on dissemination of results and policy recommendations. Specifically, the CON-VIVA and Constitutionality teams will collaborate on case studies of the lion, on the wolf and on the jaguar. This includes cooperation on development of an edited volume exploring the issues central to both projects as well as joint organizing and management of a major international conference already planned for the end of CON-VIVA in fall 2021. Moreover, the two projects will collaborate to plan for joint follow-up research after the two projects have concluded to continue the convivial work developed in this current research phase.

Furthermore, the project will collaborate closely with the new Wyss Academy for Nature (Prof. Peter Messerli), that is interested in pioneering research regarding local innovations for conservation of key species (lion and jaguar) and with the Centre for Development and Environment that shares a genuine general interest in their governance cluster regarding issues of institutions for the management of natural resources and conservation. Furthermore, another Swiss collaboration is being developed with the new established Uri Institute for Alpine Cultures (Uner Institut Kulturen der Alpen) regarding the wolf. Last but not least we will also work and collaborate closely with the researchers from the SNSF-Project ‘Wölfe: Wissen und Praxis’ at the University of Zurich and with local anthropologists which are doing or have already done important research on the topic (for example with Dr. Monica Vasile and her research project ‘Romanian Mountain Commons Project’6 in Romania, and Gérard Verschoor and his contacts in Colombia; in Kenya we will strongly collaborate with the Centre for Development and Environment (CDE), University of Bern, Switzerland and its Kenyan partners mainly Centre for Training and Integrated Research in ASLA Development (CETRAD) and the Institute of Geography, University of Nairobi, Kenya).

6 see: https://romaniacommons.wixsite.com/project/people_28.03.2020.
3.3. Case studies

3.3.1. Samuel Weissman, PhD Candidate, Institute of Social Anthropology, University of Bern

i) Research area

Lion in Kenya

In 2015 the incident of a lion (Panthera leo) pride being poisoned in Kenya made headlines worldwide. The case involved a well-known lion pride and invoked an international debate surrounding human-lion conflicts where many narratives collided over who or what is to blame and how this might be solved. It is by no means a singular event that took place in the Maasai Mara National Reserve, and incidents involving killing of lions or other wildlife conflicting with humans are frequent (see Gadd 2005; Hazzah et al. 2014). While many influencing factors are identified with the decline of lion populations across African countries - such as habitat loss, depletion of prey, retaliatory killing to protect humans and livestock, insufficiently managed sport hunting, and demand for ‘traditional’ medicines (Bauer et al. 2015) - effective management strategies addressing the issues are manifold but haven’t yet succeeded in halting lion population decline or sustainably influenced mitigation of human-lion conflict (Hazzah et al. 2014).

As Goldman, Roque de Pinho, and Perry (2013) argue on the basis of ethnographic research done in Kenya and Tanzania, often projects to mitigate human-predator conflicts involving the lion are simplified by conservation authorities, linking them either to ‘cultural’ or ‘retaliatory’ behaviour. The authors criticise the methods currently employed, even by progressive projects, to generate improved relations between locals and lions, which in this case are mainly concerning Maasai, as their rangelands have been greatly reduced through the colonial and post-colonial process of common land and green grabbing and are now often in close proximity to or overlapping with protected areas. While there are behavioural traits linked to ‘prestige’ and retaliation embedded within Maasai institutions, so-called ‘lion-hunting’ is not just a means for gaining prestige or for retaliating after loss of cattle, it also serves the function of deterring lions from feeding on cattle, pre-emptively taking action before lions can get habituated to people or livestock (2013: 497-498). The authors also argue that additional, uncharacteristic killings can be linked to political statements, where government and/or private regulations concerning conservation are increasing pressure on local livelihoods while not acknowledging local needs and rights (2013: 498). Notable, hereby, is that poisoning of lions does not fit within either category and is not accepted as legitimate killing even by Maasai institutions. This would suggest an even stronger reaction to rules and regulations by formal government laws being protested, as they are secretive and considered ‘illegal’ by both parties (2013: 491).

