

CONFLICT MANAGEMENT TOOLKIT FOR THE ECOLOGICAL CONNECTIVITY IN THE ALPS

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Introduction

Ecological connectivity points at the establishment and maintenance of the ecological continuum of nature to allow **wildlife species** to be in physical connection so to ensure the genetical exchange in their natural populations. The planning, the development and the physical implementation of the ecological networks imply sharing spaces between wildlife and humans, which makes it a fertile ground for the development of **human-wildlife conflicts** (HWCs).

In the **Alps** HWCs are increasing. The Alpine environment is the scene of continuous interactions between different human activities and ecological processes. For centuries, humans have always been directly dependent on mountain ecosystems and local communities have created specific conditions capable of assuring the persistence of ecosystems and their capacity to provide essential goods and services (Cantiani et al., 2016). However, in recent decades, dramatic changes, such as changes in lifestyles, in land use, in governance and in the climate, have occurred. In these territories, which have lots of natural and cultural values but are at the same time particularly vulnerable, **new needs and new order of values priorities arise** and these often result in conflicts. Outdoor sport activities disturb wildlife and affect long-lasting activities in the mountains; the return of large carnivores has found local communities unprepared; transhumances of huge flocks cause crop damages and disturbance to private ownership; poaching is a serious threat to many wildlife species; animal-vehicle collisions have a high impact on road traffic and human health. These are just few examples that explain how HWCs are characterized by multi-functional nature, the problems to face are complex, the involved parties are usually numerous, some of them represent thousands or millions of people.



In the framework of the Interreg **Alpine Space ALPBIONET2030 project**, in the regions the project is working on, authors identified the most important local and transnational HWCs, which could have an impact on the development of the local and transnational ecological network and on the coexistence of the human activities with local wildlife species. To prevent and manage these conflicts, a methodology has been developed and different tools have been implemented in each project working region. From the experience acquired during the project, authors developed this **toolkit** that wants to provide guidance for the identification of the **key elements** to work on during a process of conflict management.

Addressing HWCs effectively requires a **systematic approach**, able to combine different actions and strategies simultaneously, boosting the efficiency of each one [FIG. 1]. Single and short term actions are sometimes needed but they are not sufficient by themselves (Madden & McQuinn, 2017). Human-Wildlife conflicts' prevention and management are mid to long-term processes that combine different actions with different timetables.

Identifying and analyzing conflicts, informing and improving scientific knowledge, raising awareness, opening up a dialogue among different competences, favoring the transfer and the coordination at national and international level and managing conflict at the local level are key elements that can, at the same time, prevent conflicts and transform them into opportunities for coexistence.

FIGURE 1
Seeing conflicts as opportunities



The aim of this toolkit is to provide an overview of innovative and effective strategies to recognize, prevent and manage HWCs in the Alps, in order to create the necessary social framework and acceptance needed to foster the development and the maintenance of an ecological network in the Alps. The starting point of each conflict management process is the awareness of conflict-as-opportunity, being a social phenomenon that, if well managed, has the potential to stimulate local change and constructive growth, inside of a transnational framework. This toolkit is directed to local administrators and decision-makers in order to provide them a concrete instrument capable of showing them the necessary steps, but also to researchers and practitioners, to directly manage conflicts as soon as they appear and, more in general, to people affected by HWCs. The purpose of the development of the present toolkit is to provide a simple tool to either prevent conflicts, or if they have already occurred, to intervene more effectively and to manage them as opportunities, valorising the enhancement of human-wildlife relationships. The following paragraphs describe in detail each key element to work on, the relevance of each of them in the whole process and the concrete tools for its implementation. As all approaches which are suitable to face complex situations, the "Conflict Prevention and Management Toolkit for the Ecological Connectivity in the Alps" is not a rigid process. It has been created so that every case can be evaluated and enhanced because of its specific characteristics and context, and thus be subject to an ad-hoc process choosing the most suitable tools and adding new tools when needed.

1

Identify and analyse current HWCs



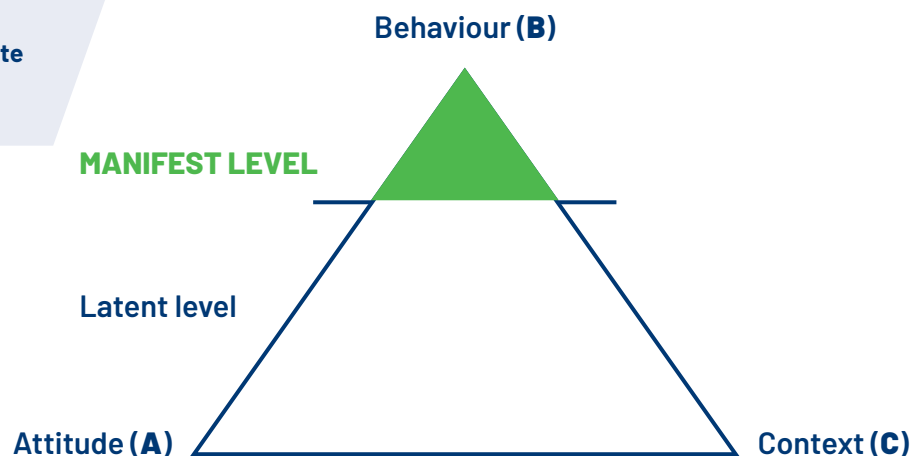
DESCRIPTION OF THE PROBLEM

Conflict is a widely used word but often poorly understood. The terminology “conflict”, especially in languages of Latin origin, is often identified with “violence” and this is the first reason why situations that can be connected or described with this word are “naturally” avoided. Conflict is a concept much richer than it is generally assumed. According to Novara (2011), conflict is “a contradiction without components of irreversible damage, there is the intention to address the problem without harming the other parties and to maintain relations between stakeholders, even if difficult and problematic”. According to Galtung (2000), the conflict has parties and parties have needs or goals. When they are incompatible, then we have issues with accompanying patterns of attitudes and behaviour. The sum of all these components is the conflict [FIG. 2].

FIGURE 2

Galtung’s triangle.
The red part is the immediate evidence of a conflict

Adapted from Galtung, 2000



1. IDENTIFY AND ANALYSE CURRENT HWCS

How parties act in a conflict is the immediate evidence, it is the manifest level of conflict. Under the manifest level of conflicts there are aspects that are less evident which are contributing factors (Galtung, 2000). They include attitude (values, emotions, perceptions) and the context from different points of view (political, cultural, economic, historical). All these different aspects play a key role in a conflict. If the underlying is understood and transformed, the solutions that arise are more durable and likely to succeed. If these aspects are not addressed, conflicts persist (Madden & McQuinn, 2017).

Here we focus on conservation conflicts, which Redpath (2012) defines as 'situations that occur when two or more parties with strongly held opinions clash over conservation objectives and when one party is perceived to assert its interests at the expense of another'. This definition recognizes that conservation conflicts fundamentally occur between humans. As confirmed by Madden & McQuinn, 2017, while it has long been considered a conflict between people and wildlife, in reality it is a conflict between people about wildlife with unmet social needs simmering beneath the surface of the conflict. For this reason, analysing HWCS is important for deeply understanding the discontent among diverse stakeholders at all levels. If we do not understand conflicts in all its facets, or if we avoid them, they can be destructive, costly and not only undermine effective conservation, but also compromise economic development, social equality and resource sustainability (Redpath, 2012).

