ARTICLE IN PRESS

BIOC-06454; No of Pages 7

Biological Conservation xxx (2015) xxx-xxx



Contents lists available at ScienceDirect

Biological Conservation

journal homepage: www.elsevier.com/locate/bioc



Discussion

Understanding stakeholder conflict between conservation and hunting in Malta

Diogo Veríssimo^{a,b,*}, Brian Campbell^c

- ^a Durrell Institute of Conservation and Ecology, Marlowe Building, The University of Kent, Canterbury, Kent CT2 7NR, UK
- b David H. Smith Fellow, Andrew Young School of Policy Studies, Georgia State University, 14 Marietta St. NW, Suite G-52, Atlanta, GA 30303, USA
- ^c School of Anthropology and Conservation, Marlowe Building, The University of Kent, Canterbury, Kent CT2 7NR, UK

ARTICLE INFO

Article history: Received 23 March 2015 Received in revised form 6 July 2015 Accepted 14 July 2015 Available online xxxx

Keywords:
Animal welfare
Bird conservation
Birds directive
Conflict
Governance
Migratory
Poaching
Sustainability

ABSTRACT

Conservation conflicts often involve tensions between human stakeholders. One highly topical conflict is that around migratory bird hunting in the Mediterranean, particularly in Malta. Here, tensions between hunters and anti-hunting groups have escalated to include rural surveillance operations by anti-hunting groups, physical scuffles with hunters, retaliatory poaching and measures unheard of in Europe, such as the use of drones or army interventions. We describe the historical and political background to the Maltese conflict and use social network analysis to map the institutional relationships between governmental and non-governmental stakeholders influencing hunting in Malta. Our analysis confirms that the institutional landscape is highly polarised with two distinctive sides with few links between them. Nonetheless there are links between organisations in opposite sides of the spectrum and these could be explored to improve dialogue between the hunting and antihunting lobby. We also uncover that the ORNIS committee, the state's single hunting consultative platform lacks brokering power, the ability to connect otherwise unconnected groups within a network, which is likely why those opposed to spring hunting have recently started campaigning for a national referendum on the issue. Although independent monitoring is urgently needed around the Mediterranean, if science is to contribute to the management of this conflict, it will only be useful if the current stakeholder polarisation is overcome. Important steps towards conflict resolution include anti-hunting groups improving their ability to distinguish clearly between species conservation and animal welfare, and the ability of hunting groups to co-ordinate themselves better to ensure compliance with the law amongst their membership.

© 2015 Elsevier B.V. All rights reserved.

1. Introduction

Conflicts related to the management of wildlife present conservation with one of its toughest challenges (Dickman, 2010; Redpath et al., 2013; Woodroffe et al., 2005). Although traditionally framed as human–wildlife conflict, this framing has been increasingly criticised for masking the underlying human dimensions that make these conflicts essentially between stakeholders over wildlife (Marshall et al., 2007; Peterson et al., 2013; Young et al., 2010). Following Redpath et al. (2014) we thus define conservation conflicts as "situations that arise when two or more parties have strongly held views over biodiversity objectives and one of those parties is attempting to assert its interests at the expense of the other".

These conflicts are often costly and destructive affairs that not only undermine effective conservation but also hinder economic development and disrupt social order (Goldman et al., 2013). Conflict tends to

be particularly intense around practices that require the direct use of biodiversity (e.g. hunting), and in regions such as Europe and North America, where non-governmental organisations (NGOs) are particularly active and risk fuelling a conflict that they could be instead mitigating (Douglas and Veríssimo, 2013; Redpath et al., 2013).

In Europe, one of the highest-profile cases of stakeholder conflict involves tensions between hunters, state, European Union (EU) institutions and environmental NGOs over the shooting and trapping of migratory birds. These conflicts are particularly pronounced along the shores of the Mediterranean (Gaston and Evans, 2004), where hunting is deeply rooted in local culture (Falzon, 2008; Fenech, 2010). It is estimated that at least 4.5 million hunters populate Mediterranean countries (FACE, 2010; International, 2007), with some estimates putting the total number of birds hunted annually at about 1000 million (Magnin, 1991). Nevertheless, the absence of robust statistics, particularly from North African and Middle Eastern countries, creates great uncertainty around both these figures.

It is in Malta, however, that this conflict has received most media attention (Youth, 2003). Despite being an archipelago of three islands covering only 315 km², Malta has 14,000 licensed hunters (FKNK, 2012), by far the highest density of hunters per km² of any country in

http://dx.doi.org/10.1016/j.biocon.2015.07.018 0006-3207/© 2015 Elsevier B.V. All rights reserved.

^{*} Corresponding author at: Durrell Institute of Conservation and Ecology, Marlowe Building, The University of Kent, Canterbury, Kent CT2 7NR, UK.

Europe (FACE, 2010). Conflict between hunters and anti-hunting groups has escalated rapidly in recent years. Environmental NGOs have started to organise increasingly complex field-operations, deploying patrols and piloting unmanned aerial vehicles (UAVs) — commonly known as drones — to curb illegal hunting. Hunters responded by denying environmentalists access to their hunting grounds and deliberately targeting protected species out of protest (Lia, 2011). Meanwhile the police has requested army support to prevent illegalities (both illegal shooting and trespassing) and maintain order when the tension escalates into violence between stakeholders (Boissevain, 2006). It is in this context that Malta has been dubbed a bird hunting "black spot" within the Mediterranean region (Raine, 2007).

