Commentary 30 August 2018 Jordan Owen Hampton **Ecotone Wildlife Veterinary Services** PO Box 76 Inverloch, Victoria 3996, Australia +61 497 093 754 j.hampton@ecotonewildlife.com

RH: Hampton and Teh-White • Social License and Animal Welfare

Animal Welfare, Social License, and Wildlife Use Industries<sup>1</sup>

JORDAN O. HAMPTON, <sup>2</sup> Ecotone Wildlife Veterinary Services, PO Box 76, Inverloch VIC 3996, Australia

KATHERINE TEH-WHITE, Futureye, 66 Punt Road, Windsor VIC 3181, Australia

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<sup>&</sup>lt;sup>2</sup> Email: j.hampton@ecotonewildlife.com

**ABSTRACT** Many wildlife use industries are facing criticism from animal welfare groups. In some recent cases, opposition to contentious practices (e.g., kangaroo [Macropus spp.] harvesting) has achieved widespread community support and industries have lost market access or regulatory approval. The concept of social license to operate has become an important focus for many natural resource management fields, but there is ostensibly less awareness of its role in animal industries. To regard this contemporary threat to traditional wildlife management as more than inexplicable requires some delving into social sciences. We use the example of the declining harp seal (Pagophilus groenlandicus) harvest in Canada to illustrate how poorly addressed animal welfare concerns can erode social license and decimate even ecologically sustainable wildlife use enterprises. We argue that other consumptive wildlife use industries, such as North American fur harvesting and kangaroo harvesting in Australia are at risk of loss of social license if animal welfare concerns are not addressed proactively and effectively. When faced with opposition from animal advocacy groups, many wildlife use industries have traditionally been reactive and have been reluctant to engage with stakeholders who possess seemingly irreconcilable differences. Instead, industries have often resorted to secrecy or deception, or have steadfastly defended their current approaches while attacking their critics. We suggest that a more effective approach would be for industries to proactively engage with stakeholders, establish a shared vision for how their industry should operate, and support this vision by transparently monitoring animal welfare outcomes. Proactive management of community expectations surrounding animal welfare is essential for the maintenance of social license for wildlife use enterprises.

**KEY WORDS** commercial use, engagement, harvesting, human dimensions, policy development, social science.

#### WHAT IS SOCIAL LICENSE?

The term social license has recently become popular, but the concept of social license to operate (SLO) has existed for more than a decade and was originally coined to draw the attention of mining companies to stakeholder issues (Nelsen 2006). Social license to operate describes the community's tacit consent for a business, industry, or project to exist and is an extension of the concept of corporate responsibility (Widmar et al. 2018). This unwritten consent is earned through initial community support but, as public values or operating environments change, may then be maintained or lost. Social license is a public policy concept reflecting legitimacy and should not be confused with traditional licensing such as regulatory approval. However, loss of social license can be quickly followed by loss of regulatory licenses and it would be a mistake to dismiss social license as a concept with no real-world implications. Social license now plays a major role in which industries thrive and which fail (Berger 2011). The importance of this concept has been particularly embraced in the past decade in Australia (Lacey et al. 2012, McGreevy and McManus 2017) and New Zealand (Quigley and Baines 2014, Edwards and Trafford 2016).

Maintenance of social license is considered particularly important for organizations with a wide range of interested stakeholders, long-term operations, and high exposure to global markets (Dare et al. 2014). As such, social license has recently become something that many industries have prioritized, placing SLO strategies at the forefront of how they operate and interact with society (Hall et al. 2015). Hence social license has recently become an important focus for many natural resource management fields, including mining (Lacey et al. 2012), energy production (Hall et al. 2015), forestry (Lester 2016), and agriculture (Robbins et al. 2016). There is, however, less awareness of its role in wildlife management (Kendal and Ford 2017, Darimont 2018). There has been some disagreement between authors as to the applicability of the term social license to wildlife fields (Kendal and Ford 2017, Garnett et al. 2018), but the concept is increasingly being used in contemporary human dimensions studies

(Oakes et al. 2015, Garnett et al. 2016, Wanger et al. 2017).