AIMS

- Understanding the underlying of conflicts in order to uncover latent conflicts, to prevent conflicts' escalation and to act more effectively.
- Better understanding of what is at stake as a basis for the identification of what is needed to know more and for the design of a plan for the conflict management.

TOOLS

Conflicts do not appear suddenly, they often are the result of minor tensions that gradually progress in small stages until escalation. It is important to identify the first small signals of conflict appearance as often as possible (Glasl, 1999). There are several ways to do that, for example by analyzing the local press and social media, by interviewing stakeholders and experts, by making surveys and site visits [SEE PARAGRAPH 2]. It is useful to organize the information collected through the following tools of conflict analysis, borrowed and adapted from Fisher (2000).

CONFLICT ANALYSIS

The chosen tools do not intend to offer a comprehensive approach to conflict analysis and additional tools would be needed to fully understand the complex dynamic of conflicts. The selected tools do represent a good basis to understand the reality of conflict from different perspectives, to find out more about what is going on in a conflict, the background and history of the situation. Conflict analysis is a process that we suggest to adapt to the particular circumstances being analysed, being as creative as possible. It is not a one-time exercise, it has to be an ongoing process as the situation is developing to adapt the actions to changing dynamics.

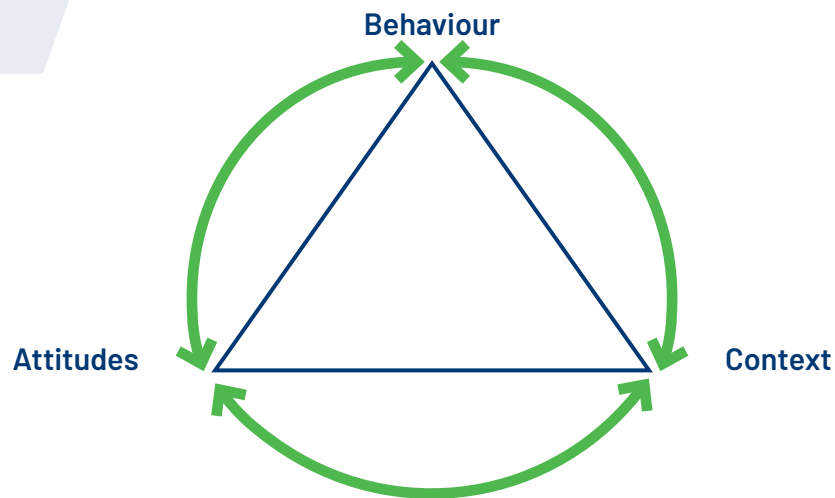
a) The ABC triangle

As highlighted above, the ABC triangle is based on the premise that conflicts have three main components: the context, the behavior of those involved and their attitudes. These three factors influence each other, hence the arrows leading from one to another. This tool is useful to identify and analyse every factor for each of the major parties involved in the conflict and to identify a set of actions that can work on each of them. In other words, specific interventions e.g. preventing the economic or physical loss, or compensating for it, could be efficient solutions only if carried on together with actions that work taking into account the context and the attitude of the community.

FIGURE 3

The ABC triangle

Adapted from Fisher, 2000



b) Stages of conflict

Conflicts change over time, passing through different stages of activity and intensity. The stages of conflict tool show the increasing and decreasing intensity of conflict, plotting along with a timescale. It is useful to try to predict the future escalation with the aim of preventing it from occurring or, if the conflict is already escalated, to avoid the development of a meta-conflict that is the cyclical repetition of the same conflict. Furthermore, conflicts can be internally managed inside of a community, if the interested parties have the will to dialogue and to find a common agreement, or externally by the use of a mediator who can analyse the situation from a neutral point of view and can help the parties to understand each other and develop a win-win situation.

The analysis comprises five different stages:

- **Pre-conflict:** this is the period when an incompatibility of goals between two or more parties appears, which could lead to an open conflict. The conflict is hidden from the general view but there may be tensions in relationships between parties.
- **Confrontation:** at this stage the conflict has become more open with the risk of occasional fighting between the parties. Relationships are becoming very strained, leading to a polarisation between the supporters of each side.
- **Crisis:** this is the peak of the conflict, when the tension is most intense and different levels of violence may break out. Normally, at this stage, the "fighting parties" interrupt any form of communication and public statements tend to be accusations against the other side.

1. IDENTIFY AND ANALYSE CURRENT HWCS

- **Outcome:** at this stage the level of tension slightly decreases and the crisis will lead to an outcome.
- **Post-conflict:** finally, the situation is resolved in a way that leads to the end of tensions and to more normal relationships between the parties. However, if the issues arising from their incompatible goals have not been adequately addressed, this stage could eventually lead back to another pre-conflict situation and the conflict may recur in similar cycles.

FIGURE 4

Stages of conflicts

Source: Adapted from Fisher, 2000



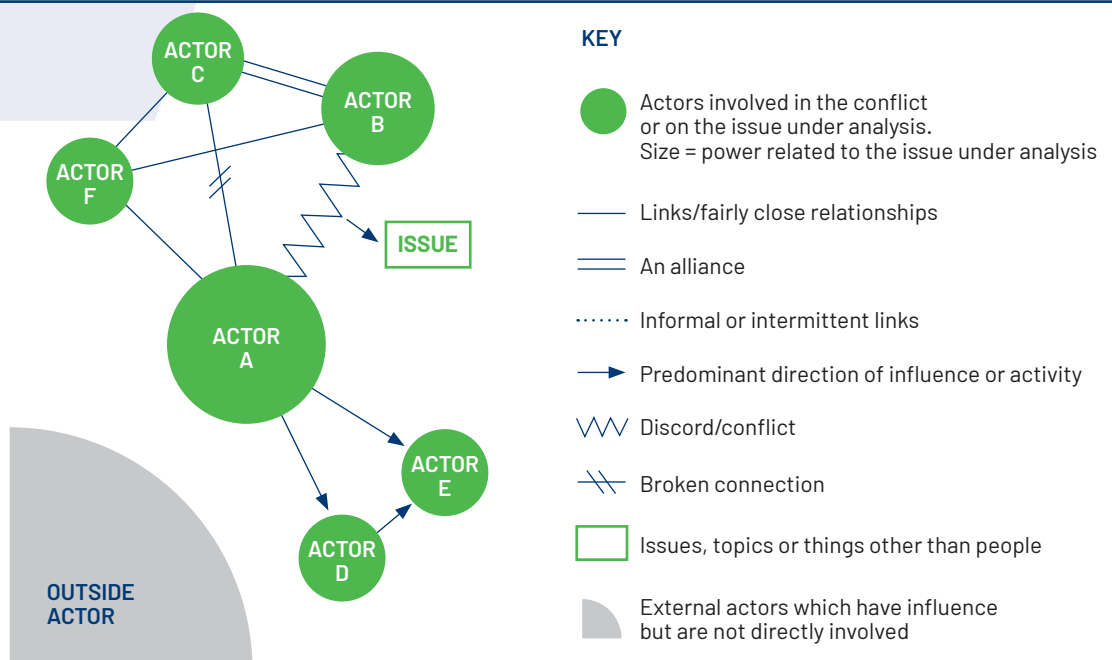
c) Conflict mapping

Mapping is a technique used to graphically represent a conflict, placing the parties in relation both to the problem and to each other. It is useful to better understand the situation, to see the relationships between parties more clearly, to clarify where the power lies, to see

FIGURE 5

Conflict mapping

Source: Adapted from Fisher, 2000



1. IDENTIFY AND ANALYSE CURRENT HWCS

where allies or potential allies are and to identify openings for action. In mapping, a particular convention state indicates parties, power, alliance, discord, issues etc. They can be used as suggested or it is possible to create new ones. In HWCs, where the problems to face are complex and in which the involved parties are usually numerous, it is useful to refer to a specific situation.