As is the case with the majority of conservation conflicts, the situation in Malta has mostly been approached from a strictly ecological perspective, with little effort to take into consideration the complex inter-relationships between stakeholders (Dickman, 2010; Redpath et al., 2013; White et al., 2009). As such there is currently little published information about stakeholder relationships, information exchange, institutional co-operation, the nature of the rivalries, hopes, fears and aspirations as well as the availability of effective spaces through which reconciliation and conversation can occur (see Briguglio, 2012; Campbell and Verssimo, 2015).

In this study we provide the historical and political background to the issue of bird hunting in Malta. Additionally, we use social network analysis to map out and analyse the institutional relationships between governmental and NGO stakeholders. Scholars studying natural resource management are increasingly realising that social networks matter (Prell et al., 2009). The networks stakeholders belong to can have significant impact on how resources are mobilised and allocated (Carlsson and Sandström, 2008), knowledge generated and shared (Isaac et al., 2007), rules and policies are agreed upon and communication facilitated (Scholz and Wang, 2006). This makes the existence and the structure of social networks crucial in determining the ability of stakeholders to work together and effectively deal with conflicts around natural resource management (Bodin and Crona, 2009). This way, social network analysis can help us reframe conservation conflicts by placing human stakeholder firmly at the centre of the issue and ensuring that relationships between human stakeholders are taken into account (Prell et al., 2009). In this research we demonstrate how social network analysis can be used to study conservation conflicts from an institutional perspective. This approach facilitates the making of policyrelevant recommendations not only for Malta but also for other similar conflicts within the European Union (e.g. Aaltola and Oksanen, 2002; Jenkins, 2013; Young et al., 2005, 2007).

2. The historical and political background

Malta joined the European Union in 2004. Pressure by Malta's four Hunting Associations, notably the Federazzjoni Kaċċaturi u Nassaba Konservazzjonisti (FKNK), who claimed that its 9000 members could swing an election, forced the Maltese government to negotiate an EU entry package that allowed for the opening of the spring hunting season and the continuation of finch trapping until the end of 2008. This was granted in the form of a derogation from the EU Birds Directive, allowing the shooting of two species (quail Coturnix coturnix and turtle dove Streptopelia turtur) in spring and the trapping of seven species of finches. However, widespread reports that Maltese hunters were breaking the terms of the derogation lead to legal action against Malta. This legal process lead to interim measures that prevented the opening of the spring hunting season in 2008 and 2009. That same year, the European Court of Justice (ECJ) ruled that the Maltese spring hunting seasons of 2004 to 2007 were in breach of European Union law but acknowledged that the number of quail and turtle dove during the autumn was not enough to provide an alternative. This ruling thus provided a legal pathway through which the Maltese government could apply for a derogation.

Also in 2009, frustrated by the state's consistent failure to take a stand against hunting, and emboldened by the ECJ's ruling, BirdLife Malta, the Maltese environmental NGO with the largest membership, and the Committee Against Bird Slaughter (CABS), a German animal welfare NGO, intensified their field-operations to monitor hunting activities, seek out illegalities and report them to the police. Violence between NGO volunteers and hunters became regularly reported (CABS, 2010; Raine and Temuge, 2009).

In 2010, despite finding Malta guilty, the ECJ allowed Malta to continue to apply a derogation to the EU Birds Directive and reopen a more limited spring hunting season. Angered, the environmental NGOs responded by deploying more volunteers and in 2012 even a drone to monitor the landscape, although the device was allegedly shot down by hunters in just a few days (CABS, 2012). From 2013, the Army and another drone were used by the state to assist the police in keeping order in the countryside (Times of Malta, 2014b). This increase in enforcement in turn lead some hunters to retaliate by shooting at protected birds out of frustration and protest (Lia, 2011).

In summer 2013, Alternattiva Demokratika (AD), Malta's small green party, encouraged Malta's environmental NGOs to band together and employ a different tactic. Baptised the 'Coalition Against Spring Hunting' (CASH), the goal of this alliance was to by-pass political negotiation and use a recently enacted law that allowed the Maltese public to push for a referendum if at least 10% of the Maltese voting population was in favour of it. CASH claimed it had enough support from the general Maltese population to collect the 35,000 signatures required to call a referendum, and to subsequently win the contest to abolish spring hunting. Following the formation of CASH, the situation kept evolving rapidly. In April 2014, CASH handed in about 40,000 signatures, which after being processed by Maltese authorities led to the scheduling of the referendum for April 2015. After a very heated lead-up to the referendum, the hunters won with 50.4% of the votes. This led to the opening of a spring hunting season for 2015, which was afterwards cut short by a few days when a shot kestrel fell into a school yard (Times of Malta, 2015).

3. Understanding the stakeholders

In order to understand this complex institutional landscape we started by conducting a review of limited literature available on the topic (Fenech, 1992; FKNK, 2012; Lia, 2011; Raine, 2007; Wild Birds Regulation Unit, 2013) which initially identified the CASH and the Federazzjoni Kaċċaturi Nassaba Konservazzjonisti (Federation for Hunting and Conservation Malta — FKNK) as the major players. We then used snowball sampling to identify other relevant stakeholders.