Considering the conservation history in Kenya being highly militarized and laws highly restrictive of hunting, people with lesser and least political influence and bargaining power positions on the level of policy making are vulnerable to several processes leading to disownment of rights, land and mobility, as in the case of pastoral, nomadic people (German et al. 2017). Studies conducted on the strategy initiated throughout the northern rangelands in Kenya have shown that participatory conservation with communities mainly practicing livestock rearing as their main source of income are currently under threat of green grabbing due to the external control over the regulations of former rangelands where land rights and resource use is contested by various stakeholders (2017). Additional ethnographic research undertaken in Kenya has also shown that some contestation over land and resource-use go back as far as colonial intervention and have led to issues over wildlife to the present day (Weissman 2017, 2019).
It is therefore proposed that research should be aimed at addressing issues where local institutions can be or have been adapted to support bottom-up institution building, as these are most likely linked to local knowledge systems that have a history and well-founded practice in dealing with their surroundings. Masai, for instance, do not consider the lion to be solely a problem animal, but see it as part of their environment and primarily use hunting to manage predation on their livestock (Goldman, Roque de Pinho, and Perry 2013). This perspective then makes predator management more relatable to other cases, such as dealing with wolves in Switzerland.

Since this case study aims to view the issues from an institutional perspective, much can be learned from comparing it to the other cases. Kenya, for instance, has very strict laws pertaining to the security of wildlife. Hunting is illegal and poaching is severely punished (See ‘The Wildlife Management and Conservation Act’ 2013: 1296-1310)\(^7\). This context, therefore, presents as very challenging to agro-pastoralists having to deal with large predators, such as Lions for instance. The Lion presents as similar to the Swiss case where the wolf is strictly protected under federal law and therefore offers similar challenges for agro-pastoralists from a legal standpoint as well as in everyday practical situations. They are both animals that can have a high impact on livestock and can both be understood as formidable predators that stand under threat of human retribution. It will, however, be interesting to explore the ways in which people have learnt to deal with conflict situations in a positive manner for both human and predator interests and to ask whether any measures are or were successfully institutionalised.

Kenya is therefore a well-suited country for this case-study, since conservation has a long history and the strategies by protected areas are regarded as well-established institutions. Furthermore, the choice also falls to Kenya, since the University of Bern, through the Centre for Development and Environment, has long standing relations with the CETRAD institute in Nanyuki and the University of Nairobi. Additionally, since the CON-VIVA project is researching similar aspects of human-wildlife conflicts with lions in Tanzania, the case in Kenya can offer additional input and exchange on a similar context.

The project supervisor views this candidate as an excellent choice for the case in Kenya, since he conducted his research in Kenya and wrote his master thesis on the institutional change of pastoralist societies in the context of conservation, for which he received the highest distinction upon graduation in 2017. The candidate not only has the necessary language skills (Kiswahili and Ma-Language) but also the required experience for further research in this context. Additionally, in 2018, he published his first paper in the edited volume ‘The Commons in a Glocal World: Global Connections and Local Responses’ (Haller et al. 2019), following the IASCs regional conference in Bern in 2016, where he led a panel on the topic of conservation in the global south and their connections to zoological organisations in the global north\(^8\).

\(^{ii)}\) Specific research question of the case

A) Emic perspective: How are nature and apex predators (i.e. the Lion) locally perceived and how are apex predators embedded in the specific socio-cultural, socio-economic and socio-religious context?

B) Which local knowledge systems and institutions exist and how have these changed over time?

1) Etic perspective: How do global ideologies concerning conservation, nature and wildlife impact the local perceptions of these as well as the strategies of local actors

2) Are there local initiatives of new institutions or if not, how would local stakeholders shape such institutions if they were allowed to (experimental discussion)?

