#### Article

# **AN INNOVATIVE APPROACH** TO MITIGATE THE CONFLICT BETWEEN LARGE CARNIVORE CONSERVATION

## AND LOCAL COMMUNITIES

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#### 1. Introduction

The LIFE EX-TRA project took place between January 2009 and March 2013 in three Italian national parks [Gran Sasso and Monti della Laga National Park (PNGSML), Monti Sibillini National Park (PNMS) and Appennino Tosco-Emiliano National Park (PNATE)] and in different areas in Romania, Bulgaria and Greece. Based on the knowledge acquired in the previous LIFE project "Improving the coexistence of large carnivores and agriculture in southern Europe" (LIFE04NAT/IT/000144-COEX), of which the PNGSML was a partner, the LIFE EX-TRA project offered the opportunity to transfer skills and good practices concerning the management of large carnivores to other areas.

One of the lessons learned from the LIFE COEX Project has been that, although many technical, legal and economic measures can be used to try to mitigate the conflicts between large carnivores and local communities, these tools cannot reduce the emotional impact that depredation of livestock has on its owners. The effects of these negative feelings are that the local communities strongly fight against

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the presence of the wild predators. This can be seen by several cases of wolves and bears being killed in the past years, and also by the simple constant lobbying against the presence of these animals in the area.

Conflicts between carnivore conservation and local communities are characterized by a plurality of actors, interests, motivations, all with different ways of communicating. Often the negative feelings of local communities towards wolves and bears are an indirect symptom of other problems associated with issues such as land use restrictions in protected areas, inadequate working conditions for livestock raisers, insufficient appreciation of local products, and the general feeling of being abandoned by the local authorities. In fact, many discussions with local interest groups have revealed that the conflicts with wolves and bears were mainly a way to attract the attention of local authorities onto other, more fundamental issues.

The new element that was introduced in the LIFE EX-TRA project was the attempt to gain a full understanding of all the affected stakeholders and, in a second step, to start a negotiation process between the local authorities in charge of nature management and the most affected parties, in order to allow the start of dialogue. In the project's first year (2009) a detailed stakeholder analysis was conducted, based on the consultancy of national experts in the four project countries, and under the coordination of an international steering group.

After the first pre-assessment, while sharing the same theoretical basis, we understood how the methodological approach to the management of environmental governance would be different in the four individual partner countries. The socioeconomic, legal, ecological and geographical conditions were so different among areas that it became immediately clear that in each country a common approach had to be adapted to meet diverse local needs. The support of specialists in each country has helped to adequately point out specific problems to be faced in the consultation process.

In the present article the methodology and activities developed in the three above-mentioned Italian National Parks are presented.

#### 2. Methods

The preliminary stakeholder assessment phase was followed by the application of a methodology that aimed at the management of conflicts through negotiation with local stakeholders and participatory planning.

Two sets of negotiation meetings were conducted: the first set aimed at identifying, some urgent themes and, consequently, some concrete priority actions. The second set of meetings was directed at verifying the results of the previous agreements and at stipulating new ones. Thanks to the mediation of facilitators, these meetings resulted in the common agreement on management approaches, which were followed by concrete interventions on the ground.



#### 2.1. General approach

Despite the diversity of the different geographical areas and the social, political and economic parties engaged, the starting point in the project required all involved partners to understand that "environmental governance<sup>1</sup>", is composed by the analysis and comprehension of the power dynamics between stakeholders.

We referred to a particular type of governance, related to the coordination methods of local actions, in which a plurality of actors operate on a given area, each one having decision-making power (Lewis et al., 2003, Turco, 2009a). These powers are far from being well-defined, but are often intertwined. Furthermore, they are not solely based on legislation, but also on cultural heritage and informal social arrangements. In this perspective the spatially defined approach that was applied gives a significant contribution to environmental conflict prevention and management (Woch & Emel, 1998; Philo & Wilbert, 2000; Faggi & Turco, 2001) since it involves shared planning in a bottom-up negotiation approach.



**Fig. 1.** Classification of actors identified in the stakeholder analysis carried out in the three involved National Parks in Italy in the LIFE EX-TRA Project, 2009.