Our final dataset was obtained through semi-structured interviews with 25 representatives of both state and Maltese NGO institutions active in the hunting arena between October and November 2013. This included representatives of two hunting associations, the Ministry of Environment of Malta (in particular the Wild Birds Regulation Unit), the Administrative Law Enforcement Section of the Maltese police, one political party and 20 Maltese NGOs largely focused on the environment and animal rights. Interviews were personally conducted by both authors in English (exceptions were one interview conducted mostly in Maltese, one phone interview and two instances where the questions were sent via email). Interviews ranged from 12 to 59 min, with a mean of 30 min. Interviews were digitally recorded using a Sony ICD-PX312 recorder. Consent for participation and audio recording was obtained before each interview.

Our semi-structured interview guide was based on previous research on natural resource governance and social network analysis (Cohen et al., 2012; Vance-Borland and Holley, 2011) and included a set of topics to be discussed with the interviewees. We divided the interview into four sections, slightly tailoring each interview for each

organisation targeted. We additionally followed-up the answers with further questions as to ensure no important data was missed even if outside the scope of the guide. The first section focused on the interviewee's current and historical role within the organisation. The second focused on the internal structure of the organisation, namely its membership size and internal decision-making processes, and the informal and formal relationships with other institutions. The third section focused on hunting, particularly on hunting related projects that the organisation is or had been involved in, any partnerships developed with other institutions and the sources of information on hunting used by each organisation. In the last section we asked interviewees which were, from their perspective, the key organisations on hunting and requested advice as to what other organisations we should contact on this topic.

Secondary sources, such as institutional press releases or interviews by NGO representatives to reputable media channels, were used to identify the inter-institutional ties of those organisations whose representatives could not be reached (an issue mainly for smaller organisations). Additionally, these sources allowed us to triangulate and verify the information obtained in the stakeholder interviews. These relationships were subsequently ordered into three classes of increasing strength, ranging from those relating only to information exchange, to those suggesting joint activities and finally to ties of coalition, where allies act as a single entity (e.g. CASH). This data representing symmetric and valued institutional ties was then used to create the visual representations of the networks using Ucinet 6.232, a software package for analysing social network data. We then used ORA-NetScenes 3.0.9.9d, to calculate metrics such as the total degree centrality or between centrality of each organisation within the network.

3.1. The institutional landscape

In relation to the anti-hunting movement we found that the CASH had a heterogeneous membership including different organisation types (political parties and NGOs) of varying sizes (from less than 10 to about 2650 members) and agendas (from animal welfare, to maritime conservation, to the protection of historic heritage). A particularly complex aspect of the internal structure of the CASH was that it lists the Coalition for Animal Rights (CAR), another coalition of NGOs, as one of its members (Fig. 1). In CASH's committee meetings, the CAR is represented by a single delegate and is considered a single member. However, some of the CAR's members are also direct members of the CASH with individual representation in committee meetings. It was also clear from our interviews that the membership of the CAR was rather

fluid with organisations regularly entering and exiting the coalition, for that reason we represent only those members that are either active or which have been part of the CAR for several years.

CASH's institutional structure is divided into three tiers (Fig. 1), linked to the weight of particular institutions in the coalition. CASH is largely run by a committee of four organisations (red on) that includes BirdLife Malta and AD. The Coalition has other less frequent general gatherings attended by CASH's direct members (orange on figure). Members of the CAR (yellow on figure) do not generally directly participate in the CASH's meetings, and are represented by a delegate.

Our results also show that most of CASH's direct members (red and orange on Fig. 1) are connected by strong ties outside CASH and CAR. These links are the product of previous collaborative projects around other issues (e.g. illegal urban development) (Fig. 1). By contrast CAR members have fewer and weaker ties with other institutions, perhaps because their narrower focus, more limited resources and reduced manpower provides them less scope to venture into larger projects.

In relation to the wider institutional landscape, only five members of CASH were found to have connections with other organisations active in the hunting scene (Fig. 2). This landscape is dominated by two large factions (orange and blue) of roughly equal membership. Both are inward looking, in the sense that the strongest connections are with institutions that share their view of the conflict. It should be noted that although all four hunting organisations came together to defend hunting rights around the time of entry to the EU, two of them have subsequently disappeared from the public sphere, currently serving only as hunting insurance providers. The anti-hunting lobby (orange) is more complex. As a coalition, CASH (diamond) does not directly interact with other institutions. Some of its members (orange circles), however, do. Yet their strongest ties remain with members of the anti-hunting lobby, including CABS which, being a foreign organisation, is not part of CASH.

The high interconnectedness of the anti-hunting lobby is demonstrated by looking at the normalised number of direct connections that each institution has in the network (total degree centrality). Stakeholders with a high degree centrality can play a crucial role in bringing other stakeholders together. However, given the amount of effort related to maintaining a large number of ties, these are often weak (Prell et al., 2009). Thus, although stakeholders with high degree centrality can often be relied upon to diffuse information, there is no guarantee that they are able to significantly influence and effectively mobilise those to whom they are tied (Prell et al., 2009). The nine organisations with the highest number of institutional connections all belong to the anti-hunting lobby, with BirdLife placing first (0.237). The most connected organisation outside this group was the FKNK which