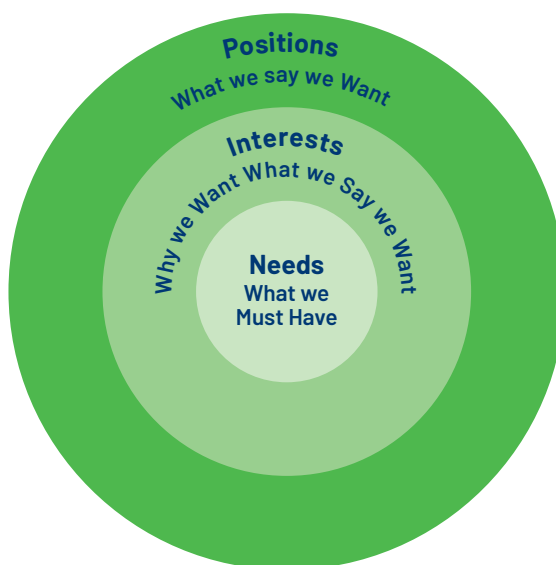
d) The “onion”

This tool is based on the analogy of an onion and its layers. The outer layer contains the positions that we take publicly, for all to see and hear, for instance, positions for or against some projects or decisions to be taken. Underlying it, there are our interests, that is what we want to achieve from a particular situation, e.g. practice of different activities, nature conservation, etc. Finally, at the core there are the most important needs each party requires to be satisfied, e.g. vital spaces, safety, well-being. It is useful to carry out this analysis for each of the parties involved. This tool helps visualizing what different parties are saying in order to move beyond the public position of each party and to understand interests and needs. This transition is particularly relevant to facilitate dialogue and to find common ground between parties.

FIGURE 6

The onion

Source: adapted from Fisher, 2000



2

Inform, improve scientific knowledge on wildlife, coexistence and conflicts



DESCRIPTION OF THE PROBLEM

Local people and stakeholders often miss the scientific knowledge concerning natural processes, the presence of wildlife and possible interactions with humans. For this reason, often, we assist in the spreading of thousands of fake or incorrect news about the presence of wildlife, its interactions with humans and the value of nature in terms of benefits for human society.

Many people and stakeholders complain about the missing information from their administrations on the current development and evolution of their landscape in terms of wildlife presence and natural processes occurring. This apparent absence of institutions and of strategies that may protect the economic activities and the social matrix of a community by the occurred and occurring changes may result in the development and spreading of incorrect information and in the use of social media as a relief valve.

The process of information and awareness-raising on local human-nature interactions and conflicts misses the focus at local level and to be framed into a national and international context.

AIMS

- Filling the knowledge gaps and facilitating stakeholders' and people's knowledge and analyses of current conflicts.
- Promoting a conscious use of social media about occurring human-nature conflicts and avoiding the dissemination of fake news and of conflicting behaviour.

TOOLS

INVOLVEMENT OF THE LOCAL PRESS

Researchers, but also local administrators and practitioners, should proactively inform the local press about the development of the current and potential upcoming conflicts, explaining the identified causes and drawing a potential roadmap for their resolution. Every activity aiming at improving human-nature coexistence should be carried on in a consortium between science, politics and stakeholders, continuously updating the local press in order to spread correct and scientifically-based information, reducing the risk for personal interpretation and the spreading of fake news.

WRITING SCIENTIFIC BLOGS

In order to make scientific knowledge more accessible and understandable to the large public, being able to formulate complex information in a simplified way is essential. The current era of information technology has the potential to distribute information very rapidly to any person with an internet connection. Scientific knowledge written in a blog has the power to take the reader straight to the point that he/she is interested in, avoiding all the scientific background and theories that may just hinder the basic message behind the text.

Scientific blogs can provide easy access to science for a great part of the society, keeping them updated and being a channel of communication and exchange of information between science and stakeholders. Negative aspects rely on the potential extreme simplification of the message and in the reader not completely understanding.

CONFERENCES

Conferences are usually reserved for researchers as a place to present their own studies and exchange information and experiences with others, to establish new contacts.

Conferences open to the large public should focus on local issues and present them in a comprehensible way. They should be organized in a way foreseeing an informative upfront part and a more interactive part, with concrete questions and answers, and a place to share experiences and the problems they are experiencing with the discussed conflicts.

As conferences gather many people from different extractions, the risk exists of providing too much information and not to focus on concrete proposals and solutions.

PROFESSIONAL VIDEO

Producing and developing a professional video to spread information and awareness on human-nature interactions and conflicts can overcome the conventional ways of projects' activities communication, that could be obsolete in the current information technology era.

A video is a way of enriching viewers' minds and visions of the world. Videos are conceived to provide much more information on a topic rather than paper-based media in a relatively short amount of time. A video on local and international human-nature conflicts should be based on highlighting the characteristics of each conflict and the common features between those occurring at the local level with those in other countries and the approaches thereby followed for their management and resolution.

The storyline of each video should guide the viewer inside the need for coexistence, showing the necessary factors to help the viewer in building his/her own view, opinion, and potential ways for contributing to the non-escalation of the conflict and to its management and resolution.

Regarding this, case studies are a good way to stimulate the empathy of the viewer, because each person can find some common elements to his/her own place. Videos should show the framework of one or more conflicts, the known causes and the current impact they have on the local population, preferably in an enlarged view (regional, national, transnational). Working on case studies, it is fundamental to include interviews and activities (surveys, workshops) with local people, stakeholders and administrators, in order to develop a message of “common good” and a shared management.

Focusing on the effectiveness of the videos, it should be considered that the audience will start to disappear over the length of the video. In fact, studies reported that for a video of 4–5 minutes, fewer than 60% of viewers will still be present, against the 75% for a 2-minute video (WISTIA, 2012). The ALPBIONET2030 WPT5 Video on human nature conflicts, produced during the activities of Work Package 5, attempted to fill the gap existing about an overview of the current and most impacting human-wildlife conflicts throughout the Alps. The video focuses on large carnivores’ livestock depredation, sports activities inside and outside protected areas, ungulate-vehicle collision and poaching, trying to highlight the socio-economic impact they have and how local people and stakeholders are affected by them. Through the images of workshops and qualitative interviews, the video reassembles the steps taken during the “conflict-knowledge” process of WPT5 in each of the Project Working regions and tries to stimulate the audience to know more about and individually act.