#### SOCIAL LICENSE AND WILDLIFE USE

With increasing attention paid to the human dimensions of wildlife management in recent decades, it has become apparent that, to maintain public support, wildlife managers need to engage with the different views in society of how animals should be treated (Lunney 2012a). Social license is an important aspect of human dimensions because it reflects prevailing public values. Many wildlife management activities, particularly those devoted to conservation, generally enjoy high levels of public support. However, consumptive wildlife management activities (wildlife use industries) and particularly those that rely on lethal harvesting of mammals (e.g., hunting; Darimont 2018), have experienced diminishing support (Muth and Jamison 2000, Tompkins 2017). Studies of public perceptions have questioned whether rapid changes in societal values toward animals may threaten the future of the sustainable use of wildlife generally (Decker et al. 2017). For this reason, understanding of societal expectations around the use of wildlife is of crucial importance to the future of all wildlife use industries.

All wildlife managers should respect the threat that social license poses to the survival of wildlife use. Activism opposed to consumptive wildlife industries has become fierce in recent years, culminating in very sophisticated and effective advocacy media campaigns (e.g., International Fund for Animal Welfare Canada 2016) opposed to many current practices (Braunsberger and Buckler 2011). Techniques commonly used by advocates include hidden camera investigations (Robbins et al. 2016), documentary films (McIntyre and McIntyre 2017), promotion of a celebrity's opinions (The Canadian Press 2016), and intense social media activity (Nelson et al. 2016). When this lobbying has produced public pressure that is strong enough, bans have been imposed by international communities (Sellheim 2015),

nations (Sissler-Bienvenu 2015), states (Vantassel et al. 2010), or private companies (Larimer 2015). In modern post-industrial countries, the influence of social media (Nelson et al. 2016) and the increasing urbanization of populations has led to a situation in which such regulatory bans can rapidly follow from decreasing public support (Teh-White 2017).

A contemporary example of loss of social license is evident in the recent cessation of the breeding of killer whales (*Orcinus orca*) in captivity (Anderson et al. 2016). Killer whales have been bred in captivity for entertainment purposes for decades despite opposition from animal advocacy groups. However, a documentary film (Cowperthwaite 2013) galvanized public opposition to the practice. At the same time, mounting scientific evidence indicated that captive killer whales were experiencing poor animal welfare outcomes (Anderson et al. 2016), culminating in growing community sentiment that the practice was "morally indefensible" (Anderson et al. 2016:1). SeaWorld<sup>TM</sup>, the theme park chain at the center of the orca captivity debate, was widely seen to fail to acknowledge the fundamental basis of the moral objections and their failure to legitimize those beliefs only increased outrage. Eventually, public outrage peaked and forced the California and Florida state governments to intervene and ban the keeping of killer whales in captivity (White 2018). Ultimately, SeaWorld<sup>TM</sup> recognized that they had lost social license and ended the breeding of killer whales and their use in entertainment shows (Ross 2016). This example highlights that community outrage, if not appropriately managed, can be as influential in impeding an industry's operations as regulatory bans (Hickman 2015). It is also critical to note that the killer whale issue was not centered on sustainability; the number of animals concerned was very small (Anderson et al. 2016). Rather, the loss of social license experienced by SeaWorld<sup>TM</sup> was centered entirely on animal welfare.

#### THE RISE OF ANIMAL WELFARE

Upon first glance at recent animal welfare controversies to engulf wildlife use enterprises, a logical response may be "We've been doing the same thing for years and people have been happy with it. Why is this suddenly a problem now?" The short answer is that animal welfare has rapidly matured as a social issue in recent decades and is now approaching mainstream acceptance with corresponding widespread media coverage.

Since the 1990s, animal welfare has steadily gained importance in post-industrial countries (George et al. 2016) and is an increasingly important component of consumer expectations of corporate social responsibility (Widmar et al. 2018). Consideration of animal welfare concerns has become critical for animal-based industries including agriculture (Fleming et al. 2016), zoos (Crozier 2018), animal racing (McGreevy and McManus 2017), circuses, and theme parks (White 2018). Animal welfare has more recently been gaining attention in the sphere of wildlife management and research (McMahon et al. 2012) and is now an important determinant of the maintenance or cessation of many wildlife operations (George et al. 2016). Use of lethal methods for culling, harvesting, or sampling wildlife have been met with particularly fierce opposition from animal welfare proponents (Warburton and Norton 2009).

