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4

LIFE18 NAT/GR/000768

Improving human-bear coexistence in 4 National Parks of South Europe

SWOT Analysis (Action C1, Sub-action C1.1)

Ανάλυση SWOT



Callisto
Wildlife and Nature
Conservation Society

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Authors

Dr. Tasos Hovardas

Human Dimensions Expert of CALLISTO-Wildlife and Nature Conservation Society

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SUMMARY

The deliverable presents Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis for each of the four National Parks in the frame of LIFE ARCPROM, Action C1 (Stakeholder consultation and involvement), Sub-action C1.1 (Stakeholder Analysis). Data collection employed standard methods in social science research (interviews; survey) with stakeholder members in each location, while data analysis involved coding of participant input in the four categories of the SWOT template for each stakeholder group: (1) Strengths [ingroup aspects favoring (good practice in/agreement for) bear conservation and management]; (2) Weaknesses [ingroup aspects hindering (good practice in/agreement for) bear conservation and management]; (3) Opportunities [intergroup aspects favoring (good practice in/agreement for) bear conservation and management]; (4) Threats [inter-group aspects hindering (good practice in/agreement for) bear conservation and management]. SWOT tables for each park reveal stakeholder synthesis, perceptions and positioning along core aspects of bear conservation and management. Therefore, they comprise an insightful stakeholder analysis for each different location and will be used to inform the establishment and operation of Platforms for Coexistence between People and Bears in each park in Sub-action C1.2. In this direction, project partners and platform members to be engaged need to proceed to a strategic planning of stakeholder interaction and joint action so as to build on Strengths and Opportunities, and effectively address Weaknesses and Threats. The overall objective in each location will be to mobilize available resources for adapting and updating, when necessary, good practice in bear conservation and management

ΠΕΡΙΛΗΨΗ

Το παραδοτέο περιλαμβάνει την ανάλυση Ερεισμάτων, Αδυναμιών, Ευκαιριών και Απειλών [Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis] για καθένα από τα τέσσερα πάρκα στο πλαίσιο του προγράμματος LIFE ARCPROM, και πιο συγκεκριμένα, της Δράσης C1 (Διαβούλευση και εμπλοκή ενδιαφερόμενων μερών/κοινωνικών εταίρων, Υπο-δράση C1.1 (Ανάλυση ενδιαφερόμενων μερών/κοινωνικών εταίρων). Η συλλογή δεδομένων έγινε με κλασσικές μεθόδους κοινωνικής έρευνας (συνέντευξη, ερωτηματολόγιο) με μέλη των ενδιαφερόμενων μερών σε κάθε περιοχή. Η ανάλυση των δεδομένων έγινε με κωδικοποίηση των αποκρίσεων των ερωτώμενων στις τέσσερις κατηγορίες της ανάλυσης SWOT: (1) Ερείσματα [ενδο-ομαδικά στοιχεία που ευνοούν τη διαχείριση και προστασία της καφέ αρκούδας (καλές πρακτικές, συμφωνία ενδιαφερόμενων μερών)], (2) Αδυναμίες [ενδο-ομαδικά στοιχεία που δυσχεραίνουν τη διαχείριση και προστασία της καφέ αρκούδας (καλές πρακτικές, συμφωνία ενδιαφερόμενων μερών)], (3) Ευκαιρίες [δι-ομαδικά στοιχεία που ευνοούν τη διαχείριση και προστασία της καφέ αρκούδας (καλές πρακτικές, συμφωνία ενδιαφερόμενων μερών)], (4) Απειλές [δι-ομαδικά στοιχεία που δυσχεραίνουν τη διαχείριση και προστασία της καφέ αρκούδας (καλές πρακτικές, συμφωνία ενδιαφερόμενων μερών)]. Οι πίνακες SWOT για κάθε πάρκο αναδεικνύουν τη σύνθεση των ενδιαφερόμενων μερών σε κάθε περιοχή, καθώς και τις αντιλήψεις και τοποθετήσεις τους αναφορικά με κομβικά στοιχεία της προστασίας και διαχείρισης της καφέ αρκούδας. Για τον λόγο αυτό, το περιεχόμενο των πινάκων συνιστά μια περιεκτική και στοχευμένη ανάλυση των ενδιαφερόμενων μερών και θα αξιοποιηθεί για την ίδρυση και λειτουργία Πλατφορμών Συνύπαρξης Τοπικών Κοινωνικών και Αρκούδων σε κάθε πάρκο στην Υπο-δράση C1.2. Προς την κατεύθυνση αυτή, οι εταίροι της κοινοπραξίας και τα μέλη των Πλατφορμών οφείλουν να εκμεταλλευτούν τα Ερείσματα και τις Ευκαιρίες αλλά και να αντιμετωπίσουν αποτελεσματικά τις Αδυναμίες και Απειλές. Ο γενικότερος στόχος είναι σε κάθε περιοχή η κινητοποίηση των απαραίτητων πόρων για την υιοθέτηση και προσαρμογή, αν αυτό καταστεί αναγκαίο, καλών πρακτικών στην προστασία και διατήρηση της καφέ αρκούδας.

Introduction and overall rationale

This deliverable is submitted within the frame of for LIFE ARCPROM project, specifically, for Action C1: Stakeholder consultation and involvement, and more specifically, Sub-action C1.1: Stakeholder Analysis. It contains all necessary background information for all parks in the project (Prespa National Park; Northern Pindos National Park; Rhodope Mountain Range National Park; Majella National Park) to inform the establishment and operation of Platforms for Coexistence between People and Bears in each park in Sub-action C1.2.

Background information focuses on stakeholder perceptions towards and positioning along core aspects of bear conservation and management (e.g., bear attitudes; damage prevention methods; bears approaching human settlements; development options concentrating on bear presence) and it has been processed and structured in the form of a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis. Since the SWOT table offers an overview of stakeholder synthesis, perceptions and positioning, it comprises an insightful stakeholder analysis for each park.

Specifically, the SWOT template provides orientation for the potential of adapting and updating, when necessary, good practice in bear conservation and management and the potential of stakeholder agreement, in this regard. Convergences and divergences between stakeholder groups are outlined so that stakeholder interaction will be steered in a productive manner. The analysis outlines both ingroup and intergroup factors, offering a strategic planning and decision-making heuristic for the operation of multi-stakeholder governance schemes, like the Platforms to be established in Sub-action C1.2.

Former attempts to set up and operate analogous multi-stakeholder governance schemes have shown that stakeholder collaboration is possible and fruitful provided that it is wisely steered towards productive trajectories (Hovardas & Marsden, 2018; Marsden & Hovardas, 2020). The collaboration of various stakeholder groups of heterogeneous origin and worldviews has been so far encouraging within the frame of the EU Platform for Coexistence for People and Large Carnivores (ENV/D.3/SER/2017/0021; ENV.B.3/SER/2014/0036), which has lately inspired the establishment of Regional Platforms with analogous character and operation (Hovardas & Marsden, 2020). Although stakeholder interaction may never be ideal in these schemes, the outcomes of cooperation and joint action of different stakeholders shows that these attempts may be realistic and applicable at various scales and local contexts across Europe.

In an analogous manner, the experience from concrete localities so far has unraveled a potential of stakeholders in bear conservation and management to collaborate on concrete goals with concrete results. Again, this experience may be far from ideal or perfect, but nevertheless, it showcases that stakeholder collaboration is realistic and feasible despite given of resurfacing disagreement and tension. The accumulating experience from LIFE AMYBEAR (Hovardas, 2020) and other projects (Hovardas, 2010; 2012a; 2015a, b) has shown that improvement can be expected and progress can be made under certain circumstances. Under the light of this evidence, Sub-action C1.1 in LIFE ARCPROM wishes to set the stage for Sub-action C1.2, providing the necessary background information and guidance for setting up and operating the platforms in each locality. Given the relatively confined number of schemes explicitly focusing on large carnivores that currently operate all over Europe, Action C1 of LIFE ARCPROM is anticipated to shed much light on multi-stakeholder governance of large carnivores and bears, in particular, and enrich the existing knowledge base with experiences gained in the four localities where the action will take place.

Methods

Prespa National Park

Rationale

The Prespa National Park was the only park in LIFE ARCPROM, for which no background data existed prior to the start of the project. Therefore, data selection and analysis in this case was undertaken within the frame of the first Sub-action of Action C1. Specifically, interview data with stakeholder members have been gathered and analyzed. The SWOT template has been used to process and structure data analysis and presentation, as will exemplified in the next sections.