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3.3.2. Ariane Zangger, PhD Candidate, Institute of Social Anthropology, University of Bern

i) Research area

Wolf in Romania

After the ending of the socialist era by the fall of Ceausescu in 1989, Romania is considered as a constitutional democracy. The country covers an area of 238,391 km² and inhabits nearly half of the Carpathian Mountains (Anuarul statistic al romaniei 2017: 3). Our study will focus on the south-eastern part of the Romanian Carpathian Mountains, which are known for their rich biodiversity, especially for their Large Carnivore Population (e.g. Wolf, Lynx and Bear). It is generally assumed that the Carpathians harbour 30°% of the European wolf population (Young et al. 2007: 547). Promberger and Mertens (2001) value the Romanian Carpathian Mountains as the ‘only place in Europe outside Russia where healthy populations of all three large carnivore species live’ (2001: 173). Nearly ⅓ of the Romanians work in the agricultural sector (CIA.gov 2019, Promberger and Mertens 2001: 173) whereas most farmers own sheep and goats (Anuarul statistic al romaniei 2017). In contrast to Switzerland, there is a traditional, still lively pastoral culture in Romania, where large carnivores (or apex-predators) have always been present (Promberger and Mertens 2001: 174). Therefore, we suggest that the Romanian farmers/shepherds own other narratives, ideologies, protection strategies and political ways of thinking than the Swiss farmers and organize themselves and their livestock in a different manner.

There has been research in the Romanian Carpathian Mountains on the topic of commons, institutions and conservation by a Social Anthropologist called Monica Vasile (2008, 2015, 2018 and Bauer et al. 2018) and on herd protection (Promberger and Mertens 2001). However, to our knowledge, there is no research unifying the combination of these issues in the way that is proposed here. The decision to choose Romania as a field of research in Europe was based on the already very broad range of social science, wildlife management research or human dimension (in wildlife biology) research about wolves or bears in the Nordic and Western countries of Europe (cf. Skogen et al. 2008, Skogen et al. 2017, Skogen 2017, Hiedanpää et al. 2016, Hiedanpää 2016, Pellikka and Hiedanpää 2017, Sandström et al. 2015, Bennett et al. 2016, Hovardas et al. 2017, Hovardas 2018, Wieczorkowska 2018, conviva-research.com, see anthropological research project at the university of Würzburg, and more). Less social science publications are known in or about the Eastern European countries (Trajce 2016, Hovardas et al. 2017). For this reason, and on the basis of the arguments already mentioned concerning wolf population density and the traditional pastoralism associated with it, the choice falls on Romania.

Doing a comparison between Romania and Switzerland seems in many ways interesting: First, while ethnographic research on the wolf already exists in Switzerland (see SNSF-funded project ‘Wölfe: Wissen und Praxis. Ethnographien zur Wiederkehr der Wölfe in der Schweiz’, and for further reading see also Heinzer 2016, Heinzer and Frank 2019a, Heinzner and Frank 2019b, Heinzer et al. 2019, Frank 2020a (forthcoming), Frank 2020b (forthcoming), Imoberdorf 2012), little research has been done on the interplay between conservation, commons/institutionalism and apex predators in both countries (for the topic of rewilding Bisons in Romania see Vasile 2018). Second, while Switzerland owns a set of clearly defined rules and regulations concerning the handling of the wolf and operates with a complex system of subsidies, for example the recovery of compensation payments is more complicated for the Romanian farmer, including a strict documentation requirement and according to some sources a lot of initiative by the farmers themselves. Third, Romania has great problems with corruption, labour migration and a generally pessimistic attitude towards the future of the Romanian state among

9 Interview with Romanian Shepherd 18.03.2019.
the young Romanians (Vasile 2015, Mihailescu 2017) and thus faces state-internal challenges that Switzerland
does not have. Added to this is the massively different history of the state, concerning socialism. Finally, in both
countries sheep husbandry and agricultural work appears as an identity-forming factor, but with different
understandings of the real ‘traditional pastoral work’.