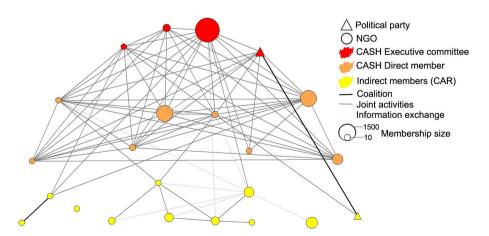


Fig. 1. Internal structure of the Coalition to Abolish Spring Hunting (CASH). Circles symbolise NGOs while triangles symbolise political parties. Yellow represents the members of Coalition for Animal Rights, orange and red the direct members of CASH, while red represents the members of the executive committee of CASH. Three types of institutional links are presented with the darker thicker lines representing stronger ties. The size of each symbol is proportional to the size of the membership of each institution. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)

D. Veríssimo, B. Campbell / Biological Conservation xxx (2015) xxx-xxx

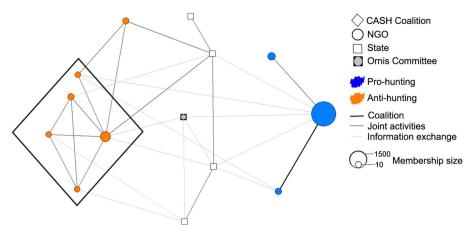


Fig. 2. Institutional links between environmental NGOs, the Maltese state and hunting organisations. The diamond symbolises the CASH Coalition, the circle NGOs, the square state institutions and the circle within a square the ORNIS committee. Three types of institutional links are presented with the darker thicker lines representing stronger ties. The size of each symbol is proportional to the size of the membership of each institution. (For interpretation of the references to colour in this figure, the reader is referred to the web version of this article.)

ranked only 10th (0.07). As expected, ORNIS placed 16th (0.032), although one must keep in mind that this platform was designed to include only a very restricted number of stakeholders.

Analysing the structure of the entire institutional network around bird hunting in Malta (which combines Figs. 1 & 2) also allows us to better understand why the efforts by the Maltese government to broker the conflict have so far been largely ineffective. This effort has been spearheaded by the ORNIS committee, a consultative platform chaired by the state that brings together representatives from BirdLife Malta and FKNK, and is the only channel for regular, mediated dialogue between the two factions. This brokering role, that is the power to connect otherwise unconnected groups within a network, is often associated with the metric of betweenness centrality, the normalised number of times an organisation acts as a bridge along the shortest path between two other organisations. Stakeholders with high betweenness centrality are important for long-term resource management planning; as they act as brokers, bringing together disconnected parts of the network. However, it should also be noted that in their role as "brokers" these stakeholders may feel torn between the different members of the network and feel forced to take sides, particularly when conflict arises (Prell et al., 2009).

When analysing the betweenness centrality of different organisations, it was revealed that BirdLife Malta is by far the organisation with the highest brokering power (0.254), followed by ORNIS (0.097) in second place and with the FKNK in 6th place (0.047). This means that although the few connections of the ORNIS are indeed strategic, the platform still has less brokering power than one of its main two members. This might explain the readiness of BirdLife Malta to pursue an abrogative referendum that effectively by-passes governmental channels as the solution to the spring hunting issue. It also may account for BirdLife Malta's unwillingness to participate in recent attempts to build consensus. A case in point is the "Joint Communiqué on our common resolve to eradicate illegal killing, trapping and trade in wild birds in Malta" drafted by the Parliamentary Secretariat for Agriculture, Fisheries and Animal Rights in March 2014. This declaration focused largely on illegal hunting and asked for both hunting and anti-hunting groups to endorse it as a demonstration of their opposition to these practices. However, it was only endorsed by the FKNK.

4. Managing conflict

Successful conflict management should move parties away from zero-sum games by finding common ground between competing factions, seeking solutions favourable to all, and fostering trust between stakeholders (Redpath et al., 2013). The Maltese case, by contrast, is marked by ever-mounting tensions between hunters and the anti-

hunting lobby, resulting in damage to property, physical violence, the intensification of surveillance in the form of drones and army deployment, and the retaliatory killing of protected birds (Campbell and Veríssimo, 2015). It is thus not surprising that our results show a greatly polarised institutional landscape, with few links between both sides of the hunting issue.

In this context, a deeper understanding of the stakeholders and how they relate to each other is essential. Knowing where the different groups stand in relation to the different aspects of the hunting issue marks the first, crucial step (Marshall et al., 2007). In Malta, although the NGOs are gradually moving towards two polarised world-views, there is an institutional landscape composed of a rich spectrum of organisations with unique ideologies, values and aspirations. One key result of our network analysis is that despite the progressive polarisation, there are activities where there is an overlap between the aims of the two sides (Fig. 2). Being open to, and publicly fostering such diversity can be one path towards successful management of conservation conflict (Thirgood and Redpath, 2008).

Another key result stems from the lack of involvement of two of the four hunting associations in the political and public sphere (thus their absence in Fig. 2). Even a small number of infractions can demolish any attempt to mitigate this conflict. While the FKNK and the KSU have taken a public stance against poaching (Times of Malta, 2014a), they need to seek ways to encourage the other two hunting organisations, who have completely kept away from current debates, to become involved and take an active stance against poaching (Lia, 2011). The current role of these institutions as mere providers of insurance for hunters is damaging to the policy process as it provides potential offenders with alternative options should they receive a lifetime ban from FKNK. These organisations disconnect a proportion of the hunting population from the negotiation process. Cooperation between the four organisations would also counter accusations that FKNK's leaders are using the high emotions generated through the conflict to mobilise a strong political backing that could win them lucrative positions in local Maltese or European bureaucratic structures (Times of Malta, 2012).