In this deliverable, two different ways of presenting processed data have been followed. Namely, in the forthcoming section titled “Presentation of SWOT analysis for the Prespa National Park”, the main results per stakeholder group are presented. In addition, several SWOT tables have been prepared, focusing each on a different topic (see “SWOT template” below; Tables 1-5). In these tables, specific accounts for each stakeholder group are specified with reference to different topics.

Overall, the SWOT template provides a comprehensive overview of stakeholder analysis, by revealing the heterogeneity of stakeholder synthesis (i.e., how many and which stakeholder groups are engaged in which topics in bear conservation and management) as well as stakeholder perceptions towards and positioning along the above topics. This stakeholder analysis will then be used as background information for reference during the establishment and operation of Platforms for Coexistence between People and Bears, which will be established in each park in Sub-action C1.2. Specifically, the SWOT template provides orientation for the potential of adopting good practice in bear conservation and management and the potential of stakeholder agreement, in this regard. Convergences and divergences between stakeholder groups are outlined so that stakeholder interaction within the Platforms will be steered in a productive manner.

Sample selection

Purposive and snowball sampling started with a shortlist of potential interviewees drafted in collaboration with the Management Authority (Body) of the Prespa National Park. Altogether, 33 semi-structured interviews were contacted with several members of stakeholder groups in the area, including local producers in the primary sector, members of local councils and local residents employed in sectors other than the primary sector, hunters, members of environmental non-governmental organizations, professionals in education/communication, tourist entrepreneurs, Board Members/employees of development organizations (Development Company of Florina; Chamber of Florina) and Board Members/employees of the Management Authority of Prespa National Park. Sample selection was terminated when information was situated (i.e., information provided in an upcoming interview diminished and was negligible as compared to already accumulated data). The Human Dimensions Expert of CALLISTO-Wildlife and Nature Conservation Society, Dr. Tasos Hovardas, acted as the interviewer. The first part of the interview was devoted to a stakeholder mapping reflection procedure with the interviewee, so that stakeholder synthesis was verified as the interview progressed. The interview protocol focused on a series of topics, which largely overlapped with actions of LIFE ARCPROM, and where the forthcoming operation of Platforms will also refer to. Interviewees were encouraged, however, to expand on any issue they considered important or relevant, on top of the pre-specified themes and questions. Interviews lasted no more than an hour. All interviewees granted their informed consent for recording the interviews, after having been briefed on the scope and rationale of LIFE ARCPROM, Action C1 (Stakeholder consultation and involvement) and Sub-action C1.1 (Stakeholder Analysis). Participation of interviewees was voluntary and anonymous.

Data analysis

Interviewee accounts were coded in four different categories: (1) Strengths [ingroup aspects favoring (good practice in/agreement for) bear conservation and management]; (2) Weaknesses [ingroup aspects hindering (good practice in/agreement for) bear conservation and management]; (3) Opportunities [intergroup aspects favoring (good practice in/agreement for) bear conservation and management]; Threats [inter-group aspects hindering (good practice in/agreement for) bear conservation and management]. An inter-rater reliability analysis performed between two independent coders (Interviewer and expert in qualitative data analysis) revealed an index of over 0.85, indicating satisfactory reliability.

SWOT template

The SWOT analysis for Prespa National Park has been distinguished in different topics, which are presented in Tables 1-5: Attitudes towards bears (Table 1); methods for preventing damage caused by bears (Table 2); bears approaching human settlements/the regional road network (Table 3); development options concentrated on the bear (Table 4); and the Managing Authority of the Prespa National Park (Table 5).

Northern Pindos National Park

Rationale

SWOT analysis for the Northern Pindos National Park has been undertaken within the frame of the LIFE ARCPIN project (LIFE12 NAT/GR/000784), Action A3 (see Hovardas, 2015a; Appendix 1).

Sample selection

This SWOT analysis was based on 25 semi-structured interviews and 4 focus groups (32 respondents, overall). Purposive and snowball sampling started with a shortlist of potential interviewees drafted in collaboration with Grevena Development Agency. The rest of the specifications followed for sample selection mirror the details already reported for the Prespa National Park.

Data analysis

Data analysis followed the same procedure reported for the Prespa National Park. Inter-rater reliability, calculated again with the contribution of an expert in qualitative data analysis, amounted to over 0.85.

SWOT template

The SWOT analysis for Northern Pindos National Park has been distinguished in two different topics, which are presented in Tables 6 and 7 respectively: damage caused by bears and bears approaching human settlements (Table 6); illegal poisoned baits (Table 7).

Rodopi Mountain Range National Park

Rationale

SWOT analysis for Rhodope Mountain Range National Park has been undertaken under a contract with the Management Authority of Rhodope Mountain Range National Park (see Hovardas, 2015b; Appendix 2).

Sample selection

This SWOT analysis was based on 31 semi-structured interviews and 3 focus groups (40 respondents, overall). Purposive and snowball sampling started with a shortlist of potential interviewees drafted in collaboration with the Management Authority of Rhodope Mountain Range National Park. The rest of the specifications followed for sample selection mirror the details already reported for the Prespa National Park.

Data analysis

Data analysis followed the same procedure reported for the Prespa National Park. Inter-rater reliability, calculated again with the contribution of an expert in qualitative data analysis, amounted to over 0.85.

SWOT template

The SWOT analysis for Rhodope Mountain Range National Park is presented in Table 8.

Rationale

The following SWOT analysis aims to systematize strengths, weaknesses, opportunities and threats connected to the participation activities to be developed in action C1.2, concerning coexistence between human activities and the bear presence in the territory of the Majella National Park.

For this purpose, it was considered important to include, for each stakeholder category, reflections concerning any aspect that must be taken into consideration in organizing the participatory process: e.g., the "power" held by the stakeholder (which determines a high degree of potential influence on the success of the project), its intervention capacities (existing or potential) on the territory, on the habitat or on the bear itself, up to the perception about the bear presence.

Data sources

As foreseen by the project, no specific interviews were carried out in order to fill in the following template, with the exception of two interviews, carried out with MNP technicians and with the editor of the report "Communication and participation in the Majella Park - Actors, dynamics and shared choices for the management of environmental conflict and the presence of the bear", based on an accurate survey commissioned by the Park at the University of L'Aquila, for which over 400 interviews were conducted throughout the territory.

Sample selection (brief summary from the original survey)

For the construction of the Stakeholders map, 3 main categories of subjects have been identified:

- Category A - Institutional actors: Local Authorities, public bodies and agencies provided by law, with specific profiles and tasks in reference to specific functions of the Government and partially also of the Park.
- Category B - Local operators: public and private stakeholders, divided into three categories: Local producers, Service providers, Local users.
- Category C - Interface actors: public and private subjects who, despite their total autonomy, carry out tasks that somehow intercept those specific of the Park.

Once the categories were identified, the directories were built starting from the Park's available data (subsequently integrated) and then, has been defined the number of actors to be involved for each category. In addition to an equal representation of each category of actors, a criterion of geographical distribution was taken into consideration: 7 areas were identified (including the entire territory of the Municipalities affected by the presence of the Majella National Park) on which the Stakeholders have been georeferenced and selected, so that each area could be equally represented. Altogether, 1.323 actors were registered: 105 from category A, 1136 from category B, 82 from category C. From these, 306 interviews were carried out and 402 persons listened (some interviews involved more actors simultaneously).

Data analysis (from the original survey)

The definitive database, containing 306 files, was obtained following a long control work, on the Survey Monkey application, for checking the correct and complete compilation of the interviews, by verifying the correspondence between the general information relating to the interview (code interview; interviewer), reference geographic area, place, date and time of start / end of the interview), up to those of the interviewee (personal data; interviewee's activities; etc.) present in the reference cards for interviewers.

The interviews were recorded and, in some cases, filmed. The average duration was one hour and the working climate was almost always friendly (the interviewers also had the task of assessing the availability of the people interviewed, in order to better evaluate the answers provided). The contents were collected in discursive form and summarized in the mentioned report. In composing the table, an inter-rater reliability analysis revealed very good agreement between two independent coders (Kendall's $W = 0.94$).

SWOT template

The SWOT analysis for Majella National Park is presented in Table 9.