#### 2.2. Stakeholder analysis

In the first year of the project a detailed stakeholder analysis was developed in cooperation with the staff of the Department of Human Sciences of the University of L'Aquila. This process began with the construction of a "Map of Actors" (Fig. 1) (Turco, 2009b), a tool that identifies three typologies of persons and bodies that are at various levels affected (positively or negatively) by the presence of large carnivores:

*Institutional actors:* institutions and functional agencies empowered by law, with specific profiles and tasks;

Stakeholders: private and public bearers of interests. Their point of view can contribute to large carnivore conservation and to create consensus around the undertaken actions. This groups includes livestock raisers, hunters, veterinarians, foresters, persons involved in local tourism et cetera. Stakeholders are selected on the basis of their representation (boards and institutions, associations), their effective presence on the ground, and the fact that they have something to say about the addressed issue (Bobbio, 2004);

*Stockholders:* a special category of stakeholders, who are interested in investing in specific tasks of a project or issue, in order to make a profit (tourist operators, farmers, construction companies), or for image strategies (biotechnological industries, green business). They can have direct interests (investors) or indirect ones (sponsors).

A second dimension was then included in the map when the actors were divided according to the level of their involvement in the targeted issue (in our case coexistence with large carnivores) (Faggi & Turco, 2001):

*The first circle* (core actors) included all the institutional actors as well as the stakeholders and stockholders who were closely and directly affected by the presence of large carnivores in the area;

<sup>1</sup> Governance is the framework of social and economic systems and legal and political structures through which humanity manages itself" World Humanity Action Trust (WHAT), 2000.

*The second circle* included interest groups that were less strongly affected by the presence of wolves and bears, benefitting from their presence only to a certain degree.

*The third circle* included only those actors who were indirectly affected by the presence of large carnivores (e.g. residents, tourists).

Each of the identified actors is characterized by different profiles, issues and strategies and, as can be seen in the figure, the representatives of both the stakeholder and the stockholders can be involved at different levels in the conservation issue that is targeted.

The construction of this map of actors has been a first important step in order to identify all people and groups to be involved more or less intensively in the following steps.

#### 2.3. Interviews

A questionnaire was developed in three steps: 1) production of a preliminary brief version of the questionnaire, 2) testing of the questionnaire on a restricted group of persons and, 3) after evaluation of the results of this test, development of the definitive questionnaire.

The "hermeneutical" interview technique, which was applied in the present analysis, is a type of semi-structured qualitative interview that includes oriented questions and open replies (Montesperelli, 1998; Dalehite, 2008; Della Porta, 2010). The purpose of this was to give the interviewees the biggest possible freedom to express their opinions and suggestions, in order to most effectively obtain a full-range diagnosis of all the factors involved in the conflicts: actors, issues, conflict setting, level of conflict. It is important to point out that the interviews did not focus specifically on large carnivores but on all issues concerning the life of the local communities in the Park areas. The aim was to detect issues and opinions that are only indirectly related to the presence of wolves and bears.

The analysis of the interviews lead to the classification of the existing conflicts based onto a 3-stage methodology (Turco, 2009a), in which the conflict dynamics were divided into three stages with an upward dynamic, each of which requires specific mana– gement interventions. In all three stages, interventions and specific behaviour can cause a decrease of the conflict level or an increase. If the conflict level strongly increases it develops into the next step.

1<sup>st</sup> Stage: An initial disagreement develops into a permanent tension stage. This happens when diverging positions among current actors emerge, regarding more or less well-identified issues or interests, but do not cause open disputes and severe negative attitudes.

2<sup>nd</sup> Stage: If the causes, effects, dynamics and time frame of tensions are not properly identified, and if they are not appropriately managed, they can evolve into a real conflict stage. In this stage diverging positions are well defined and are expressed in severe negative feelings and attitudes and in clear and open disputes. This stage requires an accurate diagnosis in order to put in place proper mitigation and management strategies.

3<sup>rd</sup> Stage: If adequate mitigation measures are not applied the arising disputes might spread or connect to other previously existing issues of any kind, developing into the conflict network stage. At this stage controversies grow, developing new conflicts, spreading into new areas, involving new actors and dynamics. This event can exacerbate the negative feelings, creating a climate of suspicion and hostility.

#### 2.5. Participatory meetings

Following the stakeholder analysis a series of 16 workshops and 24 individual meetings were carried out in the three involved National Parks between November 2009 and December 2011. These mee tings aimed to neutralize the upward dynamic of the 3-stage model, to manage the identified conflicts and tensions in order to prevent them from developing into a more severe stage. Fifteen of the workshops were developed with the "World Cafe" method and one with the "Open Space Technology".

