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The Raptor and the Lamb – Reintroduction of carnivores in agricultural landscapes in Ireland

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Abstract

Wildlife management has its roots in the natural sciences and has traditionally promoted a scientific and technical approach to conflict mitigation. The below research is concerned with the conflict surrounding the reintroduction of the white-tailed sea eagle to Ireland, in particular that between farmers and conservationists. The farmers see the eagles as a threat to their livelihood and strongly resent the imposition of the birds without sufficient prior consultation with stakeholders on the ground. We argue that behind Human Wildlife Conflict (HWC) is nearly always human-human conflict. Management decisions need to be taken not just on the best science, but they have to incorporate a better understanding of the human dimension. The paper concludes by arguing that the positive transformation of the conflict surrounding the sea eagles was hampered by a political culture reluctant to cede decision making powers, along with institutional incapacity to encourage trust and relationship building between the different agencies and stakeholders impacted by the project.

Keywords: Sea eagles, species reintroduction, stakeholders, Human-wildlife conflict, conservation conflict transformation.

Introduction

Conflict between people and wildlife is today among the most critical threats to both the conservation and reintroduction of many species worldwide (Dickman, 2010; Madden, 2004;

Manfredo, 2015; Redpath et al., 2013; Woodroffe et al., 2005). Conflict is an inevitable outcome of human interaction, but as stated by Lederach (1997) it is the consequences of the conflict that determine whether it is constructive or injurious. Madden (2004, p. 248) defines human-wildlife conflict (HWC) as situations where '*the needs and behaviour of wildlife impact negatively on the goals of humans or where the goals of humans negatively impact on the needs of wildlife'*. It is increasingly recognised that behind the overt HWC is nearly always underlying human-human social conflict; driven by fundamental differences in values, goals, identity, lifestyle, power imbalance and distrust, often in combination with historic wounds. Conflict involves people and as stated by Madden (2004: 248/249) HWC can become *'not only conflict between humans and wildlife, but also between humans about wildlife'*. Conservation and wildlife management has its roots in the natural sciences and it has traditionally promoted a biological and technical managerial approach to conflict mitigation, with possible financial compensation as a resolution strategy. The failure of many wildlife conservation projects has resulted from this misrepresentation and over simplification of a purely scientific and legalistic approach to HWC (Madden and McQuinn, 2014, Jacobsen and Linnell, 2016, Redpath et al., 2013). For example, Jacobsen and Linnell (2016), reporting on HWC surrounding large carnivores in Norway, found that recognition justice in the form of acknowledging a groups identity, lifestyle, knowledge, mutual respect and the extent to which they regarded the management system as being just and fair was far more important to them than compensation for livestock predation losses endured by farmers and herders. Naughton-Treves et al., (2003) also found that compensation for livestock losses had no influence on tolerance levels for wolf predation in Wisconsin, USA; rather deep-rooted social identity and occupation was a far more powerful predictor of tolerance level.

Long-term conservation success requires conservationists to understand and address the underlying social and psychological factors embedded in nearly all HWC. However, conservation biologists rarely have the training or skills to address these wider societal issues (Redpath et al., 2013; Bennett et al., 2017). Best practice today calls for the adoption of a holistic interdisciplinary approach, along with an acknowledgement of the key role of stakeholders in human-wildlife conflict mitigation (Reed, 2008; Madden and McQuinn, 2014; Woodroffe et al., 2005). Public participation and acceptance can be as important a determination of the success of wildlife projects as the underlying biology. We also know that many species reintroductions fail not because of biological / ecological reasons, but due to accidental or human induced mortality (Kellert et al., 1996). However, given the frequent differences in value systems and incompatible goals, meaningful stakeholder participation can be very difficult. Similarly what passes for 'participation' can range from manipulation and passive dissemination of information to active engagement and empowering stakeholders in decision making (Arnstein, 1969). But, there is evidence that effective participation, including sustained dialogue and relationship building, increases trust and reduces conflict (Reed, 2008; Wilson, 2004; Redpath et al., 2013). We must also acknowledge that stakeholder participation is not a panacea and needs to be handled carefully. Expected results may not be achieved, and key stakeholders may refuse to take part in the participatory process (Gerner et al., 2011). Redpath et al., (2013) warns against the assumption that participatory approaches lead to idealised 'win-win' solutions, rather than recognising the merits of the arguments in a conflict. Evidence suggests that long term human-wildlife conflict resolution is rare, even where appropriate strategies have been implemented and negotiated trade-off may be the only acceptable outcome (Dickman, 2010). Often the most one can hope for is to render the conflict manageable. Increased participation may not always improve HWC, but as argued by Jacobsen and Linnell (2016, p. 204), it is necessary in order

to '*ensure that the political choices are made through means that are regarded as legitimate by the stakeholders*'. Participation is intrinsic to democratic processes and is increasingly recognised in international policy, such as the UN Aarhus Convention (1998), which aims to improve information access, justice and public participation in decision-making in environmental matters.