Presentation of SWOT analysis for the Prespa National Park

Local producers in the primary sector

Tolerance towards bears (Strengths)

Analysis of interview data showed that most local producers revealed increased levels of tolerance towards bear presence in the area and damage caused by bears and this was more or less equally shared by stock breeders, farmers and bee keepers interviewed. Tolerance was mainly indicated by two points where interviewees converged. First, that there has been no bear attack recorded on local people in the area. Interviewees underlined that the bear itself would not initiate any attack to humans unless it feels threatened or unless a female feels that its cubs are threatened. Although these latter references portray the conditions under which, indeed, the bear would launch an attack, they nevertheless reveal tolerance in the sense that the bear should be challenged to attack humans. The second point indicating local tolerance towards bear was that interviewees highlighted that locals, especially local producers, knew how to live with bears and they also knew how to behave in the event of an unwanted encounter with the bear. A third element indicating tolerance was how interviewees discussed the alleged bear-introduction narrative, according to which there were some people secretly keeping and nurturing bears and then releasing them in the wild. Although interviewees did not single out the use of the narrative by a minority of local people, there were stock breeders and farmers who deliberately deconstructed the narrative. It should be highlighted that these indications of tolerance were voiced despite the fact that most local producers among interviewees also believed that bear numbers increased lately. This implies that an increase in bear numbers does not always lead to negative attitudes towards bears or a collapse of local tolerance towards bears. However, local tolerance should not be taken for granted and should not be misread as being infinite.

Capability to innovate (Strengths)

Interviews with bee keepers revealed a notable potential to change their practices and innovate, especially with regard to installing and operating electric fences. This was usually triggered after bear damage to bee hives and involved either the arrangement of the fence in place, for instance, through setting up a double fence (inner and outer perimeter) or through the improvement of the technical specifications of equipment (e.g., wire used when setting up the fence). This capability to innovate, however, was related to a weakness presented in the next section, namely, the fact that many local people who start bee keeping do this on an experimental basis and often refrain from costly solutions (e.g., do not install an electric fence at all or choose a suboptimal and cheaper solution without a photovoltaic panel). This means that the potential for improvement for novices is quite high as compared to experienced bee keepers. At the same time, novice bee keepers may not be registered as professional farmers or not registered for insurance coverage in the Greek Agricultural Insurance Organization (ELGA). Therefore, they be either discouraged and drop out after a bear damage or they will innovate and improve their damage prevention methods to sustain bee keeping. Taken together, these aspects indicate that a bee keeper who tries to establish herself as local producer in the region most likely has passed through these bottlenecks by means of innovatory improvement of the main damage prevention method available (electric fence). The collection and exploitation of these valuable experiences may be an excellent opportunity for future training and capacity building programmes.

Positive feedback loops catalyzing damage/fear (Weaknesses)

Of special interest are aspects indicating the initiation of positive loop effects, namely, where the outcome of a process catalyzes the process itself. The first aspect of that kind is that a successful attack by the bear on livestock/plant food sources/beehives will be most probable attract the bear again in the same enclosure/place/source of food, establishing a reward and a motive to come back. This was noted by all types of local producers, stock breeders, farmers and bee keepers. The implication here is that damage prevention methods should interrupt these loops and cancel their rewarding effects, e.g., the electric fence by establishing aversion where the bear would be discouraged from even approaching close to fenced areas, the livestock guarding dogs in the same direction by an avoidance of being wounded.

A second aspect favoring positive feedback loops is that damage to livestock is more likely in the case of cattle as compared to sheep, where the cost is much more increased and where shepherding methods may increase the likelihood of damage. Linked to the existing compensation system, damage to cattle may be accompanied by a substantial monetary loss and this should be one of the major points for discussion after the Platform will have been established. A third aspect with loop effects is that farmers in the flatland need to water bean fields during the night and they also need to stay during the whole night in their fields, which increases dramatically the odds of an unwanted, surprise and highly risky human-bear encounter. Bean fields are used by bears, mostly females with cubs for hiding and resting. Since the presence of the bear cannot be known or easily recognized by farmers during the night, and since females with cubs are always involved in reports of bear attacks on humans, this context creates a feedback loop increasing anxiety and fear among farmers. To this, one needs to add the fact that damage to beans is not compensated since the bear does not feed on beans. A fourth point refers to local people who start bee keeping. These may not install an electric fence at all or may choose a suboptimal solution (e.g., avoid buying a costly photovoltaic panel which would allow them not to recharge the battery of the fence again and again), which will most certainly lead to bear damage; this will most probably discourage many of them from going on and progressing with bee keeping. All these points pertain to the characteristics of local production processes and cannot easily be addressed without a marked deviation of current practices and the introduction of innovative counter-methods.

Tension between local producers (Weaknesses)

Another major weakness identified by bee keepers was that they realized that livestock was guided by shepherds through fenced areas with beehives. Anytime livestock falls on an electric fence then this stops operating, which leaves bee keepers vulnerable to bear attacks. These incidents create tension between stock breeders and bee keepers, on the one hand, and on the other, they may reflect a wider tension in the area due to a competition for space as a resource (i.e., space used for grazing vs. space used for bee keeping).

Damage prevention methods endorsed (Opportunities)

The two main damage prevention methods discussed (electric fences; livestock guarding dogs) were endorsed by interviewees. In the case of electric fences, this was unanimous. The use of electric fences was recorded and widespread, even by nomadic bee keepers who visit the area. In a characteristic tone, a bee keeper stressed that you install the fence first and then you get the beehives. Two farmers noted that they were aware of farmers using electric fences in corn fields in other areas and they were also aware of stock breeders using electric fences. Stock breeders were also willing to install electric fences if they were subsidized, since the cost is considerable. For livestock guarding dogs, stock breeders interviewed highlighted that dogs should not physically engage with bears but bark at bears from a distance so that the bear is deterred and kept away. Several interviewees acknowledged the exchange of livestock guarding dogs undertaken by that environmental non-governmental organizations operating in the area.

Endorsement of stakeholder collaboration (Opportunities)

Interviewees endorsed stakeholder collaboration and joint action in the frame of bear conservation and management. This concentrated on two different themes. First, stock breeders interviewed note that there were some initiatives for addressing poisoned baits which have involved the local stock breeders' association, the Managing Authority of Prespa National Park and the Veterinarian Service. Interviewees also endorsed the suggestion to stakeholder to sign a Memorandum of Understanding for banning illegal poisoned baits. Second, there was widespread support of certification of bear-friendly products and services. This is favored by the plans of some bee keepers among interviewees who have already started discussing about collaborating to promote certification of their product. Bee keepers underlined that certification would certainly increase the added value of honey but also increase the diversity of the business model by adding pollen, for example, among their products. Verticalization is another dimension in this regard, voiced by stock breeders and bee keepers, which would support the income of local producers substantially.

Although certification was positively perceived by the majority of interviewees as an option for stakeholder collaboration in the area, there were some concerns about financial support for the initiation and sustainability of these schemes as well as concerns about proper marketing of certified products, which would necessitate special knowledge and skills not easily to be found in the local workforce. These issues should be among the major themes to be discussed in the frame of the Platform.

Use of illegal poisoned baits and illegal snares (Threats)

Interviewees noted the use of illegal poisoned baits and illegal snares in the area, which may not target bears directly (e.g., bears trapped instead of wild boar). Interviewees, further, underlined that the use of illegal poisoned baits can cause severe damage to livestock guarding dogs and leave stock breeders unprotected to bear attacks. Some interviewees highlighted that conflict between stock breeders and hunters with regard to their dogs may accelerate the use of illegal poisoned baits.

Use of dog breeds other than the local one (Threats)

Interviewees indicated that the use of dog breed other than the local ones is frequent. Quite interestingly, this was a sharp contradistinction to the fact that most interviewees admitted that dog breeds brought outside the local area are not effective in protecting livestock.