The World Cafe method (www.theworldcafe.com) involves the subdivision of the participants in small



groups and a series of twenty-minute rounds of conversation for each group. Each round aims at discussing one specific question, designed for the context and desired purpose of the session. After the small group rounds the participants are invited to share insights or other results from their conversations with the rest of the large group.

The Open Space Technology (OST) (Owen 1998) can be used in meetings with very variable numbers of people. The approach is most distinctive for its initial lack of structure, in which the group of participants then creates the working agenda, as individuals post their issues in bulletin board style. The issues are then organized in sets of topics, which are addressed in dedicated discussion rounds. These resulting notes are compiled into a proceedings document that is distributed physically or electronically to all participants.

In addition, specific issues emerging from consensus workshops were discussed more in depth with the involved stakeholders, in opportunistically organized and unstructured personal meetings.

It must be pointed out that it is not possible to precisely plan the number, timing and structure of such meetings in advance, due to the fact that the topics and techniques involved in each single meeting result from the previous ones' outcomes, and these factors are each time influenced by many factors such as: 1) main issues raised in the previous meetings; 2) attitudes of the involved stakeholders; 3) availability of key stakeholders to participate. Therefore the whole process is subject to a case-by-case evaluation of the single steps by the experts and a consequent adaptation of locations, timing and involved techniques.

3. Results and discussion



#### 3.1. Results of the stakeholder analysis (Turco, 2010)

Following to the construction of the map of actors, during the stakeholder analysis 462 persons were interviewed, most of which were institutional actors and stakeholders (Fig. 2).

The interest groups mostly involved in all the conflict stages were livestock raisers, farmers and local communities in general, but also other specific categories have been involved especially at the tension level: veterinarians, foresters and hunters.

Regarding wolves and bears, the most concerned groups were livestock raisers/farmers as well as institutional actors (municipalities and other local land management authorities) (Fig. 3).

However, it is interesting to see that only a small share of causes of conflict was connected to the presence of large carnivores in the area (Fig. 5). In fact, in PNGSLM and in PNMS in only 14% of the instances large carnivores were mentioned as an issue during the stakeholder analysis and in PNATE only in 10,5% of the cases. Also, issues directly connected to the presence of wolves and bears have mainly been categorized in the "tensions" stage (Table 1), whereas they only very marginally appeared in the other stages.

In contrast, the analysis has revealed a large number of issues besides the presence of large carnivores that are causes or components of the different stages of conflicts (as defined in the 3-stage model) (Fig. 4; Tables 1 & 2).

In fact, the most severe conflict levels registered concerned the following two types of issues:



**Fig. 2.** Numbers of persons of different stakeholder groups interviewed during the stakeholder analysis carried out in Italy in the frame of the LIFE EX-TRA Project, 2009. The Circles mentioned in the legend (I, II and III) refer to the circles in Fig. 1 (PNGSML: Gran Sasso; PNMS: Monti Sibillini; PNATE: Appennino tosco-emiliano).



**Fig. 3.** Types of actors mostly concerned with the presence of large carnivores as revealed by the stakeholder analysis carried out in Italy in the frame of the LIFE EX-TRA Project, 2009. "Others" are categories such as persons involved in tourism, foresters, veterinarians, park rangers (PNGSML: Gran Sasso; PNMS: Monti Sibillini; PNATE: Appennino tosco-emiliano).



Fig. 4. Types of issues identified as causes of conflicts as revealed by the stakeholder analysis carried out in the frame of the LIFE EX-TRA Project, 2009 (PNGSML: Gran Sasso; PNMS: Monti Sibillini; PNATE: Appennino tosco-emiliano).



Institutional conflicts between the local communities and the Park administration, mainly because of disagreements over the general park management;

Conflicts caused by the presence of overabundant wild boar populations. In Italy, this species is present in large numbers and causes severe damage on agriculture. Due to the restrictions on hunting in protected areas this issue causes many different levels of disagreements and disputes between different interest groups.

The analysis has, however, also revealed some level of consensus for the presence of the Parks, mainly regarding issues linked to socioeconomic assistance to farmers and livestock raisers and in terms of improvement of the conditions for the tourism sector.

**Table 1.** Stakeholder categories and issues involved in the "tensions" stage of the 3-stage model applied in the stakeholders analysis carried out in 2009 in three National Parks in Italy in the frame of the LIFE EX-TRA Project (for complete tables refer to report at www.lifextra.it).