Previous research has argued that the military metaphors used by the anti-hunting lobby move the issue of bird hunting from a biodiversity conservation arena to an animal welfare arena, making hunting in its entirety morally reproachable and driving further polarisation (Campbell and Veríssimo, 2015). Our network analysis hints that this may be in part driven by the large number of animal welfare NGOs that are part of CASH (Fig. 1). This also means that a future change towards less polarizing ways of communicating is unlikely. Nonetheless, changes in the way the issue is communicated by both sides should be explored as a way to generate some mutual trust and eventually enlist the help of hunters to both monitor their peers and lead by example.

The latter is especially important, as most poachers tend to be young hunters (Lia, 2011).

Regarding the role of the Maltese state, our analysis suggests (Fig. 2) that it currently does not have the brokering power needed to mediate this conflict, with the strongest interaction between the state and other stakeholders being the links between a few anti-hunting NGOs and the police. In this context, the expansion of the ORNIS committee into a platform that includes a broader range of stakeholders should be considered. This would increase its scope and authority, consolidating it as the main channel through which opinions and complaints regarding the hunting issue are voiced and debated. This push for inclusivity needs however to be strategic (Hemmati, 2002), as efforts to include all stakeholders can lead to costly and protracted processes (Young et al., 2012). Another key issue that has surely hampered the credibility of the ORNIS committee is the current vote distribution where the Maltese state effectively has more votes than all other stakeholders together. This is despite the purely consultative nature of the committee and the fact that, historically, stakeholders have not voted in a coordinated fashion. Clearly there is little will from the Maltese state to give stakeholders any meaningful power to influence decision making.

Without the ability to perform the role of broker between the two sides, the state and its recently created 'Wild Birds Regulation Unit' will not be able to effectively impact policy or implement credible scientific monitoring of hunting activities. For example, in the spring hunting season of 2013, 67% of quails and 66% of turtle doves were officially reported to be shot in the last 2 days of the season, even if these were working days when hunters are less likely to be out in the fields (Wild Birds Regulation Unit, 2013). These results already reflect at best distrust and at worst open hostility towards the state. Another monitoring conundrum relates to the estimates of the number of birds shot in Malta. Official reports estimate this number to be on average around 150,000, yet this figure only takes into account the legally hunted birds reported by the hunters themselves (MEPA, 2010, MEPA, 2011, MEPA, 2012). On the other extreme, figures of up to 6,000,000 (Fenech, 1992) have been suggested, although this number has been criticised by Maltese hunting organisations as a gross exaggeration based on extrapolations from a small sample of hunters (Fenech, 2010; FKNK, 2012). While these estimates, and the polarised disputes they subsequently generate, are themselves part of the conflict around bird hunting in Malta, the colossal variation between them demonstrates the need for a better understanding of the ecological context. This will however be no easy task given that the migratory nature of the species in question creates wide natural variation in population size, even at the national level, and exposes the birds to multiple sources of mortality spread unevenly across their large range (Wild Birds Regulation Unit, 2015). It should nonetheless be noted that although this knowledge might help in sustainably managing hunting practices it may become irrelevant when it comes to conflict resolution given how polarised the different sides currently are (McCool et al., 2000; Wynne, 1992). One important step in ensuring support for monitoring efforts is likely to be the integration of different types of knowledge and the use of methodologies selected with the agreement of all key stakeholders (Raymond et al., 2010).

5. Moving the Mediterranean forward

Conservation conflicts often involve "deeply held values, high stakes, power imbalances and a sense of moral superiority" that can drive parties to maintain a conflict they know they cannot win (Madden and McQuinn, 2014). This is why conflicts that may appear on the surface to be negotiable can easily spiral out of control, particularly if their complexity is underestimated.

As is often the case, when faced with a threat to species and conflict, conservationists' main response has been to assert their ecologically-informed policies through legalisation and enforcement (Brechin et al., 2002; Redpath et al., 2013). Such strategies inevitably draw conservation

scientists into being part of the social conflicts they could be mitigating. In Malta, poaching is claimed to have decreased in recent years (Fenech, 2010), perhaps as a result of the increase in surveillance by both the Maltese state and NGOs. Yet, the anti-hunting lobby continues to demand increased law enforcement and has stopped engaging with the other stakeholders, opting instead for an abrogative referendum that would completely close down the spring hunting season (Campbell and Veríssimo, 2015).

It is hard to understand why the anti-hunting lobby believes that this confrontational approach will resolve current conflicts instead of further alienating hunting stakeholders, without whose support conservation goals are unlikely be achieved (Redpath et al., 2004; Thirgood and Redpath, 2008). Similarly, NGOs have recently done little to dispel hunters' fears that conservationists want the abolition of all forms of hunting. This has led hunting and government representatives to cynically remark that conservation NGOs benefit from the publicity conflict generates, and cannot be trusted to strive towards reconciliation (Times of Malta, 2011). Hunters have also been slow to understand that killing protected species is unacceptable in a society that increasingly values species conservation. Clearly, any attempts to reverse such a situation will need to proceed carefully, or they might backfire and further increase distrust between stakeholders.