Unfair compensation system (Threats)

The system compensating local producers for damage caused by bears was considered by all interviewees as unfair. Many respondents presented figures to show the difference between money invested in, e.g., a cattle or a bee hive, not to mention the work they had put on production, and then compared these amounts to what one can get back when compensated, which is in some cases less than half the sum added in investments. This brings one to a disadvantaged position as compared to the condition prior to investment. An additional and crucial issue highlighted mainly by stock breeders was the time span of their investment which is interrupted by bear damage (e.g., three years needed before calving). Local complaints also converged on delays in obtaining the compensation, as well as logical or other inconsistencies in the compensation system. For stock breeders, no compensation can be obtained if a bear attack on cattle was not fatal, even if the animal that survives is not reproductive anymore. Many interviewees reiterated the responses of inspectors of the Greek Agricultural Insurance Organization, when they explained the criteria according to which a compensation was eligible. These accounts always portrayed a contradiction in verifying a damage that was not enough for being entitled the compensation, meaning that on the one hand, bear damage had been acknowledged but, on the other, stock breeders would not be compensated. For farmers, damage to bean fields was stressed, which can be extensive but is not compensated because bears do not feed on beans. These and other aspects in the system, for example, the fact that many damages are not recognized at all during inspections or cannot be verified, the bureaucracy involved and the fact that one has to pay an administrative fee before filling a claim, lead to a problem which way surpasses monetary claims, a problem of extreme socio-cultural importance: Namely, the fact that local producers who suffered a damage from bears feel like not being recognized or that their work is being undervalued, which is projected to their livelihoods, overall. It goes without saying that a problem of that kind and magnitude needs to be thoroughly and timely addressed. In terms of stakeholder interaction in this direction, another crucial aspect mentioned by interviewees was the fact that they felt left alone, since they believed that no institution/organization was capable/willing to take the blame or assume responsibility for their loss.

Local councils/local communities

Apart from local producers in the primary sector, interviewees included members of local councils and other residents occupied in sectors other than the primary sector. For these interviewees, strengths for bear conservation and management pertained to a recent diversification caused by young people who came to live in the area, who revealed increased tolerance towards the bear. In the same direction, there was a difference noted between younger and older residents, with the former being more tolerant towards the bear. A last strength referred to older residents, mainly, who frequently stated that they knew how to live with bears.

A main weakness noted was the widespread fear of an unwanted, surprise human-bear encounter even among those who were openly more tolerant towards bear presence in the region. There were additional weaknesses related to bears approaching human settlements. First, trees with fruits or a confined number of beehives, which are kept by local residents in courtyards, act as bear attractants and increase the likelihood of unwanted, surprise human-bear encounters. Indeed, many locals had encounters with bears or saw bears close to their homes, close to their villages or on the regional road network; despite the fact that no such

encounter has been reported as dangerous itself, many interviewees reported dangerous encounters of other local residents.

For local communities there were two main opportunities for bear conservation and management. First, there were indications that locals who are more tolerant towards bears may exert minority influence upon the rest of the local population. Second, some concrete measures for addressing human-bear conflict were suggested, for instance, the fact that the Forest Service should plant fruit trees up in the mountain to keep bears away from villages.

There were two findings which point to a persisting tension between local communities and environmental non-governmental organizations (Threats). First, there were a few critical attitudes towards "ecologists", which all have implied a kind of privileged access of this stakeholder group to European funding for bear conservation and management projects. According to these same accounts, however, this funding has not always been accompanied by an analogous competence of delivering outcomes meaningful for local communities. The second aspect mirroring tension between local communities and environmental non-governmental organizations was that several accounts from interviews confirmed the existence and circulation of the bear re-introduction narrative. According to this narrative, there are some people who breed bears in captivity and then release them secretly in the wild (Threats). Although interviews indicate that the narrative decreases in salience and tends to be used less frequently and by a smaller percentage of local residents, it is still influencing intergroup relations. Such a narrative largely targets "environmentalists", "ecologists" and environmental non-governmental organizations as being behind the increase of bear numbers. On top of these assumptions, the bear re-introduction narrative is frequently accompanied by descriptions of bear behavior as changed in comparison to the past, where the main point is that bears have lost their "natural" fear for humans and are, therefore, much more prone to cause several types of damages. An issue that should be highlighted, in this regard, is the fact that the release of bears after they have recovered from injury or after survival training, in the case of orphan bears, may reinforce the bear re-introduction narrative. Although the latter are of course not undertaken secretly and follow good practice protocols they may nevertheless catalyze the re-introduction accounts. This should be an issue to inform environmental education and outreach initiatives.

A last threat recorded, again engaging local communities and environmental, non-governmental organizations, focused on the Bear Emergency Team. This was criticized for not being always able to intervene timely; a related concern was that it intervenes after the bear has turned into a threat, namely, ex post; this needs to be acknowledged as an "inherent" challenge of the Bear Emergency Team as an institution

Hunters

Strengths for hunters, in terms of bear conservation and management, was that they appreciated the beauty of the animal and that they believed that a bear may attack humans on the mountain not because it wants to hurt humans but because the bear itself feels surprised or threatened. Indeed, hunters highlighted their relation to ecology as positioning and scientific discipline. They noted, however, that there were increased probabilities of an unwanted, surprise human-bear encounter, even when no hunting dogs were on the scene, which may lead to hunter's injury, especially if a female bear was accompanied by cubs. Interviewees reported two such incidents in the past 5 years. They also noted that fear for hunters as local residents was referring not only to risks taken while hunting but also to the odds of an unwanted surprise human-bear encounter close or within human settlements in the area. Among opportunities, they pointed towards the coexistence of hunters with other stakeholder in decision making bodies and newly established institutions, which increases the chances of joint action. They added the good working relations between hunters, gamekeepers and the Forest Service. However, hunters underlined several aspects which could reflect intergroup tension (Threats). For instance, they noted that a study to update bear population size and range of distribution is missing, and, therefore, bear numbers were severely underestimated by eNGOs. In the same direction, they underlined a divide between hunters and "anti-hunters", which was widening. Hunters could not single out lethal management of bears if bear numbers surpassed a threshold or in the case of "problem" animals.

Environmental non-governmental organizations

A detailed account of interview input from eNGO members is presented in Tables 1-5. Here we will concentrate on some issues only, which need special attention. These pertain mainly to weaknesses (ingroup aspects) and threats (intergroup aspects). With regard to weaknesses, interviews revealed three areas in which more consideration and work by eNGOs will be warranted. First, educational/outreach interventions and communication strategies by most eNGOs have been so far rather general in nature and not tailored to target audiences and stakeholders. More specialized and structured interventions will be needed, in this direction. Second, it was noted that eNGOs have not yet adequately worked on all implications of the Common Agricultural Policy for bear conservation and management, which need to be specialized and detailed on the local level. Third, it was highlighted that more effort will be needed to proceed from an event-driven intervention through the Bear Emergency Team to a plan for policy-driven interventions based on a thorough assessment of the operation of this scheme.

Concerning threats, several of these were linked to intergroup relations of eNGOs in rural areas. For instance, interviewees from eNGOs noted that the same number of animals may on some occasions lead to an increased number of bear observations; this would not necessarily reflect bear numbers, and there was a tension with other stakeholders, in this regard. Another concern was the still existent "bear ownership" attitude, voiced by stakeholders who believed that bears were "owned" by eNGOs and that the latter should be held responsible for dealing with them and the damage they cause. Such an attitude would not allow for a proper operation of the Bear Emergency Team and would catalyze a tension between eNGOs and other stakeholders. A major threat referring to damage prevention methods was that they should be planned at the landscape level so that no individual producer would be left vulnerable to bear damage.

Three threats were mentioned by interviewees affiliated with eNGOs in terms of development options concentrating on bear presence. A first concern was that certification of bear friendly products and services may be hindered lack of product standardization and packaging. Second, interviewees in this stakeholder group underlined that not all options for infrastructure development were eligible for alternative forms of tourism in the area and respecting its character. Third, they noted that it would take time to create the necessary conditions for bear-based tourism, which may increase drop out of interested individuals or organizations. This was also considered a main issue for fair diffusion of tourist benefits.

Professionals in education/communication

Interviewees with professionals in education/communication concentrated on two main aspects, namely: (1) environmental/outreach interventions of eNGOs and their communications strategies; (2) the sentiment of recognition, or lack thereof, of locals, when it comes to damage caused by bears and compensation of that damage. Although this stakeholder group will not be included in the SWOT tables presented in this deliverable, their contribution was decisive for triangulating aspects voiced by local producers in the primary sector and eNGOs. Professionals in education/communication all singled out educational and outreach interventions as well as communication as a major strategy to be employed for supporting bear conservation and management. In addition, they presented strong indications that younger people and children in the area reveal much more tolerant attitudes towards the bear in contrast to older age groups (Strengths). At the same time, however, professionals in education/communication stressed that educational and outreach interventions have been so far rather general in nature and failed to convey specialized messages for different audiences and stakeholders (Weaknesses). Another aspect related to the above disadvantage was that interviewees referred to a local sentiment of not being recognized, which was especially pronounced anytime when local people felt they were left vulnerable to bear damage, without getting any fair compensation (Weaknesses). On the other hand, interviewees believed that background conditions were mature enough and timing allowed for planning much more common initiatives among stakeholders involved in bear conservation and management (Opportunities). These should tackle, however, a major threat for intergroup relations, namely, the fact that most messages framing ecological issues and, in particular, bear conservation and management, were found largely omit locals (Threats).