The project supervisor views this candidate as an excellent choice for the case in Romania, since she conducted
her already mentioned research in Törbel (Switzerland) and wrote her master thesis on the conflicts, the local
participation and the institutional change in dealing with large carnivores, for which she received the highest
distinction upon graduation in 2018. The candidate not only has the necessary language skills (Romanian) for the
proposed research here, but also the required experience for further research in this context. Furthermore, the
candidate has an already existing and broad network within the ‘Wolf Researchers’ in Switzerland and other
countries, as she did an internship at KORA (Carnivore ecology and wildlife management - Switzerland) after her
master’s degree and participated at the conference ‘Encounters with Wolves. Dynamics and Futures’ in Bautzen
(Germany).

ii) Specific research questions of the case

1. Emic perspective: How are nature and apex predators (Wolf) locally perceived and how are apex
   predators embedded in the specific socio-cultural, socio-economic and socio-religious context?
   1.1 Which local knowledge systems exist and how have these changed over time?
2. Etic perspective: How do global ideologies concerning conservation, nature and wildlife impact the local
   perceptions of these?
3. How does the interplay between different actors and the institutional setting work, concerning the
   management of agricultural activities, conservation and wildlife resp. apex predators, in the specific field
   research areas? Are there local ideas on cohabitation or what are local people’s views on how to craft
   institutions to deal with the issue?

3.3.3. Third PhD Candidate (N.N.)

The third PhD Candidate, who still needs to be recruited, will focus on the Jaguar in Colombia. We will give some
suggestions of the potential field research area and the research questions. But they are not carved in stone: In the
end, the third PhD Candidate will decide on their research questions and field research areas. When selecting the
third PhD candidate, the focus is on local language skills (Spanish and others), good previous knowledge of the
region under investigation and excellent knowledge of social anthropological methods.

i) Research area

Jaguar in Colombia

The jaguar (Panthera onca) is considered highly endangered throughout South America, and particularly within
Colombia (Boron et al. 2018). Within the country, conservation authorities are working to promote jaguar
protection in the face of resistance at multiple levels, from the federal government to local communities
surrounding protected areas in which jaguars are sustained. Yet this work is hampered by the fact that very little
is known about exactly how many jaguars remain in the country, the extent of their range, or particularly how they
are able to navigate fragmented landscapes comprising agricultural parcels as well as protected areas (Olsoy et al.
2016; Boron et al. 2019). This dearth of ecological knowledge is complemented by a near total absence of
knowledge concerning how local people living within jaguar migration routes negotiate relations with the animals.
Research in other places demonstrates that jaguars typically migrate through vast territories and are often able to
move unseen through human-dominated spaces (Olsoy et al. 2016). Yet in this movement they often come into
contact with people and are considered particularly problematic due to their frequent predation on livestock. Yet, notwithstanding this conflict, people and jaguars have successfully co-existed in Colombia for centuries, and therefore the behaviours and practices developed by both species to manage this co-existence have to be documented and analysed. This is the reason why we selected the jaguar as third key species animal because of similar aspects of migration, predation on domestic animals and long-term local knowledge regarding the behaviour of the animal. There is little research done in Colombia regarding this topic and we will collaborate with Gérard Verschoor from University of Wageningen, The Netherlands, and profit from his link to the Universidad de los Andes, Bogota and local research groups.