It is clear that the tangential referendum victory enjoyed by the hunters is not a step towards conflict resolution but merely another episode that will undoubtedly add meaning to future incidents and perhaps deepen both sides' negative views of each other (Madden and McQuinn, 2014, 2015). As showcased by the early and unexpected closure of the spring hunting season, conflict remains unabated and those involved will use (or create) opportunities to redress perceived injustices (Madden and McQuinn, 2014). Simultaneously, there are important signs, such as the persistent retaliatory killing of protected birds, that the situation is perceived as intractable and hopeless, leading disputants to destroy what they value if that ensures their opponent will also not win (Atran and Axelrod, 2008).

There is thus the need for a new overarching framework on how to identify, understand and manage this conflict. One innovative approach is conservation conflict transformation (CCT), which uses principles and processes from the peacebuilding field to address social conflicts and improve the effectiveness of conservation efforts (Lederach, 1995). Unlike traditional conflict management approaches that focus on the explicit and concrete manifestations of conflict, CCT strives to focus on the social, psychological and systemic root causes (Lederach, 1995). Furthermore, CCT advocates for long-term and sustained engagement with the parties in conflict, something essential in conflicts with a rich historical background but rarely offered by traditional approaches which most often to focus on episodic periods of engagement around specific and time bound conflict episodes.

In addition, CCT also recognises that deep-rooted conflicts such as the one around bird hunting in Malta often have conflict both within groups (intragroup) and between groups (intergroup), where internal conflict can be central in perpetuating the external conflict (Deutsch and Coleman, 2012). This is a valuable insight into the Maltese hunting context where hunters, while often lumped together as single group, are actually constituted by several conflicting sub-groups. This internal conflict is visible in the way different hunting associations have dealt with reports of poaching. Whereas FKNK and KSU have been publicly vocal in condemning this behaviour and revoked the membership of any members involved the other two organisations have so far been silent on the issue. Yet, this dissonance between hunting groups has not been recognised by anti-hunting associations which divide the blame across all hunters. This has led to frustrations amongst FKNK and KSU who at the same time cannot publicly readily admit their inability to control their members or even represent hunters in general for fear of losing face.

While the media attention around bird hunting in Malta continues to increase, little research has been conducted around this issue. As is the

case with most so-called human-wildlife conflicts, the limited research around bird hunting the Mediterranean has focused on bird ecology and behaviour. This study complements such research by broadening the concept of conflict to include tensions between human stakeholders. We still require more information on how polarised factions are likely to form, how they manoeuvre politically, recruit support, and acquire values that encourage or prevent them from negotiating with their opponents. Such knowledge will enable those trying to enable dialogue between stakeholders to identify not only how, but also when collaboration can occur. In sum, the conservationist must not only be versed in ecology, but also master the art of political participation, and learn to manage the complex weave of ambitions, hopes and fears of the stakeholders at hand (Madden and McQuinn, 2014). Equally important will be an understanding of how stakeholders perceive each other, how perceptions might differ within an institution, and how they change over time (Marshall et al., 2007). Obtaining this information is likely to require not only a more extensive adoption of social science tools such as game theory and choice experiments, which are becoming more widely used (Colyvan et al., 2011; White and Ward, 2011), but also the use of more qualitative approaches of fields such as anthropology and history (Falzon, 2008).

While much remains to be understood around the issue of bird hunting in Malta, the situation in Northern Africa and the Middle East, where governance is weaker and monitoring virtually absent, remains practically unstudied. Given the transboundary nature of bird migration, effective conservation will depend on a more holistic understanding of hunting across disciplines, geographical areas and political regions.

Acknowledgements

We would like to thank the institutions that made this research possible. We also would like to thank D. Campbell and P. Campbell for logistic support. This research was funded by a Collaborative Research Fund grant from the School of Anthropology and Conservation of the University of Kent.

References

- Aaltola, E., Oksanen, M., 2002. Species conservation and minority rights: the case of springtime bird hunting in Aland. Environ. Value 11, 443–460.
- Atran, S., Axelrod, R., 2008. Reframing sacred values. Negot. J. 24, 221-246.
- International, B., 2007. Building capacity for sustainable hunting of migratory birds in the Mediterranean countries of North Africa and the Middle East. http://www.birdlife.org/datazone/userfiles/file/sustainable_hunting/ (Accessed June 2014).
- Bodin, Ö., Crona, B.I., 2009. The role of social networks in natural resource governance: what relational patterns make a difference? Glob. Environ. Chang. 19, 366–374.
- Boissevain, J., 2006. Changing attitudes to Maltese landscapes. Etnofoor 87–111.
- Brechin, S.R., Wilshusen, P.R., Fortwangler, C.L., West, P.C., 2002. Beyond the square wheel: toward a more comprehensive understanding of biodiversity conservation as social and political process. Soc. Nat. Resour. 15, 41–64.
- Briguglio, M., 2012. ENGOS, EU accession and empowerment: the case of land rationalisation in Malta. Int. J. Green Econ. 6, 279–297.
- CABS, 2010. Malta Bird Protection Camp Autumn 2010. Operation "Safe Passage": 12–26 September 2010. (Bonn, Germany. << http://www.komitee.de/sites/www.komitee.de/files/wiki/2011/01/CABS%20final%20report%20Malta%20autumn%202010.pdf> Accessed June 2014).
- CABS, 2012. Model aircraft films bird trappers on Malta drone shot down by hunters. http://www.komitee.de/en/actions-and-projects/malta/spring-bpc-2012/model-aircraft-films-bird-trappers (Accessed June 2014).
- Campbell, B., Veríssimo, D., 2015. Black stork down: military discourses in bird conservation in Malta. Hum. Ecol. 43, 79–92.
- Carlsson, L.G., Sandström, A.C., 2008. Network governance of the commons. Int. J. Commons 2, 33–54.
- Cohen, P.J., Evans, L.S., Mills, M., 2012. Social networks supporting governance of coastal ecosystems in Solomon Islands. Conserv. Lett. 5, 376–386.
- Colyvan, M., Justus, J., Regan, H.M., 2011. The conservation game. Biol. Conserv. 144, 1246–1253.
- Deutsch, M., Coleman, P.T., 2012. Psychological components of sustainable peace: an introduction. Psychological Components of Sustainable Peace. Springer, pp. 1–14.
- Dickman, A., 2010. Complexities of conflict: the importance of considering social factors for effectively resolving human-wildlife conflict. Anim. Conserv. 13, 458–466.
- Douglas, L.R., Verissimo, D., 2013. Flagships or battleships: deconstructing the relationship between social conflict and conservation flagship species. Enviro. Soc. 4, 98–116.