## Animal Welfare versus Animal Rights versus Sustainability

There is a distinction between animal rights and animal welfare. Proponents of animal rights (Regan 1983) and related deontological approaches such as compassionate conservation (Wallach et al. 2018) generally oppose all use or killing of animals (including wildlife) on absolutist philosophical grounds. Animal welfare advocates, on the other hand, apply a consequentialist ethic to animal harm and generally support utilitarian use or control of animals provided that the suffering of affected animals can be justified, measured, and minimized (Dubois et al. 2017). The threat that the animal rights movement (e.g., People for

the Ethical Treatment of Animals 2018) has posed to traditional consumptive wildlife management has been recognized for decades, with proactive opposition having been employed by agencies such as the International Association of Fish and Wildlife Agencies since the 1990s (Decker et al. 1991). However, less proactive efforts have been developed for demonstrating that animal welfare improvement is a priority.

It is also important for wildlife use industries to recognize that animal welfare concerns are entirely separate from those related to sustainability. Wildlife use industries that are highly sustainable can generate very poor animal welfare outcomes and industries that generate very good animal welfare outcomes can be unsustainable. Sustainability has traditionally been identified as the sole focus for defending the social license of contentious wildlife use industries (Johnson et al. 2015, Brink et al. 2016, Decker et al. 2017). This approach requires realignment because public concern around animal welfare has equal, if not greater, footing in affecting public perceptions of wildlife use industries, and has the capacity to provoke damaging community backlash and activism for affected industries (Ben-Ami et al. 2014). Crucially, advocates of animal welfare and sustainability often have different philosophies and core values, despite sharing some common ground (Paquet and Darimont 2010). However, they often diverge because decisions made to maximize conservation outcomes can affect the welfare of individual animals (Lunney 2012b, Wallach et al. 2018). Such conservation actions include poison baiting to achieve eradication of invasive predators on islands (Russell et al. 2016) or lethal control of invasive urban birds by bird enthusiasts to minimize competition with native bird species (Larson 0000-0001-9591-1269 et al. 2016). Hence one argument or approach is unlikely to apply to or placate both groups of concerns.

The growth of animal welfare studies, media stories, and advocacy groups over the

past few decades is indicative of a social issue that is maturing (i.e., gaining increasing community acceptance; McGrail et al. 2013). An understanding of social issue maturation is essential to understand how animal welfare has developed as a social license issue over recent years.

#### **Social Maturation of Animal Welfare**

Social maturity is a concept designed to allow industries to predict future challenges. There are 6 core phases to social issue maturation: observation, emergence and theorization, popularization, challenge, governance, and normalization (Hill et al. 2013, McGrail et al. 2013). In early phases, an issue is termed immature and is a niche concern. At this stage, knowledge is still forming and there is a tendency for issues to be highly contested (e.g., among relevant experts). Once the issue has matured, new social expectations and associated norms have become more deeply embedded in society, and there is broad agreement between experts (McGrail et al. 2013). At this stage, an industry not demonstrating alignment with these new social expectations and norms will likely face sanctions (e.g., the example of captive killer whales). For comparison, societal awareness of the importance of biodiversity is a more mature social issue than animal welfare and matured rapidly throughout the 1990s (Hill et al. 2013) to the point where it would be widely considered to be a normalized issue today. Over the past 2 decades, animal welfare has expanded from a fringe movement in the emergence phase to a mainstream societal concern approaching normalization in many post-industrial countries (Byrd et al. 2017).

An instructive example of social issue maturation in the wildlife arena can be seen in the history of opposition to commercial whale harvesting. Bans were imposed on commercial whaling activities by the International Whaling Commission in 1972 on the basis of sustainability and were intended to be temporary (10 yr) to allow time for whale numbers to

replenish to sustainable levels. Animal welfare was an emerging issue in the 1970s (Broom 2011) when biodiversity was a more mature issue (Rothman 1998). Social values matured throughout the period of the ban, with an increasing focus on animal welfare (Harrop 2003), especially for marine mammals (Wenzel 1978). The result was a loss of social license for commercial whaling, with the International Whaling Commission (IWC) deciding to impose a permanent moratorium on commercial whaling in 1982 (to commence from 1986 onwards), largely citing animal welfare concerns (Harrop 2003). Since 1986, only 3 nations (Japan, Iceland, and Norway) have continued to harvest whales (Conrad and Bjørndal 1993, Boffey 2018) despite severe animal welfare criticism from other nations (e.g., Australia; Gales et al. 2008). During 1972–1982, animal welfare matured as a social issue from the emergence phase to governance (Harrop 2003). Since 1982, social awareness of animal welfare has continued to grow towards a situation where it affects governance and is now rapidly approaching normalization.

