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**SOCIAL, EDUCATIONAL AND CULTURAL ASPECTS:  
HUMAN DIMENSIONS AS A TOOL FOR BIRD CONSERVATION**

**- Report 2011 -**

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*The opinions expressed in this work are the responsibility of the author  
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## EXECUTIVE SUMMARY

- While there has been considerable biological and legal work focused on bird conservation, there has been a lack of addressing the same issue from a human perspective. Thus the focus of this report is to present an understanding of existing knowledge about poaching motivations and best ways forward regarding integrating people into bird conservation.
- Human dimensions in bird conservation is defined as understanding public beliefs, attitudes, motivations and behaviours toward illegal killing, trapping and trade of birds.
- Various motivations exist for poaching: economic, food source, recreation, trophy, thrill, culture, rebellion, gamesmanship, self-defence and disagreement over conservation regulations. However, these have never been applied to the issue of illegal killing, trapping and trade of birds.
- Motivations behind poaching are tied to human-human conflicts. Conflicts can be considered as: cognitive, economic, value and behavioural. Depending upon the nature of the conflict, different alternative dispute resolution techniques are needed.
- Within the illegal killing, trapping and trade of birds, two traditional approaches have been taken: 1) the “big stick” approach focused on law enforcement and 2) the “educational enlightening” approach dealing with increasing public awareness about the issue. Both will not serve as solutions to resolve all possible conflict types and in fact have not been successful as illegal activity continues to occur and increase.
- The lack of systematic, rigorous study of the human component in illegal killing, trapping and trade of birds is a fundamental stumbling block to understanding the issue and being able to provide meaningful and effective solutions.
- To move forward, there needs to be a paradigm shift from people as a problem to people as part of the solution. Public involvement approaches are described and an innovative path forward to address the issue is provided in this report.
- The solution lies by implementing Alternative Dispute Resolution and public involvement of all stakeholders through facilitated workshops as an innovative way to addressing bird poaching.
- Six recommendations are provided at the end of this document for consideration and adoption by the Standing Committee at the upcoming Bern Convention meeting.

## 1. INTRODUCTION

The African Convention on the Conservation of Nature and Natural Resources (1968), the Ramsar Convention (1971), the Bonn Convention and the European Union Bird Directive (1979) have been enacted to protect migratory birds at international levels. Despite such legislation and increased conservation strategies to protect Mediterranean long-distance migrants, migratory birds in the Mediterranean basin are decreasing. Declines have been mostly attributed to changing EU agricultural policy and regulations (BirdLife International, 2004; Kirby et al., 2008), to desertification and use of chemicals in Africa (Sanderson et al., 2006; Cresswell et al., 2007), to climate change (Sanderson et al., 2006) and to hunting in the Mediterranean regions (BirdLife International, 2006). While all of these contribute to bird population declines, the major threat to migratory bird conservation continues to be legal and illegal hunting (BirdLife International, 2006). Hundreds of millions of birds are hunted as they migrate from Africa to Europe to breed and back to Africa for wintering every year (BirdLife International, 2006; Contesso, 2009). As stated by BirdLife International (2006) “migratory bird hunting represents in many areas an important socio-economic activity as it supports subsistence hunters and trappers, weapon and ammunition manufacturers, bird-trap makers, caged bird sellers and restaurant owners”. Thus, migratory bird poaching represents a persistent and growing social practice in Mediterranean countries, and thus a problem for bird conservation (BirdLife International, 2006; Contesso, 2009).

Council of Europe recognizes that the issue of illegal killing of birds is important and like many wildlife conservation issues, focusing on the human dimension (i.e. understanding and working with people) seems to be more important to bird conservation than further understanding of the biological and ecological issues. The Standing Committee of the Bern Convention for over 15 years has had the issue of illegal killing, trapping and trade of birds in Mediterranean Parties on their agenda (Council of Europe, 2011). Despite this continued focus on the issue, the activity remains prevalent throughout the Mediterranean. In 2007, due to several interventions from a number of Contracting Parties and continued concern about the declining bird populations, the Standing Committee considered that illegal killing of birds, trapping and trade of birds required a pan-Mediterranean perspective (Council of Europe, 2011). At this time though, the focus was “on the prosecution of persons illegally catching, killing or trading in protected birds”, a recommendation initially made in 1986 (Council of Europe, 2011). The belief being that the issue continued to occur due to poor enforcement and that the solution was stronger national legislation and better law enforcement efforts. While legislation can be one mechanism from a human dimension perspective to address the issue, it is not the only one. Again, in 2008, the Secretariat informed the Standing Committee that there had been little progress in addressing the issue of illegal killing of birds partly because the response had been poor from Parties to report on the issue. Particular concern was mentioned about Cyprus and many other Mediterranean states (Council of Europe, 2011). This would suggest effective identification of the key players and communication amongst them was weak hindering a strategic joint effort forward on the issue. Addressing this lack of collaboration and cooperation may require innovative human dimension facilitated workshop approaches, the nature of which will be discussed later in this report.

At the 29<sup>th</sup> Standing Committee meeting, Mr. Sultana from Malta reported that illegal killing of birds remains a common occurrence in numerous European countries including his own and he suggested that in “some countries this illegal activity has increased enormously” (Council of Europe, 2011). Once again, the call was made for better enforcement and tougher penalties to all those involved in the activity from those catching the birds to those serving them in restaurants. The Federation of Associations for Hunting and Conservation of the European Union (FACE) reiterated the need for appropriate penalties at all levels (Council of Europe, 2011). However, after 15 years we must realize that better law enforcement, tougher penalties and stronger national legislation are not necessarily the solutions to this complex problem which centres on people’s beliefs, values, culture, economic benefits, social networks, awareness and overall concern or lack thereof for birds and biodiversity. In fact, FACE did stress the need for awareness campaigns targeted to key stakeholders (Council of Europe, 2011), and while this may be appropriate, it is important to understand whether the activity is driven by a lack of awareness or by other factors that will need to be addressed by innovative methods other than educational awareness and communication campaigns. Hence, there is a need for a comprehensive understanding of the human dimensions in illegal bird killing and trade. Such a topic will be discussed at the “European Conference on Illegal Killing of Birds” in July 2011 in Cyprus.