SOCIAL MEDIA ANALYSIS

Social networks (mainly Facebook, Twitter and YouTube) gave everybody the opportunity to express their own perception of the world and opinions on any kind of topic regarding each person and the whole community’s daily life and issues. The social perception of human-nature conflicts is highly influenced by the social networks and the media that, through the diffusion of online news, videos and comments, contribute to magnify the public opinion and reaction to a certain conflict topic.

Through social networks, online media and people can often express their feelings against wildlife species deliberately selecting catchy headlines and strong expressions (e.g., *the wolf does not feed itself but tear to pieces or devour; the bear has attacked an excursionist, etc.*). This provokes an emotional reaction by the reader, stimulating him/her to click on the video/article (*clickbait*) and to comment (to raise the *engagement*). Often people do not check the veracity of the font (contributing to spreading *fake news*), neither analyse the tones in which the news itself is reported. According to a recent study of ANSA (Italian National News Agency), 82% of the Italian population is not able to identify fake news online (ANSA, 2018). A social media analysis allows the understanding of the social impact of a certain topic, which is important to see how people use the democratic opportunity provided by these tools when referring to a conflict situation that happened to them, or that they are scared of.

There is a big difference in the use of social networks to reply to a certain topic posted by others, which may show our personal agreement/disagreement in this regards, and to post a personal experience in social networks producing an amateur video to show the conflict itself and spread the personal attitude, frustration and emotions after being personally affected by a conflict, in order to get consensus and support from others.

The authors reported examples of headlines of the main and most influencing newspapers throughout the alpine arc, comments of Facebook users in replying to a certain topic/conflict and few amateur videos referring to real conflict situations that occurred in the Alps.

Favour the dialogue among different competences



DESCRIPTION OF THE PROBLEM

In recent decades, the great activism of citizens is requiring major changes in the way public decisions are taken on projects that affect the community. More and more citizens are explicitly asking to be more involved in the decision-making process and to express their opinions.

In this historical period, on the one hand, there are many means of communication at disposal, but on the other hand, there is an increasing difficulty in listening and facilitating dialogue. It is demonstrated how the use of social media leads to a polarization of positions and makes changing opinions more difficult.

Generally, environmental issues, such as wildlife management, are also kindled by the complex technical-scientific content and lack of real knowledge. In the past, the mobilization of experts was a taken-for-granted, unproblematic aspect of decision-making processes. Experts would 'educate the public' and, in doing so, help to prevent and to solve conflicts. Confidence in the power of expertise has nowadays almost vanished and often expert interventions have been seen as manipulative, thus losing much of their credibility. Accusations of having engaged in mercenary practices have also been raised against experts.

Given the indispensable role of experts in the management of HWCs, the issue becomes that of securing its acceptance and its capability in listening, communicate and interact.

3. FAVOUR THE DIALOGUE AMONG DIFFERENT COMPETENCES

AIMS

- Recognizing the role of experts and the different knowledge and expertise of those working in the field.
- Taking different expertise (scientists, technicians, operators in the field, etc.) into the debate with the territory to enrich their proficiency in communicating.
- Favoring the dialogue and the exchange among different competencies to improve a plural vision of the problem, favor cooperative dynamics aimed at shared strategies to face the challenges.

TOOLS

ACTIVE LISTENING

In quickly changing scenarios (social, political, ethical values, etc.), innovative competencies are indispensable in order to improve the plural vision and a new deal with the territory (Riva, 2019). New, or reshaped, communication skills are fundamental to work efficiently in many fields, especially if complex and controversial as HW interactions. Good communication and, particularly, active listening (AL) are at the base of conflicts' prevention and management. According to Sclavi (2008), AL is expressed by the following statement: "In order to understand what another person is saying, you must assume that he/she is right and ask him/her to help you understand why.

In general, the correct attitude to adopt as an active listener is the direct opposite of what is conventionally expected of good observer: impassive, neutral, self-assured, heedless of his emotions. In dealing with a complex and controversial situation it is important to be open, non-judgmental and avoid contrived and paternalistic approaches. The basic requirement is to be "neutral" with respect to the issues at stake, and "multi-partial", which means with either equidistance or the same empathetic openness to all parties (Ropers, 2017). Furthermore, it is important to also take into consideration the emotional elements, to be considered as knowledge tools to explore the social and cultural context.

AL helps (Wilson, 2016) to:

- establish a professional connection with individuals and community members
- create the condition for open, honest and insightful conversation where mutual learning occurs
- build trust, credibility and empathy among stakeholders and those impacted by the conflict.

Considering the cultural norms of each country, there are different verbal and non-verbal languages that can help people to feel at ease and strengthen the climate of trust. Generally, the main tips for active listening and to improve the understanding are:

- use an easy-to-understand and "common" vocabulary
- select and prioritize the most useful information for the listener
- improve the ability of storytelling
- pose relevant questions to explore and clarify what the speaker said
- paraphrase or re-state what the speaker said
- summarize key points.

3. FAVOUR THE DIALOGUE AMONG DIFFERENT COMPETENCES

GOOD PRACTICES OF DIALOGUE

Dialogue is an essential tool, which has been used for thousands of years to address joint problems and guide collaborative social change. In contrast to the terms “discussion” and “debate”, which primarily focus on the content of a conversation, the word “dialogue” places equal emphasis on the relationship between the persons involved. Another difference is that “debate” often includes a competitive component to underline the superiority of one opinion, while “dialogue” implies mutual understanding and the aim to identify common ground (Ropers, 2017).

- **Interviews**

Interviews provide the opportunity to get the personal point of view of key stakeholders on a certain issue, without the direct confrontation with others. People feel free to express their knowledge and ideas. Interviews can be used to better identify different points of view of each stakeholder and to engage them in dialogue. It could be useful to meet stakeholders in the field to show interest in their job, to catch other types of information and to make them feel at ease through informal interviews.

- **Dialogue in small and large groups**

The dialogue with the territory should be inclusive, with the widest participation. It is important to work productively with a variety of stakeholders, who hold different values. To keep the discussions manageable despite the large group of participants, various formats should or could be combined: plenary sessions, thematic discussion tables, parallel working groups, etc. Technicians and experts should become “actors” in the process, effective and credible interlocutors towards the external public and they can do so through a guided educational path (Riva, 2019). Acknowledging and keeping distinct roles (technicians, experts, operators in the fields, citizens, administrators, etc.) and respecting them, is one of the best tools to make everyone talk without creating chaos, to improve the climate of trust and to broaden the scope of possible solutions.

4

Favour the transfer of coordination capacities at local, national and international level



An activity that clearly aims to support national or international development priorities, such as biodiversity protection and the local sustainable development, should not be driven by profit or self-interests but should rely on cooperative relationships that seek to enhance common strategies facing similar problems. In this regard, civil society has become a critical stakeholder in environmental decision-making processes and a valued profile in implementing and monitoring environmental policies at the local, national and also global level. Decentralized decision-making and implementation responsibilities require coordination among authorities at different levels of governance. Vertical coordination refers to relations between administrative levels (national, sub-national, local) and horizontal coordination of interactions between authorities and/or stakeholders at a specific territorial level. The real challenge is trying to integrate both systems.