Tourism entrepreneurs

Tourism entrepreneurs endorsed bear presence as an opportunity for local development (Strengths). They underlined that the bear can be turned into a brand name of the region. However, they also highlighted that there was an outdated distinction in the area between tourist and non-tourist villages, which should be overcome so that bear tourism will be inclusive and diffuse benefits fairly among locals (Weaknesses). They saw many opportunities for local development based on bear presence, which could integrate several institutions into a planning procedure. In this direction, planning should involve small and quick wins to keep participants engaged. For bear tourism, tourism entrepreneurs stressed that it could be based on bear signs. They also noted that bear presence can add at least one overnight stay in the area, especially if foreign tourist markets were targeted. The latter was also expected to increase demand, which has been underlined as a major driver for stakeholder cooperation. Finally, bear tourism was thought to provide synergies with local producers and increase the quality of the tourist product. Two main threats were mentioned by this stakeholder group. First, there were many tourists willing to approach cubs, which could trigger an attack by the female bear. Therefore, trained guides should accompany tourists. Second, not all options for infrastructure development would be eligible for alternative forms of tourism in the area.

Development organizations

Interviewees associated with development organizations concurred with tourism entrepreneurs that there was potential in turning the bear into a brand name of the region (Strengths). However, they noted the lack of a network for distributing local products to targeted markets, which would be a precondition for a certification scheme for bear-friendly products and services to be fully exploitable (Weaknesses). Another weakness they noted was related to the analogous certification scheme developed in the frame of LIFE AMYBEAR. In this case, they highlighted that a detailed elaboration of this certification scheme and its promotion was needed, especially in terms of criteria to granting certification. With regard to opportunities, interviewees saw the certification scheme in LIFE AMYBEAR being extended to cover the Prespa National Park to create desirable synergies. They thought a scheme of that kind was suitable for targeting foreign markets and they noted that the transition of the local economy after the extraction of brown coal has been left behind will focus of the agricultural sector and processing of local products. They underlined that stakeholders should be planning for small and quick wins to keep participants in the scheme engaged. Concerning threats, interviewees were concerned about the sustainability of the certification scheme. Two more threats mentioned were that there was currently almost no cooperation with Balkan countries and that the percentage of the area in the total exports in Western Macedonia was low (about 1%).

Managing Authority of the Prespa National Park

A main strength for the Managing Authority was that it has gradually improved its communication interventions and synergies with local stakeholders. The Authority should be however adequately staffed to effectively address existing duties and those to be added in the frame of LIFE ARCPROM (Weaknesses). Interviewees affiliated with the Authority saw many opportunities for bear conservation and management, including their role in the diffusion of information within local communities. They noted encouraging attitudes among locals, for instance, a negative disposition towards the use of illegal poisoned baits, and the existing demand for electric fences. They also underlined that the planned change in watering systems by introducing drop irrigation may address the fear of farmers of the bear, at least up to a degree, since they will no longer be obliged to have night shifts for watering their bean fields. The Bear Emergency Team to be established in the area in the frame of LIFE ARCPROM with staff from the Authority and CALLISTO was another opportunity for bear conservation and management. With regard to the certification scheme for bear-friendly products and services, they highlighted that most locals would most probably endorse it. Interviewees from the Authority overlapped with tourism entrepreneurs and interviewees from development organizations in stressing the need to plan small and quick wins to keep participants in the scheme committed and in their concern for securing the sustainability of the scheme (Threat). Another related threat was that there was an initiative for an analogous certification scheme covering all Protected Areas in Greece. Interviewees from the Managing Authority expressed their concern that the new certification scheme would increase unnecessary cost and logistics if not planned on synergies with existing schemes, including the above scheme and the one developed within the frame of LIFE AMYBEAR.

Table 1. SWOT analysis focusing on attitudes towards bears in the Prespa National Park

	Local producers in the primary sector	Local communities	Hunters	Environmental non-governmental organizations (eNGOs)
Strengths [ingroup aspects favoring (good practice in/agreement for) bear conservation and management]	The majority of local producers showed relatively increased levels of tolerance towards bear presence in the area and damage caused by bears (stock breeders, farmers, bee keepers)	<ul style="list-style-type: none"> Local communities diversified lately with young people who came to live in the area, who revealed increased tolerance towards the bear; Younger people in the area reveal much more tolerance towards the bear in contrast to older age groups 	<ul style="list-style-type: none"> Appreciate the bear for its beauty and cannot accept retaliatory killing of bears Believe that a bear may attack humans on the mountain not because it wants to hurt humans but because the bear itself feels surprised or threatened 	Have had continuous presence in the area and have implemented a series of environmental education and outreach programmes
Weaknesses [ingroup aspects hindering (good practice in/agreement for) bear conservation and management]	Several feedback loops catalyzing effects of damage by bears or fear of bears positively (i.e., the outcomes of each of these processes favors/speeds up damage/fear)	There is widespread fear of an unwanted, surprise human-bear encounter even among those who were openly more tolerant towards bear presence in the region	Increased probabilities of an unwanted, surprise human-bear encounter, even when no hunting dogs are on the scene, which may lead to hunter's injury, especially if a female bear is accompanied by cubs; two such incidents reported in the past 5 years	Educational/outreach interventions and communication strategies by most eNGOs were rather general in nature and not tailored to target audiences and stakeholders; more specialized and structured interventions needed
Opportunities [intergroup aspects favoring (good practice in/agreement for) bear conservation and management]	Damage from bears tolerated when it is kept under a threshold which is highly context-dependent	Indications that locals who are more tolerant towards bears may exert minority influence upon the rest of the local population	Coexistence of hunters with other stakeholder in decision making bodies and newly established institutions increases the chances of joint action	<ul style="list-style-type: none"> Opportunities for cooperation with locals who are more tolerant towards bears Background conditions and timing adequate for planning stakeholder joint action
Threats [inter-group aspects hindering (good practice in/agreement for)]	<ul style="list-style-type: none"> Events of illegal poisoned baits and illegal snares confirmed by interviewees; although the bear is not 	<ul style="list-style-type: none"> Critical attitudes towards "ecologists", which imply a privileged access of this stakeholder group to 	<ul style="list-style-type: none"> A study to update bear population size and range of distribution is missing, and, therefore, bear 	<ul style="list-style-type: none"> The same number of animals may on some occasions lead to an increased number of bear

<p>bear conservation and management]</p>	<p>usually the animal targeted, retaliatory poaching of bears was not singled out</p> <ul style="list-style-type: none"> • All interviewees underlined the fact that the compensation system was not fair at all; rather than being just an issue of monetary claims, fairness in compensation was elevated to a crucial issue of recognition, with major socio-cultural implications • An ongoing conflict between stock breeders and hunters has been highlighted as a reason for the use of illegal poisoned baits 	<p>European funding for bear conservation and management projects; the latter is not accompanied by an analogous competence of delivering outcomes meaningful for local communities</p> <ul style="list-style-type: none"> • The bear re-introduction narrative is confirmed, according to which, there are allegedly people who breed bears in captivity and release them secretly in the wild; these accounts refer to bears' behavior in the last several years - bears today are "tamed", domesticated, they have lost their "natural" fear for humans, and much more dangerous for humans than "wild bears" 	<p>numbers are severely underestimated by eNGOs</p> <ul style="list-style-type: none"> • Underlined a divide between hunters and "anti-hunters", which is widening 	<p>observations - eNGOs underline that number of observations do not necessarily reflect bear numbers and there is a tension with other stakeholders, in this regard</p> <ul style="list-style-type: none"> • Illegal behavior targeting wildlife and the bear, in particular, still existent in the study area, despite a substantial number of initiatives undertaken for decades in the frame of several projects
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Table 2. SWOT analysis focusing on methods for preventing damage caused by bears in the Prespa National Park