Traditionally, efforts by managers and authorities to solve complex conservation issues like bird conservation have been approached by ignoring the complexity of the issue and believing that every issue can be solved in two ways: 1) the “big stick” approach and 2) the “educational enlightening” solution. The former has definitely been the option of choice for many years by the States involved to address the illegal killing, trapping and trade of birds. Tougher legislation, harsher penalties and stronger law enforcement presence (i.e. the “big stick” approach) has been used but with little impact on the problem. Common to many conservation issues and more recently being considered in the bird conservation issues is now the “educational enlightening” solution. The belief with this approach is that the reason for the problem lies in a lack of public awareness or knowledge about the issue (i.e., a cognitive conflict to be discussed later), and that this problem can be solved by simply a good communication campaign with effective targeted messages to those beliefs most directly linked to attitude and behaviour, delivered through the appropriate medium by a trusted and credible messenger, to the specific target group, in a particular geographic space. Rarely are conflicts solely based on knowledge or lack thereof, and while educational campaigns are another aspect of human dimensions (HD), there are many other HD perspectives to consider.

If a decision is made to address the complex issues of illegal killing, trapping and trade of birds from either the “big stick” or “educational enlightening” approaches, an important first step toward developing more effective environmental education, public information, and law enforcement programs is to develop an understanding of the reason behind poaching of birds. Such an understanding of motivations is required to identify research gaps and better guide resource managers toward developing effective bird conservation programs. By having an overview of the main themes explored by HD and by investigating why people poach migratory birds during the “European Conference on Illegal Killing of Birds”, a better understanding of the possible reasons behind illegal bird killing will be developed. Thus, recommendations and future priority actions to reduce this activity will be identified and further developed to support and improve migratory bird conservation.

### **1.1 Human Dimensions Overview**

The purpose of this section of the report is to provide a brief overview of the nature of human dimensions. Similar to an ecologist or a biologist providing the necessary background to the habitat and biology of the species, the status of the population, and ecological implications of mortality rates, this section provides the reader with the necessary background of a social science field that may be unfamiliar to many of the participants at the “European Conference on Illegal Killing of Birds” to be held in Cyprus in July 2011. Human dimensions is a relatively new discipline consisting of clear research and applied conflict resolution components that enable managers and decision-makers to effectively integrate an understanding of people, their attitudes, beliefs, intentions and actions into wildlife conservation projects so to provide scientific advice for management decision-making processes. While there are many dimensions or perspectives in bird conservation issues, most of these perspectives tend to be human in nature rather than biological (Mitchell, 1989). And as we definitely understand, the success of a species to survive within human dominated landscapes depends mainly on a willingness of local residents and sometimes specific target groups.

Mitchell (1989) suggests that there are seven dimensions or perspectives of resource management and that these vary over space and time. Most of these perspectives are human-oriented and broadly could be considered human dimension issues. All these perspectives exist to differing degrees within bird conservation. These dimensions include: economic (i.e., costs and benefits and values of landscapes and birds), social (i.e., attitudes, beliefs, expectations and behaviour toward birds), political (i.e., the nature of political will or lack thereof of conserving birds), legal (i.e., policies, guidelines, national and international laws and conventions on bird conservation), institutional arrangements/governance issues (i.e., mandates of different agencies and their interactions with each other to conserve birds) and technological perspectives (i.e., complex versus simple technologies to solve challenges in different societies). There is also the biophysical perspective (i.e., ecological understanding of habitats, bird populations, and prey-predator relationships). Traditionally, the biophysical perspective has been considered the most important for the conservation management decision-making process (Decker et al., 2001). Within the illegal killing, trapping and trading of birds biological issues have been important but also legal issues have dominated over the past 15 years as mentioned earlier. In addition, institutional arrangements and governance issues, particularly weak collaborative relationships between governments across State boundaries are important in the issue of illegal killing of birds. Trans-boundary cooperation and collaboration between States has been identified before by Council of Europe as a challenge in conservation issues where species travel across State boundaries (Bath, 2005). Considering the biophysical perspective or biophysical feasibility for birds in isolation of human factors may not provide an accurate representation of the complete situation and alone will not achieve conservation of the species and prevent illegal killing, trapping and trade of birds. We tend to talk about resource management, birds being no exception, as if we are managing the resource, but in fact we manage the people. We have to understand that the resource (birds) may be considered a valuable aesthetic resource to some individuals, an important cultural food source or a unique natural feature to be conserved. A resource (the bird) is a subjective, dynamic concept that is shaped through an understanding and interaction of three components: human, culture, and nature. According to Zimmerman (1933), “resources are not, they become.” A resource emerges because of

human wants and needs, and the available technology to make it happen. Up to this point, little attention has focused on understanding these elements in a scientific and applied way as they pertain to the activity of illegal killing, trapping and trade of birds; a human dimensions project could address these issues.

Wildlife management has been defined “*as the science and art of changing the characteristics and interactions of habitat, wild animal populations, and people in order to achieve specific human goals by means of managing wildlife resources. In one form or another, everything done in wildlife management is done for the people.*” (Anderson et al., 1987) Biophysical scientists have focused upon understanding the species and considerable discussion has often occurred about endangered species (Decker et al., 2001). Emphasis in bird conservation, similar to other wildlife management issues, then shifted away from studies of the species to the need to understand the spaces where these species survived. Researchers began discussing endangered spaces (Hummel, 1989). However, biologists and ecologists haven’t adequately addressed the people component of the equation and with poaching activities on birds, this human dimension is probably more important than the biophysical component (Bath, 1998). Social scientists (e.g., human geographers and rural sociologists) began to apply techniques to understand the people part of the wildlife management equation. This application of studying people and their interactions with wildlife was later termed human dimensions in wildlife management (Manfredo et al., 2009). Today, successful bird conservation will involve not only an understanding of the biology of the species and its habitat, but also an understanding of public attitudes toward and beliefs about the species, behavioural intention in terms of support or opposition toward possible management approaches to the species and actual behaviour (Manfredo et al., 2009). The human dimension of illegal killing, trapping and trade of birds is particularly important to understand when designing and implementing management plans for species, which often arouse conflicting emotions among the general public and /or hold cultural importance to local residents (Majic and Bath, 2010). Indeed, addressing illegal bird hunting is more a socio-political issue than a biological one which is explicitly wrapped in a social, cultural and economic dimensional space.