Each conflict situation brings with it its unique combination of geography, history, social, cultural, economic, political and biological complexities. This realisation mitigates against the use of a generic 'tool kit' approach for both stakeholder engagement and conflict mitigation. Madden and McQuinn, (2014) propose a Conservation Conflict Transformation (CCT) model that is not just an approach and set of techniques but a way of thinking about, understanding and relating to conflict. The model recognises the deep rooted historic and identity based conflict that often exists between stakeholders, along with the relationship building and equity and transparency of the decision making process necessary to transform conservation conflict. Ultimately it calls for a change in orientation in HWC studies away from the current narrow focus on the 'dispute' to a broader and more holistic approach that can position the conflict within its underpinning social context. The two-step conceptual model - 'Levels of Conflict Model' and the 'Conflict Intervention Triangle' (see Figs. 1 and 2), that are the main components of Madden and McQuinn's, (2014) CCT approach are used in the below case-study research, to help analyse the conflict surrounding the reintroduction of the white-tailed sea eagle to Ireland. The major obstacle to the success of the project ultimately proved to be human induced mortality of the birds.

Figure 1: Levels of Conflict Model (after Madden and McQuinn, 2014)

Figure 2: Conflict intervention Triangle (after Madden and McQuinn, 2014)

Methods

This case study research is based on over thirty in-depth interviews with the various stakeholders involved in the sea eagle reintroduction project, including conservationists (Golden Eagle Trust, the National Parks and Wildlife Service personnel that were directly involved in the project), hill sheep farmers in the eagle release area, the Irish Farmers Association (IFA – the main farmers union) and tourism interests, including hoteliers and members of the Killarney Chamber of Tourism and Commerce. These in-depth interviews, along with attendance at stakeholder public meetings and site-visits, were conducted between 2011 and 2012, and were subsequently qualitatively analysed. The research also involved following the media coverage of the project in the local and national press, on television and on internet from the start of the project in 2006 up to the present. A lot of background reading of technical reports on the eagle reintroduction project in both Ireland and Scotland was also undertaken.

White-Tailed Sea Eagle

The white-tailed sea eagle (*Haliaeetus albicilla*) is a large raptor, with a distinctive white wedge shaped tail, dark brown plumage and a large yellow bill (see Fig. 3). Sea eagles are widely distributed over northern Eurasia, with the largest European population of an estimated 3,000 pairs found along the Norwegian coast (Halley et al., 2006). They have a varied diet of fish and sea birds and they also scavenge on carrion. They are not on the IUCNs Red List of endangered species, but they are protected under European Law and are listed on Annex 1 of the EUs Birds Directive (2009/147/EC) and in Appendix II of the Bern Convention. The sea eagle became extinct in Britain in 1918 and in Ireland in the late nineteenth century, with the last sited recording in County Kerry in 1898 (D'Arcy, 1999; Love, 1983). They suffered heavy predation at the hands of gamekeepers, egg collectors,

sportsmen and landowners. Sea eagles were reintroduced from Norway to Scotland between 1975-2012, and today the Scottish population is securely established with over a hundred breeding pairs (RSPB, 2017; O'Toole et al., 2002).

Figure3: A White-Tailed Sea Eagle fishing in the Lakes of Killarney (source The Irish Times, October 19, 2017, www.irishtimes.com)

A collaborative project between the Golden Eagle Trust (GET) (an Irish non-government organisation) and the state-run Irish National Parks and Wildlife Service (NPWS), to reintroduce the white-tailed sea eagle to Ireland began in 2006, with the majority of the funding (70%) coming from the NPWS. The aim of the project was 'to re-establish a viable, self-sustaining breeding population of sea eagles in south-west Ireland after an absence of 110 years' (Mee, 2009). The proposed re-introduction site for the sea eagles was within Killarney National Park, at the eastern end of the mountainous Iveragh peninsula in County Kerry. The peninsula is surrounded by the Atlantic Ocean on three sides, and the park's pre-release site was about 20 km from the coast (see Fig. 4). The donor eagle population, as in the Scottish reintroduction project, came from Norway. In collaboration with the Norwegian Institute for Nature Research (NINA), a hundred juvenile sea-eagles were introduced to Killarney National Park over a five year period from 2007-2011, at an estimated cost of over €1.5 million.

Figure 4: Location Map, showing the reintroduction site of the white-tailed sea eagles in Killarney, Co. Kerry, and that of the golden eagle in Donegal.