	Local producers in the primary sector	Environmental non-governmental organizations (eNGOs)
Strengths [ingroup aspects favoring (good practice in/agreement for) bear conservation and management]	<ul style="list-style-type: none"> • Endorsement of damage prevention methods, unanimous for electric fences, widespread for livestock guarding dogs (LGDs) • Bee keepers revealed increased capability to innovate after damage by establishing a double fence with inner and outer perimeter or improving of technical features of equipment (e.g., wire used) 	The two main damage prevention methods promoted by eNGOs in the case of bears, namely, electric fences and livestock guarding dogs, have largely proven effective in decreasing damage caused by bears'
Weaknesses [ingroup aspects hindering (good practice in/agreement for) bear conservation and management]	<ul style="list-style-type: none"> • Tension between local producers, when livestock is guided through fenced areas; the electric fence does no longer operate and bee keepers are vulnerable to bear attacks • Local people who start bee keeping may not install an electric fence at all or may choose a suboptimal and less costly solution, which makes bear damage likely • Some interviewees underlined that LGDs today are less effective in keeping the bear away than LGDs in older times 	eNGOs have not yet adequately worked on all implications of the CAP for bear conservation and management, which need to be specialized and detailed on the local level
Opportunities [intergroup aspects favoring (good practice in/agreement for) bear conservation and management]	Endorsement of stakeholder collaboration and joint action for banning the use of illegal poisoned baits (e.g., a Memorandum of Understanding)	Electric fences and LGDs included among the actions of LIFE ARCPROM
Threats [inter-group aspects hindering (good practice in/agreement for) bear conservation and management]	Indications of using dog breeds other than the local one; this is despite the fact that most interviewees admitted that dog breeds brought outside the local area were not effective in protecting livestock	<ul style="list-style-type: none"> • Damage prevention methods need to be planned at the landscape level so that no individual producer is left vulnerable to bear damage; a related remark referred to land use implications when the use of electric fences expands • There are local producers who treat their LGDs as consumables, without proper veterinarian care, which decreases the odds of effective guarding

Table 3. SWOT analysis focusing on bears approaching human settlements/the regional road network in the Prespa National Park

	Local communities	Hunters	Environmental non-governmental organizations (eNGOs)
Strengths [ingroup aspects favoring (good practice in/agreement for) bear conservation and management]	Frequent accounts that locals know how to live with bears	Hunters highlighted their relation to ecology as positioning and scientific discipline	Accumulated knowledge and experience from their participation to Bear Emergency Teams
Weaknesses [ingroup aspects hindering (good practice in/agreement for) bear conservation and management]	<ul style="list-style-type: none"> • Trees with fruits or a confined number of beehives which are kept by local residents in courtyards act as bear attractants and increase the likelihood of unwanted surprise human-bear encounters • Many locals had encounters with bears or saw bears close to their homes, close to their villages or on the regional road network; despite the fact that no such encounter has been reported as dangerous itself, many interviewees reported dangerous encounters of other local residents 	Hunter who are at the same time local residence have to deal with fear of bears while hunting on top of the odds of an unwanted surprise human-bear encounter close or within human settlements in the area	<ul style="list-style-type: none"> • The Bear Emergency Team needs to be supported by more members of eNGOs to better respond to emergency calls; a good practice protocol would be helpful for capitalizing on the experience gathered so far • More effort is needed to proceed from an event-driven intervention through the Bear Emergency Team to a plan for policy-driven intervention based on a thorough assessment of the operation of this scheme
Opportunities [intergroup aspects favoring (good practice in/agreement for) bear conservation and management]	Some interviewees suggested that the Forest Service should plant fruit trees up in the mountain to keep bears away from villages	Good working relations between hunters, gamekeepers and the Forest Service	Databases with details from the intervention of the Bear Emergency Team can be used to improve its operation and effectiveness
Threats [inter-group aspects hindering (good practice	The Bear Emergency Team criticized for not being always able to intervene timely; a related concern was that it intervenes after the bear has turned into a threat,	<ul style="list-style-type: none"> • Lethal management of bears cannot be singled out if their numbers surpass a threshold or in the case of "problem" animals 	"Bear ownership" attitude by stakeholders who believe that bears are "owned" by eNGOs and that the latter should be held responsible for dealing

<p>in/agreement for) bear conservation and management]</p>	<p>namely, ex post; this needs to be acknowledged as an "inherent" challenge of the Bear Emergency Team as an institution</p>	<ul style="list-style-type: none"> • When the Bear Emergency Team intervenes and needs to relocate a bear, the relocation destination needs to be properly selected in order to avoid a return of the bear close to human settlements; the knowledge and experience of gamekeepers and hunters in these cases would be insightful 	<p>with them and the damage they cause; this attitude does not allow for a proper operation of the Bear Emergency Team and catalyzes a tension between eNGOs and other stakeholders</p>
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Table 4. SWOT analysis focusing on development options concentrated on the bear in the Prespa National Park

	Local producers in the primary sector	Environmental non-governmental organizations (eNGOs)	Tourism entrepreneurs	Development organizations
Strengths [ingroup aspects favoring (good practice in/agreement for) bear conservation and management]	There are young people who are considering to stay in the area and work in primary sector activities	Knowledge and experience from engaging in nature-based tourism and certification schemes for bear-friendly products and services	Endorsed bear presence as an opportunity for local development; the bear can be turned into a brand name of the region	Acknowledged the potential of the bear being turned into a brand name of the region
Weaknesses [ingroup aspects hindering (good practice in/agreement for) bear conservation and management]	The majority of young people are planning to leave the area for studying at a university in the main Greek urban centers or moving abroad for better employment opportunities	In their effort to augment development options concentrated on the bear in the Prespa National Park, eNGOs need to overcome the critique that Natura 2000 sites impeded local development	The outdated distinction between tourist and non-tourist villages needs to be overcome; alternative tourism based on the bear needs to be inclusive and diffuse benefits fairly among locals	<ul style="list-style-type: none"> • Network for distributing local products to targeted markets missing; this is a precondition for the certification scheme to be fully exploitable • Detailed elaboration of the certification scheme in LIFE AMYBEAR and its promotion needed, especially in terms of criteria to granting certification
Opportunities [intergroup aspects favoring (good practice in/agreement for) bear conservation and management]	Endorsement of stakeholder collaboration and joint action for certifying bear-friendly products and services by the majority of local producers	Potential for bear-based tourism, especially if foreign markets were targeted; much prospect for networking of local producers to offer a wholistic tourism experience and diffuse benefits	<ul style="list-style-type: none"> • Opportunities for local development based on bear presence can integrate several institutions into a planning procedure • Plan for small and quick wins to keep participants engaged • Plan bear tourism based on bear signs • Bear presence can add at least one overnight stay in the area, especially if foreign 	<ul style="list-style-type: none"> • The certification scheme in LIFE AMYBEAR should be extended to cover the Prespa National Park to create desirable synergies • Certification scheme suitable for targeting foreign markets • Plan for small and quick wins to keep participants engaged • The transition of the local economy after the extraction of brown coal has been left

			<p>tourist markets are targeted; the latter will also increase demand, which has been underlined as a major driver for stakeholder cooperation</p> <ul style="list-style-type: none"> • Bear tourism can provide synergies with local producers and increase the quality of the tourist product 	<p>behind will focus of the agricultural sector and processing of local products</p>
<p>Threats [inter-group aspects hindering (good practice in/agreement for) bear conservation and management]</p>	<p>Not all local producers would readily endorse the labelling/certification scheme, especially, when considering to relate their products with a bear logo</p>	<ul style="list-style-type: none"> • Criteria should be detailed for certification, which may be hindered, by lack of product standardization and packaging • Not all options for infrastructure development eligible for alternative forms of tourism in the area and respecting its character • It will take time for creating the necessary conditions for bear-based tourism, which may increase drop out; crucial issue for fair diffusion of tourist benefits 	<ul style="list-style-type: none"> • Many tourists willing to approach cubs, which can trigger an attack by the female bear; trained guides should accompany tourists • Not all options for infrastructure development eligible for alternative forms of tourism in the area and respecting its character 	<ul style="list-style-type: none"> • Sustainability of the certification scheme highlighted as a major concern • Almost no cooperation with Balkan countries • Very low percentage of the area in the total exports in Western Macedonia (about 1%)

Table 5. SWOT analysis focusing on the Management Authority of the Prespa National Park