## 1.2 Human dimensions and poaching

In a world with growing human populations and shrinking natural habitats, the issue of poaching has increased and become more complex. Despite having this problem well recognized and documented throughout the world, few social science studies have focused on poaching behaviours. In human dimension studies, poaching has been defined as the conscious intention of an individual to illegally harvest, sell, purchase, transport, possess and use species that are protected by law (Muth & Bowe, 1998). As illegal wildlife harvesting is becoming a persistent and growing social practice in many parts of the world and thus a concern for endangered species conservation, the psychological dynamics and socio-cultural context of poaching have been investigated (e.g., Wilson, 1990; Curcione, 1992; Forsyth & Marckese, 1993; Scialfa, 1993; Bowe, 1994). Such studies have attempted to categorize poachers and the motivation behind illegal harvesting. The main reasons behind this practice have been identified as the following (Muth & Bowe, 1998):

1. **Economic gain:** harvest or sale of a species (e.g., falcons destined for Middle East falconers (Robbins, 1985)) and/or parts or products of the animal (e.g., bald eagle feathers (Marler, 1986)). When poachers have been studied, most of them are motivated to illegal harvest species for commercial reasons. Lucrative, tax free profit and lack of law enforcement has been reported as the reasons behind pursuing such illegal practice.
2. **Food source:** non-commercial harvest of wildlife, mainly due for household, relatives and friends consumption (e.g., illegal bush-meat hunting of ostrich in Serengeti National Park (Magige et al., 2009)). Poachers practicing illegal harvest for non-commercial use are motivated by stating that wild game has better meat quality than domestic species. Also the lack of opportunity to get this food source from elsewhere was a driver of poaching. Another motivation behind this type of illegal harvesting is to supplement the family budget with cost “free” meat. This last motivation broadens the range of possible poachers to everyone, including people that do not hunt habitually. As a matter

of fact, poaching for food is perceived as a more acceptable practice if driven by poverty and personal needs (Glover, 1982).

3. Recreation: experiencing the satisfaction associated with hunting and fishing alone or with friends has been recognized by HD as the main reason behind motivations of practicing such recreational activities. Such legal practices often turn into illegal harvesting when hunters and fishers take a non-target species, harvest more than permitted or not in legal hours (e.g., violation of sport fisheries regulations by exceeding legal limits). Being with friends, having a good time or the excitement of the moment were the main motivations behind such illegal activity. Interestingly the motivation given for these illegal activities were similar to the one given for the same legal recreation activity (e.g., illegal duck hunting versus legal duck hunting).
4. Trophy: a trophy animal is generally illegally killed for a particular physical characteristic that represents a symbol of power and wealth for the poacher (e.g., antlers, horns, fur). As illegal trophy hunting is expensive and risky, this practice raises feelings of accomplishment and pride as the poacher acquires notoriety and recognition by pursuing this practice.
5. Thrill hunting: the psychological and emotional feelings poachers experience while killing a living animal is reinforced by the illegal factor of the action or by the fact that they are hunting a species with few individuals left (e.g., hunting snow leopards in Nepal).
6. Self-defence: when a species represents a threat to human livelihoods or their belongings (e.g., elephant raids in Indian villages) or a competitor while hunting (e.g. large carnivores preying on game), poaching becomes a way to manage wildlife. Motivations behind shooting or poisoning nuisance species are mainly associated to public risk and damage perceptions. Such beliefs are reinforced by the lack of trust toward conservation authorities, as “their” management strategies (e.g., compensation, repayments or culling problematic species) don’t always solve the conflict with the nuisance species.
7. Cultural reasons: if a species has been traditionally hunted, poachers feel that they have rights of access and use to the species (e.g., Inuit hunting caribou). Privileges to hunt the species in the past or the fact that the species has been harvested during traditional activities motivate such poachers. Reasons behind such practices can be also attached to feelings of injustice due to the closure or the regulation of species harvested traditionally by local users through laws. Tradition, ethnic heritage and social identities are often the motivation behind such type of illegal harvesting (e.g., Young Maasai killing a lion as a cultural practice to become a man).
8. Disagreement over conservation regulations: people poach as a reaction against specific conservation laws that are believed to be based on false biological notions about the species. Also the perception that regulations favour some stakeholders while discriminating against other ones motivates such illegal practice (e.g. moratorium against the depletion of fish stocks and local fisheries).
9. Poaching as Rebellion: for protest against authorities in general or dislike of conservation authorities, people poach (e.g., hunting on private land). The motivation behind this type of poaching is feelings of discrimination or social class differences. This type of poaching was more common in past centuries and today represents a minor reason for illegal killing of wildlife.
10. Gamesmanship: the hunting satisfaction is increased by the illegal act, since the poachers are at the same time wildlife hunters and people hunted by conservation authorities (e.g. bighorn poaching inside Yellowstone national park). The motivation behind this behaviour is to outsmart conservation authorities and law enforcement. As a matter of fact such poachers are difficult to catch as they have a good knowledge about formal and informal rules of illegal hunting legislation.