DESCRIPTION OF THE PROBLEM

Sometimes it seems that is too late to act promptly, sometimes people do not actually realize that our daily behavior can positively or negatively influence the surrounding environment, thus allowing for potential conflicts. Many government levels confront most of the pressures for coordination and might be expected to invest more heavily in coordination, but there are numerous examples of their failure, especially regarding environmental issues. To have a comprehensive understanding of the causes of insufficient implementation of environmental policies, it is important to examine the role that multi-level governance plays in the delivery of environmental requirements across the Alpine countries. This includes the cooperation of national and regional authorities with regional and/or local authorities, as well as local and regional environmental governance. Insufficient coordination among local, regional and national environmental authorities might address the multi-level governance and refers to the situation where responsibilities are dispersed across several authorities without sufficient coordination. Horizontal cooperation is

4. FAVOUR THE TRANSFER OF COORDINATION CAPACITIES AT LOCAL, NATIONAL AND INTERNATIONAL LEVEL

not sufficiently embedded in administrative culture and the participation in networks and public events is lacking. In this situation local communities and stakeholders can get lost since they can not rely on concrete points of reference. Local administrative capacity is in part influenced by the effectiveness of coordination between levels of governance.

AIM

- Identifying possible actions that successfully address the root causes of poor multilevel coordination governance.
- Providing inputs on how to improve cooperation with, and better support to, local and regional authorities for effective multi-level governance in mitigating and preventing local human-wildlife conflicts.

TOOLS

CREATING MECHANISMS FOR COOPERATION ACROSS LOCAL COMMUNITIES AND PUBLIC AUTHORITIES ON CONCRETE ACTIONS SUPPORTING IMPLEMENTATION IN HWCS

Therefore, regional, national and local authorities should establish more concrete mechanisms to foster cooperation, to exchange practices and to facilitate economies of scale, such as joint managing working groups, formal cooperation structures or regional networks. These cooperation mechanisms also have the benefits of reducing compliance costs and maximizing the use of available specialist skills among stakeholders involved in the process.

The experience of the WP5 in the ALPBIONET2030 project demonstrates how facilitating communication between the governments or managing specific protected areas and local actors, is crucial to enabling anyone to recognize what activities are appropriate or not in biodiversity protection and ecological connectivity implementation perspective. When their capacities are adequately developed, civil local stakeholders and entities who dedicate themselves to biodiversity protection can provide technical assistance to communities and support environment and development programs at local level, since they have a deep knowledge of the territory they live in.

Effective environmental governance ensures the participation of all actors such as governments, municipalities, NGOs, the private sector, civil society, community groups, ordinary citizens and especially young students interacting with the environment at local, national and international level.

The local level plays a key role in bridging the information and exchange gap between the population, policymakers and institutions. It can support collection of information (as for example in the activity aiming at involving high school students in a survey about local human-wildlife conflicts), dissemination policy and implementation of development policy, as well as assessment and monitoring, making sure that concerns of those affected by environmental challenges and policies are considered in environmental governance. A good example comes from the alpine management of large carnivores. There is a need to take all the interests concerned to provide possible solutions to a well-known conflict into consideration. The ALPBIONET2030 role has been to promote the networking of different stakeholders to address issues in a collaborative manner and help to develop the

4. FAVOUR THE TRANSFER OF COORDINATION CAPACITIES AT LOCAL, NATIONAL AND INTERNATIONAL LEVEL

mindset necessary for coherent management of the project detected human-wildlife interactions. Local communities should have a voice in discussing the environmental conflicts and policies that affect them, as well as have a role in managing spaces where human and wildlife live closely. The main stakeholders, who are affected by the mentioned interactions and, at the same time, by the policies regulating their impacts, should be able to participate in developing and monitoring them.

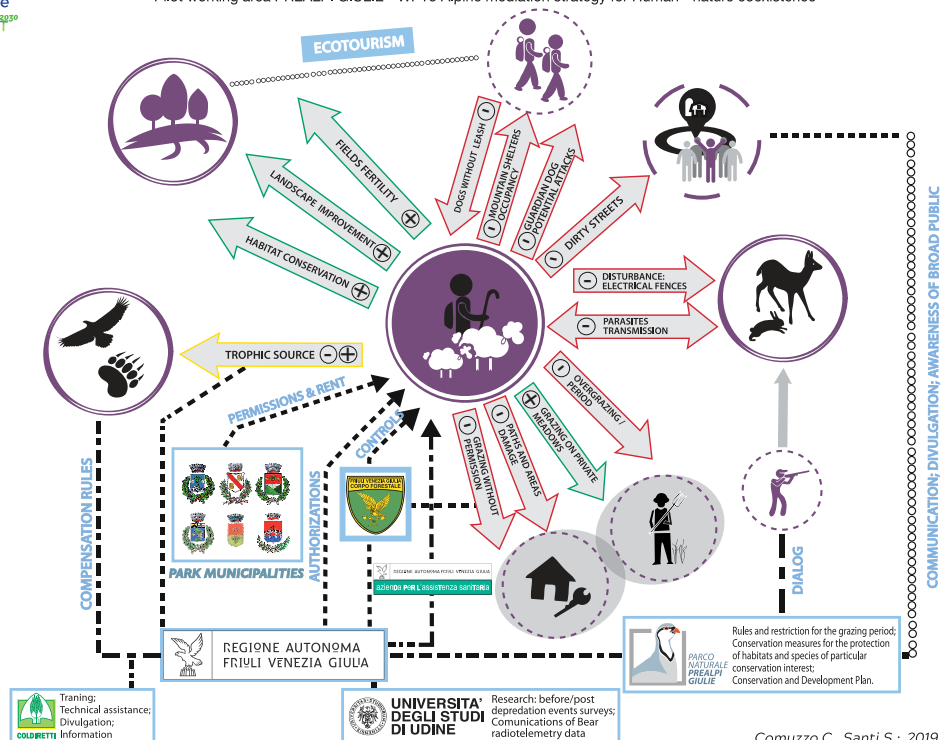
Participatory processes in local environmental governance and the national level remains weak. Local and national authorities hold the perception that local communities might constitute specific interest groups, with their participation resulting in policy distortions by incorporating their own interests or by opposing economic development in favor of environmental conservation processes. The situation is even worse if we consider the young (next) generation, which is rarely involved in participatory processes, concerning topics that might influence their healthy future. In this perspective, the crucial role of scientific research should cover the role of a driver for information dissemination on government activities at a national and international level supporting a constructive dialogue and the creation of spaces for collaboration in environmental issues. On the one side, a strong communication chain needs to be enhanced by the capacity of stakeholders to engage in national or local environmental policy evolution and dialogue processes, facilitating the formation of civil society networks, stakeholder roundtables and panels that enable local alpine communities to provide inputs to government deputies on agenda-setting and policy development processes. On the other side, the scientific community should promote awareness of environmental issues, policies and impacts by disseminating environmental information and knowledge to local communities, to young students and governments in order to address environmental problems and find adequate solutions (see the participatory process carried on in the Prealpi Giulie Regional Park and the related “map of relationship”).