Species Reintroduction – Sea Eagles

Species reintroduction is defined by the International Union for the Conservation of Nature IUCN (1998:6) as, '*an attempt to establish a species in an area which was once part of its historical range, but from which it has been extirpated or become extinct'*. Apart from biological and ecological criteria, the IUCN guidelines make distinct reference to local consultation and social acceptance of re-introduced species. They state that, '*A thorough assessment of attitudes of local people to the proposed project is necessary to ensure the long-term protection of the re-introduced population, especially if the cause of species' decline was due to human factors'* (IUCN, 1998, p. 9; IUCN/SSC, 2013). In compliance with international regulations a pre-release feasibility study, under the auspices of the IUCN Species Reintroduction Guidelines, was undertaken by the NPWS and GET. The project's steering group, which initially consisted of only natural scientists (ornithologists and conservationists), acknowledged that the outcome of the project would largely depend on the local community's attitude to the project (O'Toole, 2006). They also stated that a well-planned media campaign and an agreed clear message needed to be adopted before the first project press release (O'Toole, 2006). Burke et al., (2015), remind us that mass media – newspapers, TV, internet - is often the publics primary source of scientific knowledge and the media played a key communications role in the sea eagle project. The sea-eagle's economic benefit to the area was also seen as an important aspect of the reintroduction project. The eco or wildlife tourism potential for watching white-tailed eagles visiting winter food dumps around the Lakes of Killarney is, according to O'Toole, (2006), 'enormous'. It is estimated that sea eagle tourism in the island of Mull in Scotland, generates over £5 million annually and supports over 100 full-time equivalent jobs (Molloy, 2011). County Kerry and in particular the Lakes of Killarney is one of Irelands major tourist destinations, with over 2 million tourists visiting the area annually. The tourism sector, concentrated around the hotel

owners and the town's Chamber of Tourism and Commerce, were quick to see the potential economic benefits of the sea eagle's reintroduction and they strongly supported the project. The sea eagle along with the native red deer (*Cervus elaphus*) of Killarney are seen to imbue the area with prestigious eco-tourism attractiveness (O'Rourke, 2000). A tourism representative joined the project's Steering Committee when invited to do so in March 2007, prior to the arrival of the first eagle chicks in June that year. However the project's relationship with the farming community got off to a bad start, not only did they refuse the initial invitation in March 2007 onto the Steering Committee, but over a hundred farmers demonstrated at Kerry Airport when the plane from Trondheim carrying the first batch of sea eagles touched down on 18th June 2007, (Lucey, 2007a).

Of the fifteen birds initially released in 2007, a quarter died in the first year, the majority due to ingesting poisoned meat bate in the spring lambing time (O'Rourke, 2014). Twenty-four of the original hundred birds released were recovered dead by the end of 2012, and thirty two confirmed dead by the end of 2016 (www.goldeneagletrust.info). Of the thirty two deaths, 14 birds were confirmed to have died from poisoning, three from wind-turbine collisions, one from colliding with overhead power lines, two from shooting, one from natural causes and the rest from reasons unknown, with suspected poisoning being the main culprit (www.goldeneagletrust.info). The majority of mortalities were human induced. Thirgood and Redpath, (2008, p. 1553) argued that given that humans have been at the root of most species extinction, central to successful reintroduction projects and conflict mitigation is an understanding of 'what is - and conversely what is not - acceptable to stakeholders'.

Hill Sheep Farmers and Conservationists

The main land use on the Iveragh peninsula is hill-sheep farming, and sheep farmers' are the people who come into direct contact with the eagles (O'Rourke and Kramm, 2009). They are

also the group who were suspected of either intentionally or accidentally poisoning them. The principal problem the sheep farmers and their union, the Hill Sheep Branch of the powerful Irish Farmers Association (IFA), had with the eagles was that they were 'imposed' on them. There had been no serious pre-release consultation, with many farmers learning about the project only after the eagles had arrived[i] (Lucey, 2006; O'Rourke, 2014). This was the reason the IFA gave for initially not joining the project's steering committee when invited to do so, three months before the birds arrived. They rightly pointed out that they had no say in the initial decision to reintroduce the sea eagles, and inviting them on board at the implementation stage of the project was just a 'tick box' exercise for what was to pass for stakeholder consultation and participation. It is generally accepted that a crucial aspect of any participatory process is the identification and consultation of stakeholders at an early stage, prior to any formal management plan being put in place (Reed, 2008; Madden and McQuinn 2014).

The IFAs stated opposition to the project was centred on livelihood issues. They feared the eagles would take young lambs around spring lambing time; that they might introduce disease to their flocks, and they were unhappy with the lack of compensation for livestock loses (Interview data; Lucey, 2007b). The Golden Eagle Trust (GET) assured the farmers that sea eagles do not take lambs, of the 3,000 breeding pairs in Norway they stated that there had not been a single incident of sea eagles praying on live lambs, but they were useful for cleaning up carrion, including dead sheep and lambs on the hill (Mee, 2007; Halley et al., 2006). However, a different story was emerging from the Island of Mull in Scotland, where some sea eagles were openly taking lambs. This was confirmed by research commissioned by Scottish Natural Heritage. The research concluded that the proportion of lambs killed was insignificant compared with overall annual mortality and financial impacts would be negligible at broad spatial scales (Marquiss et al., 2003; Simms et al., 2010). Their findings

did not preclude the fact that losses could be significant for individual farmers, with one farmer on Mull claiming to have lost thirty lambs to eagle predation in one season. The Irish white-tailed sea eagle project manager, Dr Alan Mee, admitted that in exceptional cases 'rogue eagles' who had not been properly introduced may take non-viable lambs. Still the project manager assured the Irish farmers that the overall number of lambs taken was very small, between 1-2% of annual lamb mortality (Mee, 2007, 2009, 2010). This confused and contradictory message along with poor overall communications and information exchange did not engender trust from the farming community. Redpath et al., (2013: 103) argue that 'distrust is one of the main barriers to collaboration and processes that help build trust, such as transparency, are likely to encourage engagement'.