### 1.3 Human dimension in illegal killing of birds

To better understand the current main themes and actors considered while exploring bird management and conservation issues and to identify in which of the ten categories above motivations for migratory bird illegal hunting mostly occurred, an HD review of birds and poaching was carried out. Only 64 HD documents were obtained by searching within several disciplines and different search engines and keywords on public attitudes toward bird conservation, management and illegal killing. The majority of studies (68%) had birds in general as subjects; of those, 3 focused on migratory birds (Gilchrist et al., 2005; Brouwer et al., 2008; Sultaniana, & Van Beukering, 2008). These studies looked at migratory birds from a local ecological knowledge perspective, as a threat spreading bird flu and from an economic revenue perspective. The main theme explored regarding human-bird interactions was within the context of recreation (28%). Under this theme, participant's motivation, preferences and specialization concerning activities related to birds (e.g., hunting, birdwatching) were explored. The second biggest category consisted of 11 studies (17%) on public attitudes toward birds. Only one peer-reviewed article addressed the question of illegal hunting of birds. Specifically, an ostrich (*Struthio camelus*) case study was used to explore the influence of illegal bush-meat hunting in Serengeti National Park (SNP) (Magige, et al., 2009). The majority of research on human-bird interactions has focused on birdwatchers (30%) and the general public (28%). Also hunters (8%), children and students (8%) and farmers (3%) were consulted while exploring this topic. In the "Other" (14%) category, were topics and stakeholders mentioned just once (e.g., experts, agencies, community).

The human-bird interaction topic appears to be relatively new to the human dimension field. Work that has been done has focused on birds in general, recreation activities and birdwatchers. Past research has tended to focus on those individuals who enjoy birds rather than on groups that affect bird conservation through illegal killing, such as hunters and potential consumers. Despite migratory bird poaching being identified as a hot topic, only three studies focused on migratory birds (Gilchrist et al., 2005; Brouwer et al., 2008; Sultaniana, & van Beukering, 2008). Furthermore, just one study looked at poaching motivations (Magige et al., 2009). No documents were found that looked at migratory birds and poaching together from the perspective of the people directly affected or affecting migratory birds. Thus, the 10 categories of poaching motivations reported above have never been applied to better understand the social, educational and cultural factors that push people to deliberately kill migratory birds. There is indeed a large gap in this research area and a need to design and carry out more investigations about this topic to understand the real motivations behind such illegal practice. Only by developing better understanding of migratory bird poachers' motivations, will it be possible to develop conservation strategies, law enforcement programs and awareness campaigns that really explore the reasons behind migratory bird illegal killing.

### 1.4 Addressing conflict in illegal killing of birds

Despite understanding that bird conservation is clearly a "people" problem more so than a biological question, social science research that could aid in these conservation efforts has been non-existent. To address illegal killing, there is however a need to understand motivations, beliefs and cultural values behind bird illegal killing. The lack of knowledge about which are the specific social, educational and cultural motivations that push people to deliberately kill, trap and trade birds in Mediterranean regions and the lack of response from Bern Convention Parties to report on this issue make it difficult to identify the driving reasons behind the phenomenon. However, it is possible to start addressing this gap by better understanding the nature of conflict and how the 10 poaching motivations reported above can be connected to conflict perceptions.

Conflict can arise for different and concurrent reasons. When dealing with conflict, the following categories have been identified:

1. Cognitive conflict results when there is a difference in beliefs between various stakeholders and/or local residents. For example, group A believes that migratory birds are increasing and group B believes that migratory birds are decreasing. Poaching motivation connected to cognitive conflict in



this example is based on a perceived difference in beliefs which will result in a disagreement over conservation regulations as poachers don't believe that restriction laws are based on sound scientific data. These beliefs may or may not be true. In this case, educational programs may be effective if targeted on those specific weaknesses in knowledge that are most directly related to attitude and behaviour change (Bath 1996).

2. Value conflicts occur when there is a difference in the importance of an issue between various groups. For example, group A values that migratory birds need to be protected for future generations and group B believes that migratory birds should be hunted to maintain traditional activities. Poaching motivations connected to value conflicts are food source, cultural reasons and self defence. Also recreation, trophy and thrill hunting are poaching motivations that can be attributed to value conflicts. In these cases, birds are valued differently between stakeholders (i.e., conservationist, hunters, farmers, general public). This could result because of a hierarchy of values within a value system. HD research helps identify which values are most important and allows for conflict resolution techniques to focus then on principles rather than positions (Bath & Enck, 2003).
3. Economic conflicts occur when there is a difference perceived between groups of who bears the costs of implementing an issue versus who reaps the benefits of such an issue. For example, group A may feel unfair that they suffer all the costs of bird crop raiding while group B gets the benefits of bird conservation through bird-watching activities. Poaching motivations linked to economic conflicts are economic gain, trophy and cultural reasons. As bird species are perceived differently by stakeholders, their economic value varies among people depending on their social, educational and cultural background. HD research helps identify which economic conflict is driving poaching activities in specific areas and allows for conflict resolution techniques that reduce such practice (Bath & Enck, 2003). Once the nature of the economic conflict is identified, educational programs can be targeted on those specific issues.
4. Behavioural conflicts can be a personal conflict between individuals of different agencies over issues not directly related to the problem at hand. Behavioural conflicts could also exist due to a mistrust of a particular agency by another stakeholder based upon past history with the agency or organization (Mitchell, 1989). For example, group A may not trust group B due to past negative experiences concerning the conservation of species different than birds. Poaching motivations connected to behavioural conflicts are disagreements over conservation practice, poaching as rebellion and gamesmanship. Once identified such types of conflict, law enforcement (i.e. new laws, increase poaching fines, increase monitoring against poaching activities) can be designed and planned to reduce this type of poaching motivation. In addition, a human dimension facilitated workshop approach can be used to discuss openly issues of trust and credibility to address this conflict. Behavioural conflicts tend to be the most common in wildlife resource management issues and most likely are important in bird conservation issues. These conflicts can't be solved through educational efforts alone but require a good understanding of who is trusted and what messages are best to resonate with groups.

Despite identifying that there are several conflict types that can motivate illegal killing of birds, traditionally conflicts and motivations that drive poaching have been considered just cognitive conflicts. Thus, expensive educational efforts have been designed and awareness campaigns have been carried out. It is important to recognize that the assumption that all conflicts can be solved through more public awareness and educational materials is wrong. Depending upon the nature of the conflict, educational materials could be absolutely useless; in fact unless there is a cognitive conflict, educational materials is not the way to resolve the conflict. Human dimensions research can help identify the nature of the conflict and begin "peeling back the layers of the conflict", thus enabling a better understanding of the people component and the necessary direction to understand poaching motivations. While educational messages may be one way to address conflicts, there are various HD tools available to ensure the correct conflict is being addressed.