FIGURE 7

The “Relations Map” created by the Prealpi Giulie Regional Park in cooperation with the University of Udine and Coldiretti



MAP OF RELATIONSHIP CONCERNING TRANSHUMANT SHEEP GRAZING IN HIGH NATURALISTIC VALUE AREAS - Pilot working area PREALPI GIULIE - WPT5 Alpine mediation strategy for Human - nature coexistence



Comuzzo C., Santi S.; 2019

4. FAVOUR THE TRANSFER OF COORDINATION CAPACITIES AT LOCAL, NATIONAL AND INTERNATIONAL LEVEL

Strengthening the capacity of the “local level” to participate in the development of policy and legislative frameworks for environmental alpine governance and management is crucial for bringing attention to concrete and real emergencies. This will permit including the integration of environmental concerns into sectoral policies at the national level and promoting constructive dialogue among government and local actors for participatory environmental policy development.

The implementation of all these activities remains an open question. To guarantee long-lasting effectiveness of the processes, organizational capacities (including skills in project development, resource management and administrative tasks) should be improved by increasing various activities specifically designed to contribute to particular participatory outcomes. During the ALPBIONET2030 experience, the involvement of stakeholder, strictly related to the analyzed interactions, has demonstrated how important it is to ensure continuity to the processes launched, factually proving the progress made through clear evidence (documents, flyers, videos, newsletter for example) and building alliances and networking with and between institutions and local actors nationally and regionally.

The project working regions’ study also profiled the importance of young-oriented education campaigns using questionnaires, posters, social media posts, public roundtables, conferences and other communication vehicles. However, the “social analysis” provided within the WP5, demonstrates how the public spaces with the widest civic participation are found online, including social networks and other internet platforms. Such tools are inexpensive, pervasive and can (mainly negatively) influence youth as well as adults.

FIGURE 8

Example of a typical newspaper headline contributing to the escalation of a conflict



Contesto della foto: Martedì 16 Aprile 2013

Il caso Nei boschi e nelle campagne «boom demografico» di specie che sembrano appartenere alle fiabe
Orsi, cervi e lupi: è tornato il Medioevo
Sono troppe anche le volpi. E Cremona dà il via libera alla caccia

4. FAVOUR THE TRANSFER OF COORDINATION CAPACITIES AT LOCAL, NATIONAL AND INTERNATIONAL LEVEL

To be effective environmental advocates and public intermediaries or mediators, people should master these tools providing scientific discussion basis in channels that do not usually offer it. The “national level” is usually absent in these particular channels, but they should be considered as tools able to provide information to a diverse audience in compelling formats and inspiring local and national participation in judgment/evaluation processes.

Different stakeholder engagement and platforms are necessary to combine different opinions, expertise, and aspirations from different sectors, to manage human-wildlife interactions, provide feedback on the effects of these dynamics, resolve conflicts and maximize benefits. They are essential to create consensus among stakeholders, which is necessary for environmental actions to be actively accepted and promoted, rather than opposed or just tolerated without critical evaluation.

ACTIONS

- Understanding cross-sectoral nature of the problem purpose or vision statement
- Integrating cross-sectoral knowledge sources
- Trusting in a facilitative leader by different sectors creating mechanisms for dialogue and power sharing
- Enabling all stakeholders to:
 - successfully initiate, design and implement partnerships for implementation
 - effectively monitor and evaluate their partnership efforts and learn from their experiences
 - effectively feed their experiences into policy making
- Strengthening the stakeholder community as whole and those engaged in working partnerships by increasing effectiveness of decisions adopted
- Enabling trained stakeholders to carry out similar capacity development programmes through:
 - Addressing intellectual, practical, and personal challenges of mediation approaches in human-wildlife interactions
 - Learning about tools and techniques for designing and implementing human-wildlife mitigation techniques
 - Building necessary background knowledge and relevant decision making processes
 - Learning about the processes used to design, implement and evaluate the capacity development of the actions adopted.

Manage conflicts at local level



DESCRIPTION OF THE PROBLEM

European directives, national and local laws try to prevent and minimize conflicts between human activities and wildlife. They are fundamental to define the framework and the main rules. Nevertheless, there are no solutions that work for all contexts, due to the diversity of European situations. It is necessary to involve the interested parties to better understand the problem, the local context and to identify a range of solutions that work best in each one.

Another erroneous assumption is that bringing all stakeholders together for a big meeting constitutes effective stakeholder engagement. On the one hand, a methodology and a well-defined structure are necessary to ensure that essential steps and principles are guaranteed. On the other hand, the process should be adjusted to the realities, issues and circumstances without compromising the integrity of the methodology.

AIMS

- Managing conflicts at local scale considering the transnational dimension of the problem as an opportunity to exchange good practices, to look for innovative and integrated solutions.
- Raising awareness among decision-makers on the importance of the new approach in conflict management.
- Implementing inclusive decision-making processes to manage HWCs.

TOOLS

LOCAL WORKSHOP

Hereunder, we describe the main steps of local workshops organized in the Project Working Regions in the framework of the Alpine Space ALPBIONET2030 project. This method has a well-defined structure but at the same time a large and continuously evolving “toolbox” to adapt it to the specific case studies. The aim of the workshop is to explore the problem from different points of view, to take into account the local context, to identify the primary issues, to look for solutions capable to satisfy all interests, to invent multiple options, to favor cooperative dynamics aimed at a shared solution of the problem, in order to achieve an integrated package of agreements which is acceptable for all. In this sense, the described method is able to effectively respond to different HWCs which may be encountered in EC projects.

a) Scoping phase

- **Select the site and the conflict to be prevented or to be managed**

The first scoping phase involves a site visit and interviews with local stakeholders and experts in order to get the first insight into the impact of the analysed conflict at local level and on the social response of local communities. Typical questions to ask in this phase are:

- What are the main difficulties in the management of wildlife?
- Which issue do the local stakeholders want to address?
- What are the strength, the potential and the limit of the proposed approach?
- What kind of results can be obtained?

The on-going conflict will be examined also by searching for online information and in local newspapers and through contributions from available bibliographies. On the basis of the information collected, conflict analysis [SEE PARAGRAPH 1] should be used to gain insight into the dynamics of a given conflict situation, in order to propose which interventions can be applied and how.

- **Getting started**

This step concerns handling logistics and convening initial meetings.

Typical questions at this stage are:

- What are the issues to be discussed?
- What type of process is needed (prevention, mediation, participation, etc.)?
- Who could convene and host the platform?
- Who can we facilitate it?
- Is an external facilitator or mediator needed?
- Who should participate?

The process decided depends on the extent to which the conflict has developed, the local context, the room of manoeuvre for influence realistically, the experience of stakeholders working together. The scoping phase could require several rounds, depending on the extent to which stakeholders agree on, which conflict to deal with, what the workshop should address, which intervention could potentially be most beneficial. Once we have enough information on previous points of the scoping phase, the second phase starts.

b) Implementation of the participatory or mediation process

- **Call:** all interests must be represented, spokespeople or team leaders have to be chosen, stakeholders and missing groups or strategies for representing diffuse interests identified. Make use of conflict mapping to visualize the current situation [SEE PARAGRAPH 1].