This context is particularly compelling as the country has just emerged from several decades of protracted violent conflict the end of which is still being negotiated and established. Hence the national government is very much focused on this process and has little attention or resources left to invest in wildlife conservation. Consequently, local communities have been left to develop their own bottom-up mechanisms for negotiating relationships with wildlife living in and passing through their communities. Whether this relative lack of state oversight means that communities will take advantage of this opportunity to eliminate remaining wildlife, or whether they choose instead to reinforce and expand existing practices of co-existence, is thus a vital question with respect to the future of conservation in the country. This component of the project will address these issues by investigating to what extent conservationists and local community members work (together or independently) to develop means to live with jaguars and their impacts on local livelihoods in the absence of significant support and intervention by a national government preoccupied with ongoing reconstruction efforts in the wake of the protracted violent conflict engulfing the country for the past several decades. Thus, this case provides a very unique and interesting setting to study the possibility of convivial constitutionality. As we will select the PhD candidate later on, we would like to highlight, that we will apply criteria such as knowledge on local languages as described above and link to already existing research groups in the country and in connection of the CON-VIVA-Team in Brazil mainly with Kaia Ferraz and Silvio Marcini, University of Sao Paolo, Brazil. This collaboration is important for three reasons: a) local biologists in Brazil work on the documentation of jaguar movements and lack the socio-cultural aspect, b) the movements of the animal is often transboundary and extends over a large area. Thus, the collaboration between Brazil and Colombia is of great interest, since c) both countries share the effort to establish a transboundary corridor project for the animal.

ii) Specific research questions for this case

1) Emic perspective: How are jaguars perceived by local community members? How are interactions between humans and animals mediated?

2) What locally driven mechanisms exist or can be developed to foster convivial interspecies relations?

3) Etic perspective: How do national policies and actors influence human-wildlife interactions on the ground?

4. General outputs and results

4.1. Outputs

The project aims at enabling three PhD studies as well as a series of thematic, comparative and collaborative papers. All PhDs will be written as monographs due the specific country of every Candidate and compared with the reference case study in Törbel. Furthermore, there will be two to three thematic, locally related papers done by every PhD candidate and three comparing papers focusing on a) institutional change among agro-pastoralist
societies in dealing with apex predators, b) apex predators, changing value chains and conflicts in conservation and c) Convivial constitutionality: lessons from successful coexistence cases and results from participatory discussions on how to develop new institutions for conservation. These papers will also be presented individually and in the form of at least two panels at international conferences such as POLLEN (political ecology conference), American Anthropological Association (AAA), IASC, as well as at conferences on conservation issues (to be determined). In addition, an edited volume including a comparative paper will be published as well as two key comparative papers on failures of conviviality and lessons learned from convivial constitutionality. Final findings will be presented at a workshop held with the CON-VIVA team, our other collaboration partners and organised in Bern.

The project aims to provide important contributions and food for thought to western conceptions of conservation and wildlife management as well as local knowledge systems and bottom-up institution building processes.

4.2. Timetable and Milestones

4.2.1. Timetable

| PhD | 1/1 | 1/2 | 1/3 | 1/4 | 2/1 | 2/2 | 2/3 | 2/4 | 3/1 | 3/2 | 3/3 | 3/4 | 4/1 | 4/2 | 4/3 | 4/4 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| SW  | L/RD | L/RD | L/RD/ | L/RD/ | F   | F   | D/W | F   | F   | F/D | F/D | W   | W   | W   | W   |
|     | WSI  | WSI  | F/C   | F/C   |     |     | /WSI|     |     |     |     |     |     |     |     |
| AZ  | L/RD | L/RD | L/RD/ | L/RD/ | F   | F   | D/W | F   | F   | F/D | F/D | W   | W   | W   | W   |
|     | WSI  | WSI  | F/C   | F/C   |     |     | /WSI|     |     |     |     |     |     |     |     |
| N.N.| L/RD | L/RD | L/RD/ | L/RD/ | F   | F   | D/W | F   | F   | F/D | F/D | W   | W   | W   | W   |
|     | WSI  | WSI  | F/C   | F/C   |     |     | /WSI|     |     |     |     |     |     |     |     |

L = Literature research, RD = research design, F = Fieldwork, D = Data analysis, W = writing up, 1/1 = First year/ First quarter, ½ = First year/ Second quarter etc., C = Conference with presentations, WSI = workshops internal, WSE = workshops external