## 2. A NEW PATH TO ADDRESS BIRD ILLEGAL KILLING ISSUES: HUMAN DIMENSIONS AS A TOOL FOR BIRD CONSERVATION

Without clearly understanding the motivations of human-migratory bird conflicts currently affecting the conservation of migratory birds in Mediterranean regions, conflict resolution techniques including education are merely “shots fired in the dark”. Preventing and mitigating migratory bird poaching by understanding public attitudes, beliefs and conflict perceptions toward birds, is therefore needed to develop and support successful bird conservation projects. Thus, there is a need to do a step back from trying to address the illegal bird killing problem as there are no clear directions, not even from the Bern Convention Parties, on this phenomenon. To work toward solutions we suggest starting a public involvement process that offers to create the context to truly address illegal bird killing. This process will focus on identifying:

- 1) Social, educational and cultural factors driving illegal killing;
- 2) Motivations of poaching present in different Mediterranean regions;
- 3) Main geographical areas of concern;
- 4) Obstacles to stopping illegal killing;
- 5) Obstacles to raising public engagement in reducing migratory bird killing?

The public involvement approach should engage Bern Convention Parties, NGO’s, experts and the public as all these stakeholders play a fundamental role in supporting or not migratory bird management and conservation.

### 2.1 Public involvement as a tool for bird conservation

Human dimension techniques, such as public involvement, can be applied by the Bern Convention to address illegal bird killing. Such techniques allow the targeting of information and awareness raising campaigns and to work efficiently with stakeholders (the general public, politicians, police authorities, hunters, etc.). Public involvement at its basic form has been indeed defined as any action taken by an interested public to influence a decision (Praxis, 1988). Public involvement relies on the redistribution of power from decision makers to the various segments of society. Public involvement is an umbrella term that generally refers to the spectrum of methods with which to consult, engage or involve citizens and stakeholder groups in policy or program development processes. Considered to be a keystone of public involvement, Arnstein’s Ladder of Public Participation (1969) represents a critical discourse that explains and defines the different levels of power redistribution in decision-making processes. Following Arnstein’s Ladder, the public can be engaged in decision making processes at three different levels of power sharing:

Nonparticipation (info-out): To educate or “heal” the public, managers can use two types of methods to communicate with the public: **manipulation** and **therapy**. Through public meetings, advertisements and technical reports, information is given out to the public without asking for any feedback. This one-way communication, although seeking for public engagement, does not take into account the distribution, or redistribution of power (Arnstein, 1969; Mitchell, 2002; Mitchell, 2004).

Tokenism (info-out-info in): Tokenism is composed of three steps: **informing**, **consultation** and **placation**. These three participation methods differ in the amount of power that is redistributed between the parties. Whereas informing and consultation consist mostly of the public being informed and providing feedback to the authorities, placation enables participants to provide insight to the decision-making process. In this case the last decision is still in the hand of managers. Open houses, visioning exercises, focus groups, surveys and workshops are the main tools used at this level of the ladder (Arnstein, 1969; Mitchell, 2002; Mitchell, 2004).

Citizen Power (continuous exchange): Here the power between parties is redistributed. **Partnership, delegation of power and citizen control** incorporate continuous exchange of information and feedback between managers and the public. Indeed, with different degrees of power allocation, these three rungs lead either to shared power or to total citizen control in the decision-making process. Through advisory committees, task forces and facilitation, people are empowered and therefore can aim to own and be responsible for the management of resources (Arnstein, 1969; Mitchell, 2002; Mitchell, 2004).

The main benefits provided by public involvement are to increase the quality of decisions, to provide for more efficient project management, to minimize project cost and time delay, to increase the ease of implementation, to avoid “worst-case” confrontation, maintain credibility and to build legitimacy and develop team building opportunities. Despite BirdLife International (2006) recognizing that “migratory bird hunting represents in many areas an important socio-economic activity as it supports subsistence hunters and trappers, weapon and ammunition manufacturers, bird-trap makers, caged bird sellers and restaurant owners” and the Federation of Associations for Hunting and Conservation of the European Union (FACE) advocating for targeting all stakeholders (the general public, politicians, police authorities, hunters, etc.), no public involvement that has gone further than manipulation, therapy or informing has been applied to address illegal killing of birds.

Based on the overview of public involvement and the lack of data concerning public motivations on poaching, we recommend tailoring public consultation activities to really address the bird illegal killing phenomenon at three levels:

1. Working Group session “Social/Educational/Cultural aspects: Human dimensions as a tool for bird conservation”;
2. Engaging Bern Convention Parties and NGO’s;
3. Case study on migratory bird illegal killing.

For each of these levels of public involvement, a combination of consultation tools and methods are developed and provided in the sections below.

## **2.2 Working Group session “Social/Educational/Cultural aspects: Human dimensions as a tool for bird conservation”**

The first step toward addressing key issues facing bird conservation will be undertaken at the Working Group session “Social/Educational/Cultural aspects: Human dimensions as a tool for bird conservation” by exploring the following questions:

- What are the main motivations behind people poaching migratory birds?
- What are the key obstacles to stop illegal killing of birds?
- Where would be two key area(s) for ensuring successful migratory bird conservation?
- How can public opinion/trust toward public authorities be raised and fostered to reduce migratory bird killing?

By working with the conference experts on identifying the main obstacles to stop illegal killing, key locations and actors will emerge. Also a basic knowledge will be acquired on the motivations and cultural values behind illegal bird killing. Such understanding of the issue will be however partial, as not all Bern Convention Parties and NGO’s working on this issue will be present. Furthermore, people directly affected by migratory bird conservation will not participate. Thus, no information will be collected on how widespread poaching motivations are nor the strength of these views and what may be able to drive a change in these values.