Involved categories	Description of issue	
Tensions regarding wolves and bears		
Farmers/livestock raisers	Need to set up a trust relationship between farmers/livestock raisers and park staff; Difficult dialogue between farmers/livestock raisers and park staff; Insufficient damage compensation measures; Few possibilities for appreciation of professional skills.	
Public veterinary services	The presence of park veterinarians during damage assessment is not appreciated because they seem to represent only the parks' interests.	
Foresters	Problems to participate in damage assessments due to time concerns.	
Hunters	Wolves kill too many wild boars.	
Other tensions		
Farmers/livestock raisers	Insufficient economic returns for local traditional products Disputes about the usage rights of common lands (e.g. assignment of pastures).	
General Park inhabitants	General disagreements on the management of the protected territories; The interventions for rural and socioeconomic development implemented by the Park administrations are mainly carried out in the core areas, therefore the communities in the peripheral areas only suffer from restrictions and do not enjoy any benefits.	

**Table 2.** Stakeholder categories and issues involved in the "conflicts" and "conflict network" stage of the 3-stage model applied in the stakeholders analysis carried out in 2009 in three National Parks in Italy in the frame of the LIFE EX-TRA Project.

Involved categories	Description of issue
Conflict stage	
General Park inhabitants	Lack of political and legal representative of the Park and of clear figures with whom to interact (PNGSL); Request of some communities to leave the Park.
Conflict network stage	
Local institutions, associations, scientists and farmers	<ul> <li>Conflicts about wild boar management: <ul> <li>i) Political and ideological conflicts – the local authorities use the presence of wild boars as an excuse to attack the Park;</li> <li>ii) Scientific conflicts – contrasts between different opinions about population size and management methods;</li> <li>iii) Legal and economic conflicts – claims, economic damage – the wild boar is a "symptom" of other conflicts.</li> </ul></li></ul>

#### 3.2. Stakeholder meetings (Turco, 2011a,b)

#### 3.2.1. Feedback meetings

Following the stakeholder analysis, from November 2010 to March 2011, a first set of "feedback meetings" was organized in order to communicate the results of the stakeholder analysis to the persons who have been interviewed. These 6 meetings were attended by a total of 163 persons.

The main issues that emerged from the feedback meetings were then discussed in the following participatory workshops. These issues were:

- a. Wildlife management;
- b. Regional tourism development;
- c. Absence of institutional bodies: the Board of Directors Community Park;
- d. Support services in the territory;
- e. Listening to citizens' concerns (the proper strategy to achieve some of these major goals).

#### 3.2.2. Consensus workshops

After the feedback meetings two Consensus Workshops (CW) were held in each area, with the following objectives:

#### CW1

i) Joint identification of actions to be encouraged in relation to the needs of the stakeholders in the area, based on the principle that, given the limited human, material and financial resources, "we couldn't do everything";

ii) Joint identification of the methods and time frames to achieve the identified objectives, based on a fundamental principle of reflexivity: "we try to understand what we do when we do it, and not later, when it may be too late to correct the mistakes";

#### CW2

i) Assessment of the feasibility of the agreements, through specific finalized meetings, based on the principle that "the agreements have to be respected; if something did not work we have to try to understand why it didn't";

ii) Implementation of agreements to boost the participatory practice at the end of the project and let it continue in the future.

These consensus workshops did not work independently of each other; on the contrary, they were closely and explicitly related. In the second round of meetings the facilitators recalled the issues that had emerged in the first workshops, and they publicly explained which goals had been achieved, which had been partially achieved, which were subject to further assessments and which had not been achieved.

The first sets of Consensus Workshops were attended by 154 persons in 4 meetings; the second one was attended by 126 persons in 4 meetings.

Between the first and the second set of workshops, 6 thematic meetings were held, aimed at strengthening and preparing the second event, in particular with more active stakeholder groups, which presented an higher conflict level. These meetings were attended by 129 persons.

### 3.2.3. Main results of the participatory workshops in the three parks

The results achieved in the participatory process can be classified in four main outputs:

1. Concrete interventions in the field. These were agreements between the local authorities and the interest groups about specific activities and/or tools to be implemented in order to decrease depredation or to improve the working conditions of local livestock raisers, namely:

- a. Veterinary assistance to livestock raisers for sheep and cattle;
- b. Distribution of materials to about fifteen farmers to build permanent collective fences in order to protect calves born in the pasture, and to prevent damage from wolves, in PNGSL;
- c. Co-funding for the installation of 16 electric fences on livestock farms in PNMS;
- d. Initiation of the RECANDO Program in PNMS, which foresees the construction of a network of exchange of livestock guarding dogs between farmers;
- e. Installation of a feeding site for vultures and other raptors in PNMS. This allows the shepherds to dispose of livestock carcasses without having to pay for the intervention of the public health services which causes a consistent additional cost;

f. Development of a wolf monitoring program with the participation of local stakeholder groups.