Apart from the stated livelihood issues, there was a lot more going on under the surface of the Irish 'raptor – lamb' conflict. The farmers' greatest fear was not lamb predation but landscape designations such as a Special Protection Area (SPA) – from the EU Birds Directive, which could restrict planning and land use (Creedon, 2007). The farmers were particularly concerned about opposition to lucrative wind turbine projects that were already in the planning process. The GET promised no designations for twenty years until breeding populations were established and territories created (www.goldeneagletrust.info). To date at least three eagles have been killed by wind turbine blades from an existing wind farm on the Kerry – Cork border. In 2016 the NPWS objected to the development of another thirty eight turbine farm, again along the Kerry - Cork border. The NPWS argued that the sea eagle was particularly susceptible to collision with turbine blades, stating that thirty nine eagles had died in Norway at one large wind farm between 2005 and 2010 (Lucey, 2016a,b). The NPWS's objection was not upheld and planning permission was granted but the incident proved that the farmers' initial fears in relation to conflict with wind farm developments were not unfounded. Overall the farming lobby resented the 'imposition' of the project that

threatened not only their economic livelihoods but also their social legitimacy as the managers and custodians of the countryside. The IFA tried but failed to negotiate trade-offs with the NPWS, such as the removal of SAC designations from riverine areas, or a top-up to their agri-environment payments (Interview data).

A History of Unresolved Disputes

There was a history of conflict in the eagle reintroduction site between the farming community and the National Parks and Wildlife Service (NPWS), whom the farmers saw as their natural enemies. There was an ongoing conflict between the two parties surrounding the management (and over population) of the protected red deer of Killarney National Park, who frequently break fences and graze the surrounding reclaimed agricultural land. There are annual conflicts over the burning of upland heather and gorse, which theoretically require a permit from the NPWS and is restricted to certain times of the year. But this regulation is rarely respected and nearly impossible to implement, as one has to be caught in the act of setting the fire. There was an ongoing heated battle between the NPWS and the IFA in relation to Special Protection Area (SPA) designations for the hen harrier (*Circus cyaneus*) in North Kerry. In North Kerry the IFA backed a campaign not to allow NPWS personnel onto farmland (Lane, 2003). It is often difficult to differentiate between the rhetoric and the reality. Publically the IFA stated that all these environmental designations are sterilizing the countryside and reducing the price of land, while privately some farmers admitted that they were very happy with the extra (agri-environment) payments associated with having land in an SAC/SPA (Interview data). One sheep farmer with land bounding Killarney National Park, summarised the conflictual relationship between the farmers and the NPWS, when he stated; "*There is no point in complaining, we just have to 'play ball' with them'* (Interview data). 'Playing ball' often involves taking matters into their own hands. Another farmer stated: *'The former landlords were down on the peasantry, now the eagles and new found*

environmental lobby are down on the peasantry' (Interview data). Nowadays the victims and villains are not so easily identified. The ongoing and historic social conflict between the NPWS and the farming lobby made meaningful stakeholder engagement in relation to the sea eagle project very difficult. The NPWS were aware of their reputation among the farming community, which is why they wanted the sea eagle reintroduction project to be fronted by the Golden Eagle Trust (GET). But the farmers quickly saw through that, they were all the-one as far as they were concerned, they shared the same values, had the same mind-set and were ultimately their enemies. Perhaps it was also this history of conflict that forewarned the Golden Eagle Trust and NPWS that prior consultation with their old enemies would not work and the better option might be to 'impose' the eagles and then defend the project, which is essentially what they did.

Sea Eagle Poisoning

In County Kerry, and throughout much of Ireland, there is a tradition of setting poisoned meat bate around lambing time to control foxes and corvids, which all sheep farmers recognised as the main threat to new born lambs. This indiscriminate poisoning also affects non-target species, including dogs, pine martens and other animals protected under the Irish Wildlife Act 1976 (Amendment Act 2000). Being carrion eaters, the eagle reintroduction team always knew that poisoning posed the greatest threat to the birds. The Golden Eagle Trust had been calling for legislative change for some years prior to the commencement of the sea eagle reintroduction project (Irish Raptor Study Group, 2012). But when it was not forthcoming they still proceeded with the project. Neither had they addresses the traditional practice of sheep farmers setting poison bait around lambing time. Once it was quickly established that poisoning was the main cause of mortality for the reintroduced birds, the GET again set about changing the legislation. The public outcry at the sight of poisoned eagle carcases in the media, brought political pressure to bear on this long running issue. In

2009 the Golden Eagle Trust submitted a formal complaint to the European Commission, on the basis of a breach of the Birds Directive. This eventually led to an amendment to the Irish Wildlife Act in October 2010, which rendered all forms of poisoned bate illegal in the Irish countryside (Burke et al., 2015; O'Rourke, 2014).