### **2.3 Engaging Bern Convention Parties and NGO's**

To further develop the exploratory data obtained during the workshop and identify which of the 10 poaching motivations identified during the conference drive illegal killing of birds in different European regions, there is a need to collect data in a systematic way from Bern Convention Parties and NGO's working on migratory bird issues. A questionnaire with a combination of qualitative (flexible) and quantitative (fixed) items is suggested to be applied to obtain baseline data that allows for a better defining of the poaching motivation patterns from a broader perspective. To capture a more complete, holistic, and contextual understanding of illegal bird killing while providing reliable results a mix method questionnaire is supplied in Appendix I. A key aspect of this method approach is that the qualitative and quantitative perspectives involved can support each other and provide insights from the data to identify common patterns. This helps in recognizing which are the main poaching motivations, what the main poaching areas are and which are the main obstacles to achieve migratory bird conservation.

To avoid low response rates, the questionnaire will focus only on the 5 objectives identified for implementing public involvement in solving illegal bird killing. Based on the information gathered during the Working Group session "Social/Educational/Cultural aspects: Human dimensions as a tool for bird conservation", the questionnaire provided in Appendix I will be reviewed and implemented. The final questionnaire will represent an innovative consultation tool for the Bern Convention and will represent an instrument to collect data in a systematic and standardized way. The quantitative data obtained by consulting Bern Convention Parties and NGO's will be easily transformed in percentages and be further supported by the qualitative data gathered through the application of the mixed-methods approach.

### **2.4 Planning a case study on migratory birds**

As the first two public involvement techniques do not consider people directly affected or affecting bird illegal killing, there is a need to gain baseline data by engaging stakeholders (the general public, politicians, police authorities, hunters, etc.) in different European regions. Only by targeting a case study on the main poaching motivations and areas of concern identified through the first two participatory techniques, will it be possible to understand the social, educational and cultural factors driving illegal bird killing on the ground. Thus, an in depth study should be designed to explore public motivations and cultural values behind illegal bird poaching. Based on the knowledge gained from experts during the workshop, two study areas in different European regions will be identified to carry out a pilot study on public perceptions about migratory bird poaching. The two locations will be selected based on their biophysical and human traits. Thus, they should be at the same time key resting areas on bird migration routes and culturally important areas for culinary, recreation, subsistence hunting and other reasons.

The case study will explore in a quantitative (i.e. the "what") and in a qualitative (i.e. the "why") way attitudes and beliefs of stakeholders and local residents toward illegal killing of birds. For the qualitative data collection, a Common Ground Matrix (CGM) (Bath, 2000) will be obtained by preliminarily interviewing the general public and focus groups. This is a matrix that allows for an assessment of the common issues across various stakeholders through visual illustration of the key issues from each group. Upon identifying the key issues, a specific closed-ended questionnaire will be designed to gain the quantitative measurement of attitudes and beliefs toward illegal bird poaching. The questionnaire will focus on: attitudes, beliefs and knowledge about migratory birds, poaching motivations, support and opposition toward this practice and socio-demographic characteristics of participants. Qualitative data will be also collected during the study and reported as personal comments of participants regarding specific topics. Such qualitative information will assist the understanding of the data gathered through the quantitative approach.

The collaboration between various levels of government and key players will be further strengthened through an applied HD facilitated workshop approach. Facilitated workshops gather the public to discuss issues of common interest in order to get inputs, insights and recommendations about the discussed topic. Facilitated workshops can be considered a cooperative public involvement process. They can also be used as an educational tool, as non-formal education activities can be applied within workshop development.

Workshops, if well designed, are an important tool in involving stakeholders in the planning process. They also are valuable to obtain information and opinions from informed individuals and organizations, to explore, prioritize and identify issues and possible solutions, and to build familiarity and trust among groups of participants who might otherwise not interact because of their different interests. Such techniques will be used to work toward a consensus-based and cooperative strategic plan that:

- Understands bird conservation key issues from multiple perspectives;
- Defines a clear vision on how species should be managed by including people living and interacting with migratory birds;
- Identify and addresses real and perceived obstacles toward achieving the bird conservation vision from a social, cultural and geographical perspective.

During the facilitated workshop approach, the first contact with groups will be a listening exercise of key issues and concerns, not a presentation of what “authorities” believe to be the issue at hand. The second session will be a presentation of the actual knowledge gathered during the first two participation techniques to connect stakeholder or community issues with those identified by the Bern Convention. Only through communicating with stakeholders (listening and then talking) can trust be built between stakeholders and effective conservation can occur. Human dimensions research can be used to build that trust and to understand and to address the nature of the conflict between all groups (Bath & Enck, 2003). Applied human dimension facilitated workshop approaches have been successful in taking diverse interests around a wildlife species (e.g., brown bears in Bulgaria, wolves in Croatia) and through a series of workshops gaining 100% consensus on management plans which address the key concerns of all groups and create a working relationship between all Parties and effective conservation on the ground.

The expected outcomes of the pilot study are:

- Understanding local resident attitudes, beliefs and behaviours toward illegal bird hunting;
- Clear direction for mechanisms to reduce illegal activities regarding birds;
- Upon identifying the nature of the conflict, if belief driven, ability to target education and communication messages specifically to those weaknesses in knowledge most directly related to attitude and behavioural change, and targeted to specific stakeholders;
- Clear documentation of how widespread support or opposition toward illegal killing of bird hunting and trade is amongst local residents and of their willingness to report illegal activities. Direction on whether communication efforts must be widespread or not;
- Based on the pilot project, established methods to transfer and mobilize knowledge in other areas of Europe;
- Enhancement of trust between conservation agencies, different levels of government and local residents.