2. Legal/institutional improvements such as adaptation of regulations for the control of wild boars, update of compensation schemes, agreements with the Forest Administrations regarding the Park Regulations.

3. General increase of consensus among the local interest groups. There has been a steady increase of the participation of the representatives of local communities and authorities in the negotiation process. Moreover, the follow-up evaluation of the entire process has revealed a general consensus about the Park Administrations' efforts (LIFE EX-TRA 2012).

4. Development of best practices. Since the staff of the three involved Parks have recognized the effectiveness of the applied participatory procedure, they have further used these techniques in order to facilitate other processes beyond the objectives of the LIFE EX-TRA Project, such as the development of the new Park Regulations in PNATE, the training of facilitators in PNGSL, the inclusion of these techniques in several new participatory processes:

- a. Development of grazing regulations in the frame of the LIFE PRATERIE Project "Urgent actions for the conservation of grasslands and pastures in the territory of Gran Sasso e Monti della Laga" (LIFE LIFE11NAT/IT/234);
- b. The development of beach forest management procedures in the frame of the LIFE Project FAGUS "Forests of the Apennines: Good Practices to Conjugate Use and Sustainability" (LIFE11 NAT/IT/000135);
- c. Regular management of the conflicts between carnivore conservation and local livestock raisers;
- d. Development of the management plans of the Natura 2000 sites.



#### 4. Conclusions

The fact that in the present stakeholder analysis wolves and bears were concretely and directly connected to disputes only at a "tension" level is certainly encouraging. However, the other causes of conflicts may not be disregarded as factors affecting carnivore conservation. The severe conflicts, whatever their causes, create disputes with the Parks' administrations and adverse feelings towards these institutions and what they represent. Since wolves and bears are major flagship species for these Parks, they are easily chosen by the local communities in order to attract the attention of the local authorities and to express their frustrations and discontent. This important assumption has been fundamental in the development of the participatory process that was carried out after the main conflicts were identified.

It can be affirmed that the key result of this process was, without any doubt, the opening of new channels of communication between formal institutions and local communities. At the same time, the applied approach has disrupted the common view according to which stakeholders have to give "blind" support to the local governance policies. This change has on its turn caused a general increase of consensus.

Another advantage of this approach is also that the local interest groups that have participated in the decision making processes will feel more responsible for the developed tools, activities and regulations, supporting their use and respect also by other actors.

Finally, the participatory process has also helped to introduce some good practices in the field of stakeholder consultation for supporting large carnivore conservation.

The results of this four-year process have been very encouraging. Following the participatory meetings there has been a general recognition by stakeholders of a process, started by the local authorities, which is on-going and not a "one-shot" initiative. This has generated a widespread improvement of relationships between stakeholders and the decision-making bodies. Also as a consequence the local authorities have recognized the importance and effectiveness of public consultation and participatory management.

#### 5. Problems and recommendations

The main disadvantage of the presented technique is that a participatory process requires very long time. It cannot been applied as a one-shot initiative to quickly solve conflicts but it must rather been seen as an ongoing, never-ending process. In fact, in the present case the first steps into the direction of stakeholder consultation have already been done during the LIFE COEX Project (2006) this process has then been fully developed starting from 2009 and by the time of writing (spring 2014) is still ongoing in new projects. And in each step new issues arise and new conflicts are brought onto the scene. The Park administrations cannot allow to interrupt the process because this would disappoint the expectations of the local communities and generate negative feelings again. Therefore the application of a real participatory

process requires an ongoing commitment by the organization starting the initiative to dedicate resources in terms of funds, staff and time.

Another risk of this technique is that, if the process is not properly managed by specialised staff, it might generate expectations that are not fulfilled and, by bringing together different, diverging groups and positions, it might increase the conflicts instead of mitigating them. Therefore it is strongly recommended to involve in such a process one or more persons specifically trained in order to adequately manage the difficult situations that always appear during the meetings.

Finally, since the assumption of a participatory process is that each party contributes with own expectations and inputs but also with own commitments, the local authorities have to make sure that they will maintain all commitments they take in terms of concrete interventions, law adaptations, financial support.

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