Legislation in relation to poisoning is one thing, but policing and implementing it is quite another. Thirgood and Redpath, (2008) remind us that law enforcement has been ineffective in reducing persecution of the hen harrier in the Scottish Highlands and has contributed to the alienation of the hunting stakeholders. In 2010 the Irish Department of Agriculture, in collaboration with the GET distributed an 'Advice Leaflet on the 'Control of Foxes and Crows' to sheep farmers in South Kerry and West Cork, clearly stating that it is now illegal to poison foxes and crows (Department of Agriculture, Fisheries and Food, 2009, 2011). They proposed shooting as the safest means of controlling foxes (along with use of low electric fences around lambing paddocks and bright lights), and Larsen traps for crows. However, the problem on the ground did not go away, and the sea eagles continued to be either intentionally or accidently poisoned. Poisons remained widely available in the form of herbicides (e.g. carbofuran) or liver fluke products such as Trodax (which contains the active compound nitroxinil), or alphachloralose, which is still approved for the control of mice and rats. These freely available compounds continued to be the most commonly found poisons in the dead eagle carcases.

A farmer whose sheep still lamb on the hill mocked the suggestion of erecting an electric fence as a fox deterrent around his mountain - '*they think they will educate us'* (Interview data). He went on to complain about the lack of prior consultation, the fact that the eagles were 'imposed' on them, along with more 'rules and regulations'. He sees himself as the shepherd of his flock and his job is to protect his sheep and lambs. There is a general dislike of officialdom and outsiders telling them what to do. They hold what could be described as a

'resistance' mentality, expressed in their ability to endure despite the tough physical and socio-economic environment they find themselves in. All the farmers interviewed had a deep rooted attachment to their sheep and their mountain, and the majority of them had no time for a 'nuisance' of a bird, with nothing to offer them. *'The eagles may be a nice attraction for the tourists, they just want something to look at, but it is a threat and a nuisance to the farming community'* (Interview data).

Highly mediatised dead eagles giving out the wrong message

In the media the farmers who continued to set poisoned bate for foxes and thus accidently or intentionally continued to target the eagles, were presented as 'mavericks' and anti-social bachelors with mental health issues. The IFA also distanced themselves from such illegal practices. The mediatisation of the dead eagles, the stark images of the project manager holding up dead birds in the countryside, along with images of dead eagles undergoing autopsies in sterile toxicology laboratories, enraged the general public, especially the urban population of Dublin, reflected in letters to several national newspapers. The eagle project became a surrogate for wider urban-rural, 'local populist' versus external science based 'general interest' tensions (Skogen and Krange, 2003). Wilson's (2004) observation that attitudes to reintroductions tended to be favourable among an increasingly environmentally aware and urbanised general public, but negative among those likely to be adversely affected, rings true.

The poisoning of the eagles also enraged the donor country Norway, and the Norwegian ambassador to Ireland frequently expressed his concern and was quoted as saying '*We in Norway are deeply concerned about the situation and hope that all can be done to make such poisoning illegal'* (cited in Burke et al., 2014). The bad press was also affecting Ireland's substantial agricultural exports, who sell the image of Ireland's lush green pastures and

almost ‘organic’ wholesome products. The Irish food board, ‘An Bord Bia’, had recently launched its ‘Origin Green’ international marketing strategy (www.bordbia.is). This in-turn enraged the farming community – the ‘nuisance’ of a bird had gone too far. The polarisation of views and adversarial politics, the pitting of conservationists and farmers, rural and urban populations against each other and all widely covered in the media was ultimately serving nobody’s agenda. Even if the conservationists had the general public on their side, they knew the fate of the vulnerable eagles rested in the farmers’ hands, who were quick to point out that they ‘*can take out the birds at anytime*’ (Interview data). Ultimately the two sides needed to co-operate, belatedly they came to recognise they had a shared problem!

In April 2010 Teagasc (The Irish farm advisory and research service), called what they claim to be the first public meeting on the eagles in a community hall, outside Killarney. It was attended by over 200 people, including the NPWS and the Golden Eagle Trust. It was a very heated meeting and much anger was expressed towards what the IFA claimed was the project manager’s addiction to publicity and the mediatisation of eagle deaths. Ultimately this meeting led to the establishment of the ‘Kerry Sustainable Rural Environment Group’, a multi-agency group whose aim was to try to retrospectively manage the situation. They tried to promote dialogue between the stakeholders and to negotiate acceptable solutions. They held ‘Farm Walk and Talk’ events, where they demonstrated alternative predator management methods, other than that of poisoning, to sheep farmers. Most importantly, in agreement with the GET, they set about keeping the project out of the media limelight and to stop mediatising eagle mortalities. The media focus subsequently became less intense and shifted from its negative focus on dead eagles to a more positive message, such as the fact that over 13 Irish born chicks have successfully fledged their nests (Lucey, 2016c).