## **2.5 Understanding illegal bird killing issues from multiple perspectives**

By applying public involvement at three levels (i.e., workshop, Bern Convention Parties and NGO’s survey, public and stakeholders case study) and by collecting data on this phenomenon with different techniques (i.e., CGM, quantitative questionnaires, qualitative workshops), an integrated understanding of the main issues concerning illegal bird killing will be acquired. Areas of commonalties or of disagreement between stakeholders will be highlighted by comparing the information gathered through the public involvement work. For example, issues not considered before may arise and problems believed to be important may become secondary challenges thanks to a better understanding of the topic from a multiple perspectives approach. These baseline data also represent a good background from which to identify conservation strategies to suggest to the Standing Committee of the Bern Convention. Furthermore, such data will enable decision-makers responsible for conservation strategies to classify motivations behind

poaching and set the stage for monitoring changes in public behaviours over time. Through monitoring people attitudes, beliefs and perceptions about illegal killing of birds over time, it will be possible to evaluate if the Bern Convention conservation efforts are really making a change in bird conservation. Such evaluation of programs and initiatives remain rare in conservation. Only by identifying the extent of the problem, taking stock of national experiences by consulting Parties and putting forward the examples gained through the case study, will the Bern Convention address problems that really undermine migratory bird conservation and move toward achieving bird conservation.

### **3. CONCLUSION**

The organization of the European Conference by the Council of Europe Bern Convention on Illegal Killing of Birds illustrates the need to better address the issue from a biological, legal and social perspective. Biological knowledge about birds on migratory species, their behaviours and their routes from Africa to Europe and back have been largely explored through bird banding activities all over the Bern Convention Parties countries. Long-lasting and geographically broad projects on bird banding have generated scientifically strong data, have created databases on bird capture and recapture, have fostered knowledge sharing by tracking species migrations over large geographical areas and have spurred the creation of networks between experts. For example, “Il Progetto Piccolo Isole”, has collected data on migratory birds since 1988 from 38 bird ringing stations in 7 countries around the west-central part of the Mediterranean basin (Montemaggior & Spina, 2002). Bird conservation projects have enabled managers to start looking at management and conservation issues by focusing on habitat loss, local concentrations of migrants, connectivity between breeding and wintering areas and many other key topics. Not only has the biological perspective been largely explored, also legal issues have been addressed while looking at bird conservation challenges. Treaties and laws have been enacted to protect migratory birds at international, national and regional levels (i.e., the African Convention on the Conservation of Nature and Natural Resources, the Ramsar Convention, the Bonn Convention, the European Union Bird Directive). Law enforcement mechanisms and sanctions have been developed and implemented over time. From the late 1960s until today, the legal aspects of this phenomenon have been largely explored, developed and implemented to address and theoretically stop illegal killing, trapping and trade of birds.

The incredible efforts undertaken to better characterize illegal killing, trapping and trade of birds have focused mainly on biological and legal perspectives, forgetting to look also at the social aspect driving such bird conservation challenges. By trying to identify and analyse the cultural and sociological factors behind this phenomenon with a human dimension approach, it has become quickly clear that few studies have focused on poachers motivations and none have focused on migratory bird illegal killing. The complexity of exploring such a controversial issue has been further highlighted by the lack of a good response from Bern Convention Parties to report on illegal killing. For over 15 years illegal killing, trapping and trade of birds in Mediterranean Parties has been a concern for the Standing Committee of the Bern Convention, and yet, exploring why people poach using a scientific, rigorous human dimensions approach has never become a priority on the Agenda. In fact, the upcoming conference in July 2011 in Cyprus may be the first time in which the human dimension of bird illegal killing, trapping and trade will be introduced and discussed. As bird management is not only about managing the birds, but also listening and working with people, since they decide whether to support or not bird conservation, tolerate more or less birds and damages, and coexist or not with migratory birds, our first recommendation is to start considering people not only as part of the problem, but also as the solution. Engaging proactively the public and stakeholders in bird conservation issues is indeed the first step toward addressing controversial bird topics, tackling conflict between stakeholders and working toward solutions.

Before being able to really encompass people in the bird conservation equation, there is a need to step back and start collecting baseline data on social, educational and cultural factors driving illegal killing, on poaching motivations, on main geographical areas of concern and on obstacles to stop illegal killing from a people perspective. Such information can be collected through a participatory approach that encompasses multiple perspectives, as highlighted above. By involving stakeholders in conservation processes, it is possible to obtain long-lasting and supported final decisions (Reed, 2008) while

encouraging environmentally responsible behaviours (Dalton, 2005; Wilson, 2008). Thus, our second recommendation is to move from conflict resolution techniques that focus on political, legal and administrative approaches (Table 1) to alternative dispute resolution (ADR) methods (Table 2).

Conflict resolution approaches	Definition	Outcomes
Political	Involve elected decision makers considering the range of competing values and interests, and then making a decision	Protocol, Agendas, Recommendations
Legal	Litigation and courts: parties in dispute are so entrenched in their positions, or so angry at other participants, that they will not try to reach a solution	Juridical approaches, Laws
Administrative	Built into resource and environmental management organizations, and allows bureaucrats to take decisions regarding some dispute.	Life projects, wildlife management plans,

Table 1. Classic conflict resolution techniques.

Alternative dispute resolution (ADR) promotes joint decision-making and avoids the adversarial and winner-loser characteristics of political, legal and administrative approaches. Such an approach improves communication and information sharing among stakeholders, addresses causes of conflicts in a collaborative way, transforms conflict management processes into positive social change and limits occurrence and intensity of future conflicts. ADR uses methods such as collaborative laws, negotiation, mediation and arbitration to help parties reach a consensus about a specific topic and seek long-term mutual gain for all stakeholders (Table 2). The latter, however, remains as a win-lose scenario thus preference is for the use of facilitation which involves collaborative problem identification and solution-driven based on consensus, negotiation or mediation as better approaches.

Alternative Dispute Resolution	Definition	Outcomes
Facilitation	Parties agree that an independent person who is an expert in the area of dispute investigates, reports and determine the main reason behind the dispute and help the parties to work toward a shared solution	Facilitator helps parties to reach a solution over a dispute through consensus
Negotiation	Following a voluntary process in which parties reach agreement through consensus by finding a compromise between their opposing views	Parties alone or through a negotiator reach a solution over a dispute through consensus
Mediation	Using a third party to clear up misunderstandings, find out concerns, and reach a resolution.	Decision taken by a mediator. Lack the authority to impose a solution.
Arbitration	Submitting a conflict to a mutually agreeable third party, who renders a legal decision over a dispute	Decision taken by an arbitrator. Legally binding decision

Table 2. Alternative Dispute Resolution.