4.2.2. Milestones

Before the start of this proposal we took part at the Wageningen Conference ‘Towards Convivial Conservation? Governing Human-Wildlife Relations in the ‘Anthropocene’ (CON-VIVA)’ in the Netherlands in 2018. We attended all the presentations and held two presentations about the Wolf in CH and Crocodile Farming in Australia. In the last autumn semester (2019), we conducted a social anthropological seminar at the University of Bern on the subject of apex predators in different contexts. By the end of the seminar we organized a panel discussion with the title ‘Zusammenleben mit Prädatoren in der Schweiz? Zwischen Naturschutz und Kulturlandschaftsverlust’. Therefore, we invited Manuela von Arx (KORA), Nikolaus Heinzer (SNSF-Project ‘Wölfe: Wissen und Praxis’, ISEK, University of Zurich), Daniel Mettler (Agridea), Urs Juon (Mayor of Törbel) and Sara Wehrli (Pro Natura) to discuss with our students and interested visitors central questions concerning the Swiss hunting law, meanings of co-existence and the cultural, political and ecological significance of the wolf.

During the project we have several milestones to be achieved: visits by the supervisor in the different field research areas; workshops during the research (2/3 and 3/2) also in collaboration with the CON-VIVA project team and our other collaboration partners and one final workshop at the end of the project; writing of papers and presentations of case studies at international conferences from the second quarter of the third year; writing up of three classic doctoral thesis and a comparative consolidation of researches which will be done in a separate paper. Over the
course of the four years we will be present at least three international conferences, mainly the POLLEN (Political Ecology Network), AAA (American Anthropological Association), The IASC (International Association for the Study of the Commons) and several conservation conferences as well as regionally selected conferences on Africa, Latin America and Europe on conservation. Furthermore, we aim for an edited volume on the issue with Routledge, Earthscan.

5. Relevance of the Study

While the scientific literature has extensively dealt with the topics of nature conservation, human-wildlife conflicts and the associated coexistence strategies, there is hardly any social anthropological research that unifies nature conservation, apex predators, institutional change and commons. Therefore, we aim to fill the gap, respectively, of the lack of cases aimed at researching the particular circumstances surrounding local perceptions and examples of bottom-up institution building processes where alternative ways of dealing with apex predators exist. In addition, this project seeks international comparisons that allow us not only to draw lessons from different contexts regarding apex predators, but also to involve different countries, their institutional frameworks and socio-cultural, socio-ecological and socio-religious contexts. We follow herewith partly the suggestions for further collaborative research formulated by Redpath et al. (2017: 4), which we however redress by incorporating issues of power, discrimination and structural contextuality, which are lacking in the above mentioned and in the CON-VIVA approach up to now. Furthermore, we will attempt to hold discussion experiments in order to understand ideas on the local level.

The broader impact of this project can be found in the acquisition of empirical data concerning apex predators: By examining a country with respect to its state, regional and local institutions, its local ways of dealing with apex predators and its socio-ecological systems, we can generate new ideas and suggestions for and from Switzerland, the affected population and its challenges with bears and wolves. We therefore believe that this research project will ultimately be of great interest to Switzerland and its institutional framework concerning the collaborative and participatory management of apex predators, while the Swiss context may yield input for other contexts in the other cases as well. Lastly, the underlying premise would suggest that constitutional frameworks for socio-ecological systems management allows a sense of ownership that is essential for sustainable governance and can be attributed to any institutional setting across various conservation contexts in many countries.

Lastly, there is a gap in the qualitative research on local views regarding co-habitation of animals and humans in the context of conservation. Partners in CDE and in the Wyss Academy stated that qualitative insights that allow to develop further strategies on such locally developed institutions for co-habitation is of central importance for the conservation of biodiversity in a much general and broader sense and will aim to produce transformative knowledge.
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