Discussion and Conclusion

The cultural, political and practical barriers to species reintroductions cannot be underestimated (Manning et al., 2009; Wilson, 2004). As we move from exclusive protection areas to community based conservation, there is no doubt 'the human dimension is an inextricable element of 21st century conservation' (Macdonald, 2009, p. 425). Given the increased public knowledge and interest in environmental issues, along with a postmodern scepticism about science, stakeholder participation in environmental decision-making is increasingly regarded as a democratic right. It is also critical to the success of wildlife management and conflict mitigation.

Among the principal shortcomings of the Irish sea eagle reintroduction project was the initial lack of consultation with stakeholders on the ground, especially the farming community that had legitimate livelihood concerns. Neither is this situation unique, rather historically it was the norm where natural scientists tended to be the sole or primary source to guide conservation action (Bennett et al., 2017). The imposition of policy through institutionalised power has been a repeated feature of the Irish Government's *modus operandi* (Flynn, 2006). Research shows that people are far more likely to accept risks undertaken voluntarily, as opposed to risks imposed externally (Dickman, 2010). The evidence also suggests that conservation outcomes will be less durable when conservationists' assert their interests to the detriment of others (Redpath et al., 2013). The project was designed and implemented solely by natural scientists with no training or skills in communication, education and stakeholder facilitation. It lacked an interdisciplinary approach, which the management team argue was due to tight budgets (Interview data). When budgets are tight the first casualties are what are perceived to be non-essentials, such as education and stakeholder facilitation, both of which subsequently proved to be the projects major stumbling block. The reintroduction project quickly assumed an adversarial approach. There was also a history of conflict in the eagle reintroduction site between the NPWS and the farming sector. The intractability of the

conflict between the conservationists and farmers meant that they only co-operated, or rather tolerated each other, in the end because they had to, due to the bad press surrounding the poisoning of the birds.

Returning to Madden and Mcquinn's, (2014) two part Conservation Conflict Transformation model (CCT) we can see that the application of Part 1 – Levels of Conflict Model, did help with a deeper understanding of the current dispute. The 'Dispute' was the outward manifestation of unresolved deeper historic and identity based conflict between the farming community and the conservationists. However, it is in the application of the second part of the CCT model (Fig.2) – 'The Conflict Intervention Triangle', that it becomes apparent that attempts to move beyond the 'Substance' of the dispute to actually transform the conflict in a positive way, were hindered by structural weaknesses in the design and implementation of the sea eagle reintroduction project. It is in the 'Relationship' and 'Process' (decision making design) aspects of the model that the eagle project falters. The eagles were introduced with the necessary backing of a Government agency, NPWS, without sufficient prior attention to communication and relationship building among the various stakeholders who stood to be impacted both positively and negatively by the project. All of which would have required time, finance and institutional capacity building. This in turn mitigated against the quality and durability of the decision making process. As remarked by Madden and McQuinn (2014, p. 102), Governments and Government Agencies show a marked reluctance to cede any decision making power, because they 'associate it with a lack of control' (see also Flynn, 2007). This political culture inevitably framed the conflict in a hierarchical power struggle. Conservation and species reintroductions are scientifically, technically, politically and socially complex. Decisions need to be made not just on the best science, but they also have to incorporate a better understanding of the human dimension, so that the outcomes are more democratic, legitimate and ultimately more sustainable in the long term.

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References

Arnstein, A. (1969) 'A ladder of citizenship participation'. *Journal of the American Institute of Planners* 26, 216-233.

Bennett, N.J., Roth, R., Klain, A.C. et al. (2017) 'Conservation and social science: Understanding and integrating human dimensions to improve conservation'. *Biological Conservation* 205, 93-108.

Burke, B.J., Finn, A., Flanagan, D.T., Fogarty, D.M., Foran, M., O'Sullivan, J.D., Smith, S.A., Linnell, J.D.C., McMahon, B.J. (2015) *Irish Geography* 47, 95-115.

Creedon, T. (2007) 'Designations pushing Irish farmers out of existence', interview with John Stack, Kerry IFA President. The Kerryman 17/01/2007, p.17.

D'Arcy, D. (1999) *Ireland's Lost Birds*. Four Courts Press, Dublin.

Department of Agriculture, Fisheries and Food (April, 2009 and January 2011) Advice Leaflet on Control of Foxes and Crows. Dublin, p. 6.

Dickman, A.J. (2010) Complexities of conflict: the importance of considering social factors for effectively resolving human-wildlife conflict. *Animal Conservation* 13, 458-466.

Flynn, B. (2007) *The Blame Game: Rethinking Ireland's sustainable development and environmental performance*. Irish Academic Press, Dublin.