By applying the three public involvement levels reported in section 2 of this document, the Bern Convention will start moving toward applying ADR and will truly address bird conservation challenges by including people in decision-making processes. The application of ADR will also help to understand what types of conflicts are currently undermining the ability of the Bern Convention to stop illegal killing, trapping and trade of birds. By addressing such conflicts, motivations behind poaching activities will be identified and thus can be considered while implementing law enforcement and planning conservation action that strives to minimize illegal killing, trapping and trade of birds.

In a world where human settlements are expanding more and more into natural areas and the boundaries between human and birds are becoming more blurred (Messmer, 2000; Madden, 2004; Woodroffe et al., 2005), managers need to go beyond biological research and move toward strategies that integrate the views and concerns of local communities in bird management (Woodroffe et al., 2005). Indeed, conservation strategies today may succeed or fail not because of poorly developed biological science, but due to the lack of understanding and integrating people's values toward birds in management and conservation strategies. Furthermore, if the wildlife manager's goal is to work toward a more bird tolerant society, projects that embody species conservation and local community engagement are needed. Effective bird management and conservation is indeed not only managing species, but also listening to people and working with them toward stopping illegal killing, trapping and trade of birds.

#### **4. RECOMMENDATIONS**

What has been learned from examining the issue of illegal bird killing, trapping and trade of birds is that while the issue has been on the minds and agenda of the Standing Committee and Parties to the Bern Convention for many years, there has been little progress in better understanding the nature of the issue and even less in addressing the issue. Birds continue to be illegally killed, trapped and traded throughout many European countries despite national and international legislation and law enforcement efforts at national and international levels designed to prevent such activities. To move forward, there must be admittance by all Parties that these traditional approaches of law enforcement and legislation which have dominated discussions aimed to resolve the issue have not been fully effective alone. More monies to hire more officers to enforce regulations and to impose higher fines or other stiffer forms of punishment are not the answer. The issue is complex and it requires innovative ways to achieve conservation goals. Those individuals that kill, trap and trade birds need to be better understood and rather than seen as the "problem" to bird conservation, must be proactively engaged in effective processes so they may become part of the solution. This will be a radical departure from the direction pursued for the past 15 or more years and will require a significant paradigm shift in how to engage people. Interestingly, Kofi Annan, former Secretary General to the United Nations, embraced this idea recently by admitting that law enforcement and legislation had failed in addressing drug issues and suggested the need to consider the people not as criminals but as partners to finding solutions.

##### **Recommendation 1:**

##### **Need to embrace the idea of working with people rather than against them.**

While legal and biological perspectives have been widely explored, there is no history of scientific research on the human dimension side of the bird conservation equation. Social scientists can contribute through rigorous research and methods to an understanding of the motivations behind the activities of illegal killing, trapping and trade of birds. A human dimension project could also focus on those that participate in the illegal activities and on a more general public to document support or opposition to such activities. Additional research could explore the nature of conflict thus providing direction for alternative dispute resolution (ADR) techniques. Finally, assessing key beliefs and the linkages between beliefs, attitudes and behaviour would provide the necessary information to design an effective educational and communication/public awareness campaign that would target messages not too high or too low, nor on information not directly relevant to addressing cognitive conflicts. Such a project would provide decision-makers with baseline data to be able to monitor attitudes and beliefs and evaluate the effect of communication efforts and any attitudinal and behavioural changes that may occur over time.



**Recommendation 2:**

**Finance, design and implement a human dimension in illegal bird killing, trapping and trade project in two pilot areas within the Mediterranean region so to gain the necessary scientific information required to advise decision-makers and better understand and address the issue.**

As explained earlier, public involvement can take many forms, use a variety of methods, and be representative of a variety of stakeholders. Implementing recommendation 2 will ensure quantitative baseline data emerges using an information feedback approach. However, as FACE recommended earlier the various stakeholders must become engaged in a decision-making process, a process that can be used to define collectively the vision, nature of the problem and specific solutions. In addition, to generate interest in such a human dimension facilitated workshop approach, common issues need to be identified amongst all groups and interest generated to work through a consensus-based process. This will require identifying all the key players, conducting qualitative interviews with them all, and constructing a common ground matrix (CGM).

**Recommendation 3:**

**Finance, design and implement a preparatory participatory process that will allow the construction of a CGM, generate interest and trust amongst all the key players and implement a human dimension facilitated workshop.**

**Recommendation 4:**

**Finance, design, implement and support the human dimension facilitated workshop approach in two pilot areas within the Mediterranean region as examples of how to address illegal killing, trapping and trade of birds at a national level. Ensure the process is documented and able to be adaptable as a model for future sites.**

Given that scientific approaches to learning about and working with people have been absent on the issue of illegal killing, trapping and trade of birds, opportunities exist to establish baseline data upon implementing recommendation 2, which can aid in the design of effective educational and public awareness materials, and allow for the subsequent evaluation of those materials.

**Recommendation 5:**

**Design, implement and evaluate educational materials based upon the results of the baseline HD scientific study so to document the effect of implementing targeted messages on knowledge, attitude and behaviour change.**

The conference in July in Cyprus focused on illegal killing, trapping and trade of birds is an excellent opportunity to share ideas, define collectively the problem, the solution and the overarching vision for bird conservation. It is an opportunity to share educational materials, develop common messages and increase collaboration between countries. Trans-boundary cooperation is challenging to implement but is necessary when managing species that know no boundaries. Understanding and addressing the key obstacles to effective trans-boundary cooperation is a first step and some of this sharing of ideas will occur during the workshop discussions in July 2011.

**Recommendation 6:**

**Increase collaboration and trans-boundary cooperation between Parties across the Mediterranean region beginning with the sharing of educational materials and messages.**

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