	Attitudes	Damage prevention methods	Bears approaching human settlements	Development opportunities
Strengths [ingroup aspects favoring (good practice in/agreement for) bear conservation and management]	Local residents acknowledged that the Managing Authority has gradually improved its communication interventions and synergies with local stakeholders			
Weaknesses [ingroup aspects hindering (good practice in/agreement for) bear conservation and management]	The Managing Authority should be adequately staffed to effectively address existing duties and those to be added in the frame of LIFE ARCPROM			
Opportunities [intergroup aspects favoring (good practice in/agreement for) bear conservation and management]	<ul style="list-style-type: none"> • One of the main tasks of employees of the Managing Authority is to discuss with locals and inform them on any aspect of interest or concern • The majority of local residents do disapprove of the use of illegal poisoned baits, which is considered as a crucial aspect in dealing with this type of threat • The operation of the anti-poison dog unit in the area, which will be taken up by the Managing Authority, is considered to have had a major contribution in a 	There is demand for electric fences which can be covered if this damage prevention method is included in the Rural Development Programme, since almost all local producers are registered as farmers/stock breeders	<ul style="list-style-type: none"> • Change in watering systems by introducing drop irrigation may address the fear of farmers of the bear, at least up to a degree, since they will no longer be obliged to have night shifts for watering their bean fields • Bear Emergency Team to be established and operate with staff of the Managing Authority and CALLISTO 	<ul style="list-style-type: none"> • Certification would be most probably endorsed by most locals, especially if foreign markets will be targeted, which will add a considerable motive for local entrepreneurs to participate • Plan for small and quick wins to keep participants committed

	decreasing trend in the use of illegal poisoned baits			
Threats [inter-group aspects hindering (good practice in/agreement for) bear conservation and management]	A few accounts pointed to past tensions between some stakeholder groups and the Management Authority	Even when employees of the Managing Authority help local producers in recording bear damage in their crops, locals are not compensated; although this may typically be attributed to the regulations of the Greek Agricultural Insurance Organization, it adds to the widespread feeling of locals not being recognized and being left alone in case of bear damage	The recognition of all stakeholders' efforts in bear conservation and management is a prerequisite for consolidating working relations and trust between stakeholder groups (BET)	<ul style="list-style-type: none"> • There was an initiative for a certification scheme covering all Managing Authorities of Protected Areas in Greece; concern that the new certification scheme would increase unnecessary cost and logistics if not planned on synergies with existing schemes, including the LIFE AMYBEAR scheme - plan LIFE ARCPROM as a follow up of LIFE AMYBEAR as far as certification is concerned • Sustainability of the scheme highlighted as a major concern

Table 6. SWOT analysis focusing on damage caused by bears and bears approaching human settlements in Northern Pindos National Park

	Local producers in the primary sector	Local authorities	Forestry service	Environmental non-governmental organizations (eNGOs)
Strengths [ingroup aspects favoring (good practice in/agreement for) bear conservation and management]	Availability of damage prevention methods and compensation system for at least part of the damage caused by bears	Acknowledge positive attitudes of public opinion towards bears, which is mainly voiced in urban centers, and reaches rural areas through tourists	Responsible, by law, for wildlife conservation and management	Increase in bear numbers and range distribution necessitate a reconsideration of communication strategies and operational capacity
Weaknesses [ingroup aspects hindering (good practice in/agreement for) bear conservation and management]	Considerable damage caused by the bear in crops and livestock, which in most cases have long-term implications for local producers	Ambivalent attitudes between perceiving the bear as an attraction, on the one hand, and the risk of unwanted, surprise human-bear encounters, on the other	Relatively decreased resources and staff available, as compared to the past, which impacts operational capacity	There is in several cases a delay in/lack of fine tuning good practice for adapting it to local contexts
Opportunities [intergroup aspects favoring (good practice in/agreement for) bear conservation and management]	Certification and promotion of bear-friendly products and services can offer many opportunities for collaboration between stakeholders	The waste management system, including its legal frame, needs to be updated by examining the option of integrating bear-proof garbage bins	Opportunity of joining consortia and submitting proposals for funding in the broader field of wildlife conservation and management	The establishment of the Bear Emergency Team has had a positive effect on intergroup relations where eNGOs are engaged
Threats [inter-group aspects hindering (good practice in/agreement for) bear conservation and management]	Need to reconsider and update regulations for compensation/active protection employed by the Greek Agricultural Insurance Organization	“Bear ownership” attitude, where local communities hold eNGOs as responsible for dealing with the bear issue, overall	Several bureaucratic barriers in implementing management practices for enriching the bear biotope with natural food sources	Delays or other inconsistencies often observed in addressing emergencies challenge the very character of Bear Emergency Team

Table 7. SWOT analysis focusing on illegal poisoned baits in Northern Pindos National Park

	Stock breeders	Hunters	Management Authority of Northern Pindos National Park	Environmental non-governmental organizations (eNGOs)
Strengths [ingroup aspects favoring (good practice in/agreement for) bear conservation and management]	Dog losses due to primary and secondary poisoning	Dog losses due to primary and secondary poisoning	Major threat for a priority species	Major threat for a priority species
Weaknesses [ingroup aspects hindering (good practice in/agreement for) bear conservation and management]	Bears may be targeted by illegal poisoned baits	Use of illegal poisoned baits not universally condemned	Available staff and resources not always enough to undertake all priority actions	Inability to integrate local producers into networks similar to those for livestock guarding dogs
Opportunities [intergroup aspects favoring (good practice in/agreement for) bear conservation and management]	Availability of first aid anti-poison kits for livestock guarding dogs	Availability of first aid anti-poison kits for hunting dogs	Option for establishing and operating an anti-poison dog unit	Positive examples for introducing anti-poison dog units in Thrace and Central Greece
Threats [inter-group aspects hindering (good practice in/agreement for) bear conservation and management]	Raw material for illegal poisoned baits is rather easy to obtain	Raw material for illegal poisoned baits is rather easy to obtain	The establishment and operation of an anti-poison dog unit needs funding and time investment	Inability to always support a timely toxicological analysis

Table 8. SWOT analysis for the Rhodope Mountain Range National Park

	Local producers in the primary sector	Local authorities	Hunters	Forestry service	Environmental non-governmental organizations (eNGOs)
Strengths [ingroup aspects favoring (good practice in/agreement for) bear conservation and management]	Damage prevention methods are widely known and perceived as effective	Underline local desire for supporting local productive activities	Endorsement of environmental/nature protection, which involves a rejection of illegal poisoned baits	Responsible, by law, for wildlife conservation and management	Increase of bear numbers and distribution range in the area
Weaknesses [ingroup aspects hindering (good practice in/agreement for) bear conservation and management]	There is often an inability to obtain and support damage prevention methods	Bear approaches to human settlements increase the likelihood of unwanted surprise human-bear encounters	Trends in bear numbers increase the likelihood of an unwanted surprise human-bear encounter while hunting	Considerable decrease of the total time spent on the field	There is often an inability to effectively address local communities' needs and desires
Opportunities [intergroup aspects favoring (good practice in/agreement for) bear conservation and management]	Great potential for full-scale adoption of damage prevention methods at the local scale	Much potential for promoting the Managing Authority of the Rhodope Mountain Range National Park	Intention to engage at an institutional level in initiatives for wildlife conservation and management	Opportunity of participation with other stakeholders in joint initiatives and/or projects	Increased willingness of stakeholders to participate in environmental action projects
Threats [inter-group aspects hindering (good practice in/agreement for) bear conservation and management]	Bureaucracy underlined as a major barrier in claiming compensation	There is in some cases low trust for elected representatives in local authorities	Many concerns voiced with regard to current or future restriction of human activities in the area	Increased likelihood of consolidating a general sentiment of actual or perceived "lagging behind"	The bear re-introduction narrative remains a crucial barrier for eNGOs to improve their intergroup relations