Golden Eagle Trust http://www.goldeneagletrust.info/

Gerner, J., Heurich, M., Günther, S., Schraml U. (2011) Red deer at a crossroads - An analysis of communication strategies concerning wildlife management in the 'Bayerischer Wald' National Park, Germany. *Journal of Nature Conservation* 19, 319-326.

Halley, D.J., Nygård, T., Folkestad, A.O. (2006) An Evaluation of the Proposed Sea Eagle *Haliaeetus albicilla* Reintroduction Area in Ireland. Norwegian Institute for Nature Research, Trondheim, Norway.

Irish Raptor Study Group (2012) Irish Raptor Study Group 2011 Annual Raptor Round-Up Report. Irish Raptor Study Group, Ireland.

IUCN (World Conservation Union) (1998) Guidelines for Re-introductions. Prepared by the IUCN SSC Re-introduction Specialist Group, IUCN, Gland, Switzerland and Cambridge, UK. 10 pp. (http://www.iucnsscrsg.org/).

IUCN/SSC (2013) Guidelines for Reintroductions and other Conservation Translocations. Version 1.0 World Conservation Union/SSC Gland, Switzerland: IUCN Species Survival Commission. (http://www.iucnsscrsg.org/).

Jacobsen, K.S. and Linnell, J.D.C. (2016) Perceptions of environmental justice and the conflict surrounding large carnivore management in Norway – Implications for conflict management. *Biological Conservation* 203, 179-206.

Kellert, S.R., Black, M., Rush, C.R., Bath, A.J. (1996) Human culture and large carnivore conservation in North America. *Conservation Biology* 10 (4), 977-990.

Lane, E. (2003) 'Farmers urged not to allow Dúchas officials on to their lands'. Kerryman, 6/03/2003, p.43.

Lederach, J.P. (1997) Building Peace; Sustainable Reconciliation in Divided Societies. United States Institute for Peace.

Love, J.A. (1983) *The Return of the Sea Eagle*. Cambridge University Press, Cambridge.

Lucey, A. (2016a) Wind turbines killed eagles in Kerry-Cork, says parks service. The Irish Times, 31/7/2016.

Lucey A. (2016b) Wind turbines blamed for death of three sea eagles. The Irish Times, 2/9/2016

Lucey, A. (2016c) 'Six Irish-born white-tailed eagles fly nests in 2016'. The Irish Times 9/9/2016.

Lucey, A. (2007a) 'White-tailed eagle back in Kerry after 100-year absence'. The Irish Times, 19/05/2007.

Lucey, A. (2007b) 'IFA fears birds will take lambs and salmon'. The Irish Times, 26/01/2007.

Lucey, A. (2006) 'IFA oppose reintroducing eagles'. The Irish Times, 24/08/2006.

Macdonald, D.W. (2009) Lessons Learnt and Plans Laid: Seven awkward questions for the future of reintroductions, pp. 411-448. In: M.W. Hayward and M.J. Somers (eds.) *Reintroduction of Top-Order Predators*. Wiley-Blackwell, Chichester, UK.

Madden, F. (2004) Creating Coexistence between Humans and Wildlife: Global Perspectives on local Efforts to Address Human-Wildlife Conflict. *Human Dimensions of Wildlife*, 9, 247-257.

Madden, F. and McQuinn, B. (2014) Conservation's blind spot: The case for conflict transformation in wildlife conservation. *Biological Conservation* 178, 97-106.

Manfredo, M.J. (2015) Essays on human-wildlife conflict 10 years after the Durban World Parks Congress: An introduction. *Human Dimensions of Wildlife* 20, 285-288.

Manning, A.D., Gordon, I.J., Ripple, W.J. (2009) Restoring landscapes of fear with wolves in the Scottish Highlands. *Biological Conservation* 142, 2314-2321.

Marquiss, M., Madders, M., Irvine, J., Carss, D.N. (2003) The Impact of White-Tailed Eagles on Sheep Farming on Mull, Final Report (Contract Number ITE/004/99), 47 pp.

Mee, (2007) Minutes of Kerry County Council Meeting convened to discuss the Introduction of the White Tailed Eagle to Killarney National Park. Tralee, 16/04/2007.

Mee, A. (2009) Irish White-Tailed Sea Eagle Reintroduction Programme 2007-2008. Report to the Directorate for Nature Management, Trondheim, Norway. The Golden Eagle Trust.

Mee, A. (2010) Safe lambing in sheep country. Irish Farmers Journal, 3/04/2010.

Molloy, D. (2011) Wildlife at work. The economic impact of white-tailed sea eagles on the Isle of Mull. Report, The RSPB, Sandy, United Kingdom.

Naughton-Treves, L., Grossberg, R., Treves, A. (2003) Paying for Tolerance: Rural Citizens' Attitudes towards Wolf Depredation and Compensation. *Conservation Biology* 17 (6), 1500-1511.