5. MANAGE CONFLICTS AT LOCAL LEVEL

- **Interaction:** use inclusive decision-making processes by choosing the most suitable technique. At the beginning briefly explain the issue to deal with, clarify the purpose of the workshop, what has already been done on the topic, the room for manoeuvre of participants, why it was chosen a participatory approach, the schedule and how they will work. All this enhances the trust-building. During the interaction it is important to suspend criticism, explore the interests of each party, find common ground, encourage the design of multiple solutions and favor mutually beneficial options.
- **Role of experts:** require the involvement of experts whenever needed, favor the exchange among competences and the mutual learning process
- **Draft of the decisions taken:** help participants to converge and draft their agreements ensuring that all representatives have been in touch with their constituents
- **Evaluation and monitoring:** agree on monitoring arrangements for the agreements' implementation and ensure that the parties involved deliver on their commitments. If subsequent disagreements emerge, reassemble the participants and help to remind the group of its earlier intentions.

The process should be carried out with professionalism, rigor, fairness, objectivity, impartiality and balance and be subject to independent checks and verification. At all times in the process the principles below have to be guaranteed:

- **Room for manoeuvre:** at the outset of the process all participants are exactly informed about this scope. Participants are thus in a position to judge their scope for influence realistically.
- **Relevance:** the process should be focused on the issues that matter.
- **Equal opportunities:** participants are offered equal opportunities and equal scope for influence. All target groups are addressed in a balanced way. The concerns of participants are taken seriously. Arguments and counter-arguments are dealt with in fairness. Participants meet each other in a climate of partnership. A fair way of dealing with each other is the basis for fruitful cooperation.
- **Joint responsibility:** all participants are invited to take responsibility for the jointly performed work and its outcome. In this way both the quality of the outcome and people's identification with it can be improved.
- **Responsive:** the decision-makers take account of the results. 'Take account' means that they deal with the results respectfully and include them in the decision as far as possible. In this way politics and administration can build confidence.
- **Transparency:** ensure public access to information, identify the factors that are to be taken into account in decision making and acknowledge limitations and difficulties.

Raise awareness: young generations as a special target



DESCRIPTION OF THE PROBLEM

The Alpine Arc is one of the most important biodiversity hotspot for Europe and the World (Schoville et al., 2018) but different threats could cause the demise of its biological treasures. One of these threats could be the lack of awareness and the negative perception of the people towards wildlife and conservation (Gamalo et al., 2018).

Young generations represent our future and will be the new stakeholders that will have the task to rule and manage the landscape and the conservation of nature soon. Traditionally young people are pushed aside within the conservation field, excluded from international decision-making processes and youth-led projects are often under-funded, unevaluated and unfollowed-up. Youth worldwide lack the support, opportunities and the confidence to pursue a viable career in wildlife and nature conservation, which leads to a nature-disconnected generation. Young generations, especially those living in remote areas subjected to conflicts with nature and wildlife, might be influenced by the family beliefs and attitude towards the negative interactions they experienced – together with the “rumors” circulating easily in small communities – and build up a personal opinion, which is not based on scientific knowledge. Wrong beliefs built up in the juvenile period are extremely difficult to dismantle and can influence a person’s behaviour for the rest of his/her life.

Young people have varying levels of awareness about wildlife and conservation. Depending on their levels of awareness, youth vary drastically in their attitudes and beliefs about what constitutes conservation efforts, who the stakeholders are and their roles, what the effects of human activities on mountains are, what poaching constitutes, etc. Youth who have exposure to wildlife, as well as academic knowledge about wildlife, are more likely to be motivated to engage in conservation efforts. Additionally, we wanted to question the role of schools in increasing young

6. RAISE AWARENESS: YOUNG GENERATIONS AS A SPECIAL TARGET

people's nature knowledge and awareness for their own territories and about the biology of wild-life species and the coexistence with them.

It is important to involve students from different locations (city / rural area / transboundary regions) in order to see and compare the different responses to a conflict due to a different perception (because of educational, familiar, cultural, economic or historical reasons) they have of it. Yet, we are at a critical time in regard to wildlife and environment and we need these dedicated and passionate individuals to become the strong conservation leaders of tomorrow.

Engaging young people requires a well-planned strategy, targeting each segment with individual, relevant messages and rewards in terms of emotional, social or financial capital offered in exchange for interest and engagement.

AIM

- Understanding the current state of young alpine inhabitants' knowledge, attitude, beliefs and behaviour related to wildlife presence and conflicts.

TOOLS

MEETINGS IN SCHOOLS

The direct encounter with students is the best way to present them concrete cases of human-nature interactions and science-based knowledge. It is important to present the facts in an easy and understandable way, concentrating on the facts and on the concrete effects they (might) have on their own environment and social matrix. It is important to be open to questions and doubts from students, since many of them already have their own ideas and interests and many of these can be influenced by the families' attitude. According to their age, students are more curious and prone to ask questions and present their own opinions and ideas. It is important to talk about phenomena currently happening in order to check their level of information on the topic, their interest and their personal involvement.

Each level of school education (from primary to high secondary) should have its own curriculum, be subjected to changes, dealing with local nature and wildlife species, and the coexistence with them. Meetings in schools should be done on a regular basis. A regular encounter between school and science on coexistence topics can build up trust towards the scientific work and stimulate students to get more into a specific issue.

DEDICATED WORKSHOPS

Workshops are a way to engage a certain amount of people to inform and discuss a certain topic and commit them to take action.

A one-, or even half-day, workshop on HWCs (i.e., the human-wolf relationship; animal-vehicle collision; etc.) happening in their area, allows to present it in a comprehensive way and to have time to involve students in a concrete work revealing their personal knowledge and attitude.

1. The initial part should be dedicated to presenting the topic in its biological and environmental aspects, explaining the jurisdictional implications, highlighting the effects this interaction

6. RAISE AWARENESS: YOUNG GENERATIONS AS A SPECIAL TARGET

has with human activities and the social response of the population and institutions, locally and in other areas.

2. Secondly, a moderated open discussion should be stimulated, in order to collect the current knowledge and attitude of involved students.
3. In the third part, students should be divided into groups of 5 to 8 people with a coexistence problem to solve. Their role, in the subsequent amount of time, would be the elaboration of a coexistence strategy, describing the measures needed to promote and implement it and the potential benefits from an environmental, social and economic point of view.
4. A final discussion will be engaged when describing the different strategies, guided by a dialogue facilitator who will point the attention not only on the technical aspects of each strategy, but also on the importance of dialogue and of listening to the others' ideas and reasons.

SURVEY FOR STUDENTS

A survey is an investigative tool that makes the collection of a significant amount of information on quantitative and qualitative variables possible in a short period and allows for data standardization and comparative analysis. A survey can be a very powerful tool for collecting information from a significant part of the whole population, providing an image of it.

In the case of students, the survey can be used to investigate their level of knowledge, attitude and commitment towards wildlife species and the natural processes occurring in their own areas. Additionally, a survey aims at assessing the students' awareness of the current human-wildlife interactions happening in their area and their willingness for the future of their community in terms of human-wildlife relationships. A survey about human-wildlife interactions should include question blocks related to: knowledge about ecological issues, perception of wildlife and conflicts, personal lifestyle, emotions and ethics, wishes for the future, willingness to participate and be informed in topics regarding natural resources.

The language should be simple, and questions must stimulate the expression of opinions, expectations and feelings. Surveys should be anonymous and pre-tested to a sample of individuals who are not to be involved in the real survey.

A better understanding of the current youths' attitude toward wildlife may help to find better ways to inform and involve the next generation. Furthermore, through a survey, it should be possible to identify deficiencies in environmental education and the level of knowledge of students about the biological and ecological aspects of wildlife species. It is possible to investigate the impact of the family, teachers/school, or media as sources of information influencing youths.