- FACE, 2010. Hunters in Europe. http://www.face.eu/sites/default/files/attachments/data_hunters-region_sept_2010.pdf (Accessed June 2014).
- Falzon, M.A., 2008. Flights of passion. Anthropol. Today 24, 15–20.
- Fenech, N., 1992. Fatal Flight: the Maltese Obsession With Killing Birds. Quiller Press.
- Fenech, N., 2010. A Complete Guide to the Birds of Malta. Midsea books, Valletta, Malta. FKNK, 2012. The Facts About Maltese Game-shooting and Live-bird Capturing. p. 21 (Sliema, Malta).
- Gaston, K.J., Evans, K.L., 2004. Birds and people in Europe. Proc. R. Soc. B Biol. Sci. 271, 1649–1655.
- Goldman, M.J., de Pinho, J.R., Perry, J., 2013. Beyond ritual and economics: Maasai lion hunting and conservation politics. Oryx 47, 490–500.
- Hemmati, M., 2002. Multi-stakeholder Processes for Governance and Sustainability: Beyond Deadlock and Conflict. Routledge.
- Isaac, M.E., Erickson, B.H., Quashie-Sam, S.J., Timmer, V.R., 2007. Transfer of knowledge on agroforestry management practices: the structure of farmer advice networks. Ecol. Soc. 12, 32
- Jenkins, H., 2013. The Human-dimensions of Illegal Bird Trapping in Cyprus (MSc Thesis) Imperial College London.
- Lederach, J.P., 1995. Preparing for Peace: Conflict Transformation Across Cultures. Syracuse University Press.
- Lia, R., 2011. An Investigation of the Underlying Factors That Lead to the Shooting of Protected Birds in the Maltese Islands: A Prerequisite for in situ Conservation and Reintroduction Programmes (MSc Thesis) School of Oriental and African Studies (SOAS), University of London.
- Madden, F., McQuinn, B., 2014. Conservation's blind spot: the case for conflict transformation in wildlife conservation. Biol. Conserv. 178, 97–106.
- Madden, F., McQuinn, B., 2015. Conservation conflict transformation: the missing link in conservation. In: Redpath, S.M., Gutiérrez, R.J., Wood, K.A., Evely, A., Young, J.C. (Eds.), Conflicts in Conservation. Cambridge University Press, p. 257.
- Magnin, G., 1991. Hunting and persecution of birds in the Mediterranean region. In: Salathé, T. (Ed.), Conserving Migratory BirdsICBP Technical Publication No. 12. Cambridge, pp. 63–75.
- Malta Environment and Planning Authority, 2010. Carnet de chasse. https://msdec.gov.mt/en/Documents/Downloads/WBRU/CDC%20report%202010.doc (Accessed June 2014).
- Malta Environment and Planning Authority, 2011. Carnet de chasse. https://msdec.gov.mt/en/Documents/Downloads/WBRU/CDC%20report%202011.doc (Accessed June 2014).
- Malta Environment and Planning Authority, 2012. Carnet de chasse. Available at:, https://msdec.gov.mt/en/Documents/Downloads/WBRU/CDC%20report%202012.doc (Accessed June 2014).
- Marshall, K., White, R., Fischer, A., 2007. Conflicts between humans over wildlife management: on the diversity of stakeholder attitudes and implications for conflict management. Biodivers. Conserv. 16, 3129–3146.
- McCool, S.F., Guthrie, K., Smith, J.K., 2000. Building consensus: legitimate hope or seductive paradox? Research Paper—Rocky Mountain Research Station. USDA Forest Service
- Peterson, M., Peterson, M.J., Peterson, T.R., Leong, K., 2013. Why transforming biodiversity conservation conflict is essential and how to begin. Pac. Conserv. Biol. 19, 94.
- Prell, C., Hubacek, K., Reed, M., 2009. Stakeholder analysis and social network analysis in natural resource management. Soc. Nat. Resour. 22, 501–518.
- Raine, A.F., 2007. The International Impact of Hunting and Trapping in the Maltese Islands. BirdLife Malta, Ta'Xbiex, Malta.
- Raine, A., Temuge, T., 2009. Spring Watch 2009 Report. Birdlife Malta, Ta'Xbiex, Malta. Raymond, C.M., Fazey, I., Reed, M.S., Stringer, L.C., Robinson, G.M., Evely, A.C., 2010. Inte-
- Raymond, C.M., Fazey, I., Reed, M.S., Stringer, L.C., Robinson, G.M., Evely, A.C., 2010. Integrating local and scientific knowledge for environmental management. J. Environ. Manag. 91, 1766–1777.
- Redpath, S., Arroyo, B., Leckie, F., Bacon, P., Bayfield, N., Gutierrez, R., Thirgood, S., 2004. Using decision modeling with stakeholders to reduce human–wildlife conflict: a Raptor–Grouse case study. Conserv. Biol. 18, 350–359.
- Redpath, S.M., Young, J., Evely, A., Adams, W.M., Sutherland, W.J., Whitehouse, A., Amar, A., Lambert, R.A., Linnell, J.D., Watt, A., 2013. Understanding and managing conservation conflicts. Trends Ecol. Evol. 28, 100–109.
- Redpath, S.M., Bhatia, S., Young, J., 2014. Tilting at wildlife: reconsidering human-wildlife conflict. Oryx 1–4.
- Scholz, J.T., Wang, C.L., 2006. Cooptation or transformation? Local policy networks and federal regulatory enforcement. Am. J. Polit. Sci. 50, 81–97.
- Thirgood, S., Redpath, S., 2008. Hen harriers and red grouse: science, politics and human-wildlife conflict. J. Appl. Ecol. 45, 1550–1554.
- Times of Malta, 2011. FKNK welcomes CABS statement, criticises BirdLife. http://www.timesofmalta.com/articles/view/20110428/local/fknk-welcomes-cabs-statement-criticises-birdlife.362691 (Accessed June 2014).
- Times of Malta, 2012. Cyrus Engerer denies hunting for votes. http://www.timesofmalta.com/articles/view/20140307/local/cyrus-engerer-collects-signatures-for-fknk-petition. 509648 (Accessed June 2014).
- Times of Malta, 2014a. Hunters condemn shooting of flamingos. http://www.timesofmalta.com/articles/view/20121005/local/hunters-condemn-shooting-of-flamingos.439773 (Accessed June 2014).
- Times of Malta, 2014b. Hunting: drone, army cars deployed in 'intensive' law enforcement. http://www.timesofmalta.com/articles/view/20140414/local/hunting-drone-army-cars-deployed-in-intensive-law-enforcement.514946 (Accessed June 2014).
- Times of Malta, 2015. Hunting season closed after shot bird falls into school yard PN agrees, yes campaigner attacks decision. http://www.timesofmalta.com/articles/view/20150427/local/reactions-hunting-season-closed-after-shot-bird-falls-into-school-yard.565788 (Accessed June 2015).
- Vance-Borland, K., Holley, J., 2011. Conservation stakeholder network mapping, analysis, and weaving. Conserv. Lett. 4, 278–288.
- White, P.C., Ward, A.I., 2011. Interdisciplinary approaches for the management of existing and emerging human–wildlife conflicts. Wildl. Res. 37, 623–629.