O'Rourke, E. (2000) The Reintroduction and Reinterpretation of the Wild. *Journal of Agriculture and Environmental Ethics* 13, 145-165.

O'Rourke, E. (2014) The reintroduction of the white-tailed sea eagle to Ireland: People and wildlife. *Land Use Policy* 38, 129-137.

O'Rourke, E., Kramm, N. (2009) Changes in the Management of the Irish Uplands: A case study from the Iveragh Peninsula. *European Countryside* 1 (1), 53-59.

O'Toole, L., Fielding, A.H., Haworth, P.F. (2002) Re-introduction of the golden eagle into the Republic of Ireland. *Biological Conservation* 103, 303-312.

O'Toole, L. (2006) 'A Proposal to Reintroduce White-Tailed Eagles to Ireland'. Golden Eagle Trust Internal Report, January 2006, pp.12.

Redpath, S.M., Young, J., Evely, A., Adams, W.M., Sutherland, W.J., Whitehouse, A., Amar, A., Lambert, R.A., Linnell, J.D.C., Watt, A., Gutiérrez, R.J. (2013). Understanding and managing conservation conflicts. *Trends in Ecology & Evolution*, 28 (2), 100-109.

Reed, M.S. (2008) Stakeholder participation for environmental management: A literature review. *Biological Conservation* 141, 2417-2431.

RSPB (2017) East Scotland white-tailed sea eagles. http://www.rspb.org.uk/community/ourwork/b/eastscotlandeagles/default.aspx (accesses 1 June 2017).

Simms, I.C., Ormston, C.M., Somerwill, K.E., Cairns, C.L., Tobin, F.R., Judge, J., Tomlinson, A. (2010) A pilot study into sea eagle predation on lambs in the Gairloch Area. Final Report, Scottish Natural Heritage Commissioned Report No. 370.

Skogen, K., Krange, O. (2003) A wolf at the gate: the anti-carnivore alliance and the symbolic construction of community. *Sociologia Ruralis* 43 (3), 309-325.

Thirgood, S., Redpath, S. (2008) Hen harriers and red grouse: science, politics and human-wildlife conflict. *Journal of Applied Ecology* 45, 1550-1554.

Wilson, C.J. (2004) Could we live with reintroduced large carnivores in the UK? *Mammal Review* 34, 211-232.

Woodroffe, R., Thirgood, S., Rabinowitz, A. Eds. (2005) *People and Wildlife: Conflict or Coexistence?* Cambridge University Press, Cambridge, UK.

[i] There had been some media coverage on local radio and in the press along with negotiations with the local IFA. However, it was more information dissemination rather than consultation with the local community. The IFA held a large public meeting in Killarney in February 2007, where the participants unanimously voted to oppose the project.

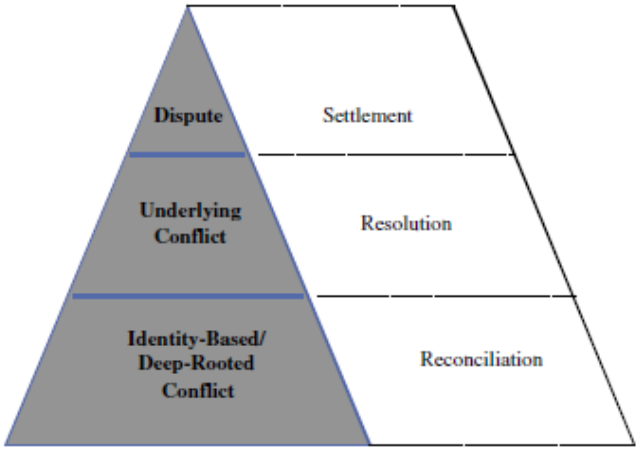


Figure 1: Levels of Conflict Model (after Madden and McQuinn, 2014)

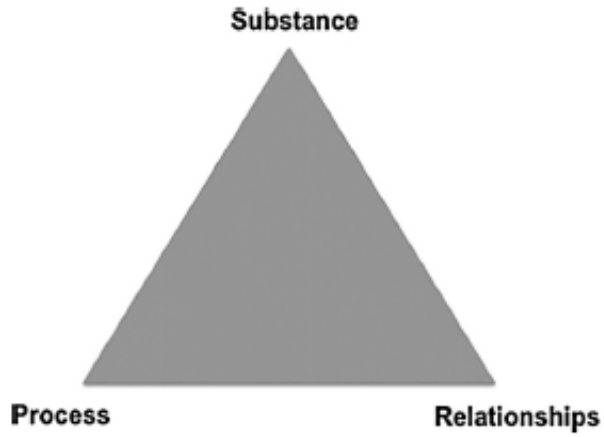


Figure 2: Conflict Intervention Triangle (after Madden and McQuinn, 2014)



Figure 3: Location Map, showing the reintroduction site of the white-tailed sea eagles in Killarney, Co. Kerry and that of the golden eagle in Donegal. (Map produced by Mike Murphy, Cartographer in the Geography Department, University College Cork.)