POSTER

Posters can provide a comprehensive visual overview on a topic, giving time to the viewer to get into it and understand the described processes and results. Posters should have as less written text as possible, but rather present graphs, images and ta-



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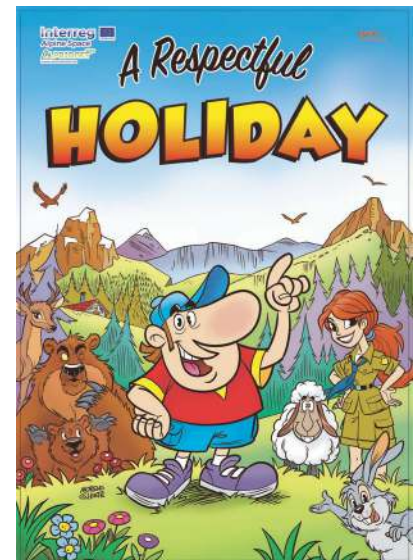
bles. Usually, posters are accompanied by the author(s), who can guide the viewer through it and reply to the questions. During the ALPBIONET2030 WPT5 activity 2, we have developed the poster "Youths' attitude and awareness towards human-wildlife interactions in the Alps" using the results of the above-mentioned survey. The idea behind it was to provide an image of the awareness of the future local administrators on current conflicts also occurring in their territories (outdoor sports activities, presence of large carnivores, poaching) for a more efficient human-nature coexistence.

COMIC BOOK

Comic books can reach an additional share of the audience. We learn to coexist with the members of our family, with our friends and the other species as soon as we are born and during the whole course of our lives. The process of coexistence can be assimilated to a process of resilience, creating value out of the efforts for adaptation to the new conditions.

Children learn this process very fast and it is important to provide them a clear message in a way that can be recognized as familiar in order to create a comfortable environment and stimulate the reading.

The comic book, mainly designed for primary and secondary schools, relies on the importance of knowing and respecting the laws of nature when we want to experience all the benefits it can provide us.



Overview

KEY ELEMENT	WHY	HOW
1. Identify and analyse current human-nature conflicts	It is the first step in the management process. To understand the underlying, to prevent conflicts and to act more effectively once they occur	<ul style="list-style-type: none"> • Conflict analysis, interviews, site visits, survey, desk research, local press and social media analysis
2. Inform, improve scientific knowledge on wildlife, coexistence and conflicts	Spread scientific information through different means of communication to foster discussion based on science	<ul style="list-style-type: none"> • Articles in the local press, scientific blogs, professional video, educational, conferences
3. Favour the dialogue among different competences	Inclusive dialogue with mutual acknowledgment of different roles and knowledge	<ul style="list-style-type: none"> • Active listening, interviews, dialogue in small and large groups
4. Favour the transfer and the coordination at national and international level	Develop and strengthen the exchange of information and experiences from the local to the international level	<ul style="list-style-type: none"> • Identifying, understanding and working with the interplay of power and interests, and varying perspectives that motivate sectors and actors involved • International workshops
5. Manage conflicts at the local level	Inclusive decision-making processes to identify a range of solutions which work best in each context	<ul style="list-style-type: none"> • Local interactive workshops
6. Raise awareness, young generations as a special target	Young generations provide a basis for a real and effective change and can influence adults	<ul style="list-style-type: none"> • Meetings in schools, dedicated workshops, surveys, posters, comics

Conclusions

Adequate prevention and management of HWCs require several adjustments to the practices of many sectors, including agriculture, breeding, forestry, hunting, transport, waste management, outdoor activities in the mountains, as well as dealing with general concerns of many rural residents, tourists and with the opinions of the large public. There are basic needs that must be preserved, different goals that can be negotiated among stakeholders and different attitudes that can escalate to very high levels and dominate the political debate.

Many impacts can be mitigated in a technical way through the adoption of rules and suitable solutions, but this is not enough. The maintenance of ecological networks and the survival of many wildlife species not just rely on innovative solutions, but also on an increased tolerance and social carrying capacity that cannot be achieved only by laws, science, money or fences alone (Madden & McQuinn, 2017). It is a long term process that empowers stakeholders to become involved in dynamic constructive change processes to build sustainable and equitable conditions for coexistence.

In environments highly populated like the Alps, the coexistence is possible if we know how to deal with conflicts. Administrators, decision-makers, practitioners and people in general affected by conflicts need a new approach to conflicts, knowledge and tools to prevent and manage them. For the implementation and maintenance of ecological networks, it is fundamental to stress the deep relationship existing between humans and the natural environment, highlighting the environmental and socioeconomic benefits that may arise from coexistence activities and the management of conflicts.

The ALPBIONET2030 toolkit does not look at the conflict as a problem, but as an opportunity and provides a systematic approach to work on through several actions simultaneously. The first step is the acceptance of conflicts, their identification and the importance to pay attention to hidden elements to uncover latent conflicts, to act more effectively and to prevent escalation. The involvement of local stakeholders is essential to better understand the problem, the local context and to identify a range of solutions that work best in each area, taking into consideration the transnational dimension of the issue and the importance of the coordination. It is important to exchange good practices, to look for innovative and integrated solutions at local, national and international levels.

The dialogue with the territory should be inclusive but should respect different roles and competences. It is important to foster the exchange at any level: from scientists to persons who work in the field. In a mutual learning process the knowledge-based dialogue is more fruitful.

Means of information play an important role in amplifying the news about the conflict or the issues in question, in supporting one or other of the parts, or in guaranteeing that information is given fairly. It is important to improve scientific knowledge to spread scientific information on wildlife, coexistence and conflicts through different means of communication to foster discussion based on science. Finally, it is crucial to raise awareness on wildlife, coexistence and con-

CONCLUSIONS

flicts at all levels. We identified a special target: young people. Young generations, as we have seen recently, provide a basis for a real and effective change and can influence adults.

The toolkit is not intended to offer a comprehensive approach and additional tools would be needed. It does offer an innovative approach, tips and simple tools to be adapted as necessary to the particular circumstances being as creative as possible, to administrators, decision-makers, researchers, practitioners and in general people affected by HWCs.

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VIDEO

ALPBIONET2030 WTP5 video: <https://www.youtube.com/watch?v=T89WD5CN678&t=2s>

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About the project

CONFLICT MANAGEMENT TOOLKIT FOR THE ECOLOGICAL CONNECTIVITY IN THE ALPS

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Interreg
Alpine Space
ALPBIONET²⁰³⁰
EUROPEAN REGIONAL DEVELOPMENT FUND



The **AlpBioNet2030 Alpine Space project** has the main objective of studying the ecological connectivity throughout the Alps, and identifying physical, natural and social barriers that currently prevent concrete implementation throughout the territory. The project is intended to put forward concrete measures capable of overcoming the existing barriers and building them into a strategy shared by all Alpine countries.

This objective was translated into the identification of **Strategic Alpine Connectivity Areas (SACA)**.

In relation to the **Work Package Thematic 5**, guided by **Eurac Research**, particular importance was given to the study of social, environmental and economic factors, which may hinder the implementation of actions and projects intended to support ecological connectivity at a local level.