D. Veríssimo, B. Campbell / Biological Conservation xxx (2015) xxx-xxx

- White, R.M., Fischer, A., Marshall, K., Travis, J.M., Webb, T.J., Di Falco, S., Redpath, S.M., van der Wal, R., 2009. Developing an integrated conceptual framework to understand biodiversity conflicts. Land Use Policy 26, 242–253.
- Wild Birds Regulation Unit, 2013. Report on the Outcome of the 2013 Spring Hunting Season in Malta, Wild Birds Regulation Unit. Ministry for Sustainable Development, the Environment and Climate Change, St Venera, Malta.
- Wild Birds Regulation Unit, 2015. Consideration of the Conservation Status of Quail and Turtle Dove. Ministry of Environment of Malta (https://environment.gov.mt/en/ Pages/WBRU/Reports-and-Statistics.aspx Accessed June 2015).
 Woodroffe, R., Thirgood, S., Rabinowitz, A., 2005. People and Wildlife, Conflict or Co-
- existence? Cambridge University Press
- Wynne, B., 1992. Misunderstood misunderstanding: social identities and public uptake of science. Public Underst. Sci. 1, 281-304.
- Young, J., Watt, A., Nowicki, P., Alard, D., Clitherow, J., Henle, K., Johnson, R., Laczko, E., McCracken, D., Matouch, S., 2005. Towards sustainable land use: identifying and managing the conflicts between human activities and biodiversity conservation in Europe. Biodivers. Conserv. 14, 1641–1661.
- Young, J., Richards, C., Fischer, A., Halada, L., Kull, T., Kuzniar, A., Tartes, U., Uzunov, Y., Watt, A., 2007. Conflicts between biodiversity conservation and human activities in the Central and Eastern European countries. Ambio 36, 545–550. Young, J.C., Marzano, M., White, R.M., McCracken, D.I., Redpath, S.M., Carss, D.N., Quine,
- C.P., Watt, A.D., 2010. The emergence of biodiversity conflicts from biodiversity impacts: characteristics and management strategies. Biodivers. Conserv. 19, 3973–3990.
- Young, J.C., Butler, J.R., Jordan, A., Watt, A.D., 2012. Less government intervention in biodiversity management: risks and opportunities. Biodivers. Conserv. 21, 1095–1100. Youth, H., 2003. Watching birds disappear. State World 14–37.