Table 9. SWOT analysis for Majella National Park

	Managing authorities of National Parks	Regional Authority (land management)	Local authorities	Forest Service and Pastures management	Surveillance bodies (national), Veterinary Public Service	Local producers (bee keepers, stock breeders, farmers)	Locals engaged in tourism	Hunters	eNGOs
Strengths [ingroup aspects favoring (good practice in/agreement for) bear conservation and management]	<ul style="list-style-type: none"> • Promoter of the process • Holder of bears information and skills (ethology, numbers and damage management). • High knowledge of the territory 	<ul style="list-style-type: none"> • Information holder • High managerial power (planning and use of the territory, infrastructure and mobility) 	<ul style="list-style-type: none"> • High interest in the topic • High management power: L.A. manage a very large portion of natural areas (included woods and pastures) • Ownership of waste management 	Possibility to develop forestry and grazing practices aimed at improving the ecosystem functioning promoting biodiversity	<ul style="list-style-type: none"> • Veterinary service well established due to Park and National vet services. • Well functioning chain of intervention for problems related to wildlife or damage to breeding. 	<ul style="list-style-type: none"> • Breeders and farmers do not see the bear as a particularly problematic factor. • Damage to herds / flocks is limited thanks to the consolidated prevention methods in the Central Apennines territory 	Widespread awareness of the environmental potential of the area, with particular regard to the presence of wildlife and the natural environment	Bear do not compete with hunters for prey (and hunters are aware of this)	High variety of subjects represented and high willingness to participate
Weaknesses [ingroup aspects hindering (good practice in/agreement for) bear conservation and management]	Poor familiarity with participatory tools and methodologies	<ul style="list-style-type: none"> • Lack of a univocal strategy / direction regarding the management 	<ul style="list-style-type: none"> • High fragmentation of the territory (39 Municipalities involved) 	<ul style="list-style-type: none"> • Presence of monopoly consortia, few forestry companies, mainly from outside the 	Lack of alignment between the territory management authorities and the	<ul style="list-style-type: none"> • Presence of many "domestic" chicken coops, often not registered 	Shortage of actors due to: <ul style="list-style-type: none"> • Scarcity of facilities, mostly 	<ul style="list-style-type: none"> • Opposition to the limitations to hunting due to the presence of 	Category associations: members are unlikely to give them a real power of representation

<p>nt for) bear conservatio n and managem ent]</p>		<p>of the areas involved (in particular on the issue of habitat and wildlife protection).</p> <ul style="list-style-type: none"> • Lack of transparent management of forestry services: those in charge of the services seem not to be prepared and adequately trained. 	<ul style="list-style-type: none"> • Low human resources dedicated within the Municipalities due to the small size of the administered communities (possible difficulty in participating) 	<p>region, with unskilled labor.</p> <ul style="list-style-type: none"> • Over-exploitation of pastures and land impoverishment, with consequent instability of the slopes and habitats 	<p>surveillance bodies regarding regulations and management strategies</p>	<p>and informally managed, which attract bears even in urban contexts.</p> <ul style="list-style-type: none"> • High presence of truffle-collection activity, often in violation of park regulation, with high presence of dogs. 	<p>managed by older people.</p> <ul style="list-style-type: none"> • Tourism discouraged by the difficulty of accessing various areas. • Lack of structured tourist offer. 	<p>bears in particular situations.</p> <ul style="list-style-type: none"> • Misperception that the presence of bears automatically determines the hunting suspension 	<p>n, they have more administrative / bureaucratic functions (difficulty in involvement)</p>
<p>Opportunities [intergroup aspects favoring (good practice in/agreement for) bear conservatio n and managem ent]</p>	<p>Existence of listening channels with local SHs already open and consolidated in the years preceding the project</p>	<p>If involved, high capacity to improve habitat conditions, also in relation to the choices regarding infrastructural interventions and the assignment</p>	<p>Widespread awareness of the importance of the environmental and landscape issue for the revitalization of the territory</p>	<p>If involved, high potential for habitat improvement</p>	<p>Willingness to improve skills and alignment through the implementation of training/updating courses and collaboration with territory management authorities.</p>	<p>Willingness of the Park to take charge of the distribution of damage prevention systems</p>	<p>Start-up of new tourist activities, mostly by foreigners (naturalistic tourism is highly appreciated especially among tourists from</p>	<p>Lack of homogeneity of thought about the topic addressed, within the same category of SHs</p>	<p>Lack of homogeneity of thought about the topic addressed, within the same category of SHs</p>

		of management services (e.g., Forestry)					beyond the Alps)		
Threats [inter-group aspects hindering (good practice in/agreement for) bear conservation and management]	Local SHs have a variable perception of the Park, mainly due both to poor knowledge of the Park mission/regulations and actual restrictions on the use of the territory	Difficulty in identifying unique references within the organization (each department works independently)	Presence of administrators very politically aligned, able to hinder the project locally	<ul style="list-style-type: none"> • Clear perception of the presence of organized crime in the forest/pasture's management sector • Lack of knowledge about the possibilities for the forests use by the community 	Presence of criminal episodes that are difficult to control, especially linked to forest fires that, beyond other things, reduce the available habitat	<ul style="list-style-type: none"> • Difficulty in engaging chicken coop owners and in enforcing minimum management rules • Tolerance of informal structures consolidated over time by the competent authorities (Municipalities and ASL Local Health Authority), also in relation to a regulatory confusion (overlapping of competence 	<ul style="list-style-type: none"> • Great disparity in presence / tourist approach between territories located on different sides of the Park • Poor/difficult to implement use regulation in areas of environmental value or relevant habitat • Poor training and education of guides and tourists 	<ul style="list-style-type: none"> • Risk of bears disturbance by hunting, or accidents (exchange of identity boar-bear) • Existence of cases of poaching 	Possible reluctance to express real interest in a public context and risk of taking uniform positions consolidated over time among "similar" actors

						s and indications). <ul style="list-style-type: none">• Occurrence of accidents for wildlife due to incorrect behavior of truffle collectors (e.g., poisoning)			
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Next steps for Action C1

Previous research has included the adapted SWOT analysis presented in this deliverable in the toolkit for stakeholder engagement in large carnivore conservation and management (Hovardas, 2012b, 2015c, 2017, 2018a, 2019, 2020). The SWOT analysis is employed as a first step of a modular procedure that continues with a structured and mediated, if needed, stakeholder negotiation, and ends in a participatory scenario development procedure. The second step serves to elaborate on both benefits and costs of implementing good practice and introducing innovation in large carnivore conservation and management, while the third step comprises an inclusionary process of stakeholder engagement in planning and implementing joint action, based on available or obtainable resources.

Starting with the SWOT tables and moving forward with the rest of the templates of this toolkit (mixed motive template for stakeholder negotiation in the second step; template for participatory scenario development), Platforms for Coexistence between People and Bear can set their priorities and agendas and structure stakeholder interaction in a productive and constructive manner. Two major points need to be highlighted in this regard. First, stakeholder constellation in platforms will include actors who may never fully agree on all issues related to large carnivores or the bear, in particular. However, a fully-fledged consensus was never a prerequisite in any multi-stakeholder governance scheme to function effectively so far, meaning that partial agreement is enough for planning and implementing joint action. The second major point is that stakeholder interaction is scaffolded by means of templates which concentrate on the procedure and not on any type of content. This procedure-based approach leaves content to be decided and reconsidered by stakeholders in the schemes in an experimental manner.

Among the many points underlined by participants in all four locations covered by LIFE ARCPROM, there are a couple of issues that deserve our closer attention. A starting point is that stakeholders in platforms should avoid an optimistic planning with unrealistic, unattainable goals or goals which would need a considerable time frame and resource investment to be pursued. Many interviewees in the Prespa National Park stressed the need to plan for small and quick wins, so that stakeholders are encouraged to stay committed on the process and continue their joint action. On the other hand, however, stakeholder interaction and collaboration should also be able to present some progress, some movement beyond current conditions, some improvement over the current context, especially as long as current conditions have been characterized as undesirable. In this regard, the small and quick wins mentioned above need to be combined with the small effort scenario in participatory scenario development. In this type of scenario, stakeholders will be able to accomplish a departure from the current condition by mobilizing and investing a relatively confined quantity of resources.

A second point of great importance is that bear conservation and management does not pertain to a confined set of attitudes and perceptions but may have considerable implications for local socio-cultural contexts (Hovardas, 2018b). The connection of compensation with issues of recognition by interviewees in the Prespa National Park, as well as several feedback loops revealed, which may catalyze the adverse effects of bear damage in that area, need to be carefully studied and inform future collaboration and action to be taken over by stakeholders in this and other localities. Moving beyond a narrow and tight managerial horizon to incorporate complex needs and desires of local communities and stakeholders has been worldwide and for long a major priority in human dimensions of wildlife conservation and management.

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