### Threats to Social License from Animal Welfare

Animal welfare scrutiny has been particularly focused on wildlife use industries that engage lethal methods to harvest mammal species perceived to be charismatic by large sections of society (e.g., marine mammals; Butterworth and Richardson 2013). Such scrutiny has often led to popular advocacy campaigns to ban contentious wildlife use practices (e.g., International Fund for Animal Welfare Canada 2016). In some cases, such advocacy has been successful in eroding public support for otherwise sustainable industries and have convinced legislators to ban practices that have become unpopular. In these instances, community concern for animal welfare has matured to a degree that legislators deemed it necessary to intervene. This is evidence that the longer an industry avoids its critics, whether through secrecy, deception, or simple avoidance (Teh-White 2017), the more mature an issue

becomes in the public eye and the more likely legislators are to act (McGrail et al. 2013).

For continued social license, it is paramount that wildlife use industries pay close attention to shifts in social expectations. Reactive efforts to issues that have already matured are less likely to be successful than are proactive management of emerging issues (McGrail et al. 2013). For industries to identify these issues and develop strategies for meeting societal expectations, they need to engage with all stakeholders with an interest in their operations.

#### **ENGAGING STAKEHOLDERS**

Social issues have come to threaten wildlife use over recent decades and studies into human dimensions of wildlife management have understandably grown correspondingly (Decker et al. 2012). To better understand and manage human dimensions, a recent evolution of wildlife management practices has been to include adoption of community engagement processes whereby stakeholders expect and are provided opportunities for input and involvement in making decisions about public wildlife resources (Decker et al. 2015). Such opportunities include public meetings (Peterson and Messmer 2010) and solicited public surveys (Mawson et al. 2016). Understanding stakeholder concerns and expectations provides organizations with a pathway to guide their practices in a manner that is in keeping with societal values. Effective engagement ultimately allows wildlife managers to resolve many disputes and aids in future management decisions (Urbanek et al. 2015). Engaging a range of stakeholders is thus essential to understand human dimensions for contentious wildlife use practices, which is in turn necessary to maintain social license.

Wildlife use industries need to acknowledge how societal expectations are creating dilemmas that need to be publicly resolved. To anticipate imminent threats to social license, industries should pay close attention to shifting societal values because what was formerly viewed as normal or acceptable practice for an industry can change over time, creating a gap

between these practices and societal expectations (Teh-White 2017). For example, the kangaroo (*Macropus* spp.) industry in Australia recently voluntarily shifted from targeting all adult kangaroos to a male-only harvest (Borda 2016). Despite the fact that female kangaroos have been harvested for decades, this change was made to acknowledge growing public uneasiness with the orphaning or killing via blunt trauma of juvenile kangaroos dependent on shot females (McLeod and Sharp 2014). To build a robust social license, wildlife industries should focus on the gap between societal expectations and current practices, and work to meet stakeholder expectations before societal outrage and pressure grows (McGreevy and McManus 2017). If there is failure to genuinely address the concerns of the highly involved voices in a public debate, industries may unintentionally invite the wider public to join the conversation (Berger 2011). The result can be a vortex effect where attentive audiences and the wider public weigh in on the debate, usually forming opinions that side with the activists (Teh-White 2017). When public outrage reaches a boiling point and an industry is not seen to be effectively engaging with that outrage, the industry is often sanctioned through loss of market access or legislative approval (e.g., Ross 2016).

#### HOW A SOCIAL LICENSE IS LOST

SeaWorld™ is not alone; many established wildlife use industries and even more resource use industries have found themselves on the wrong end of this rapidly evolving social concept in recent years (Berger 2011). An instructive example comes from the recent decline of the harp seal (*Pagophilus groenlandicus*) harvesting industry in Canada.

### **Harp Seal Harvesting**

The harvesting of harp seals in Atlantic Canada is one of the most contentious and oldest wildlife use industries in the world, with ongoing harvesting for >500 years. However, for over 50 years, harvesting practices have been highly contentious, with ongoing animal

welfare concerns (Wenzel 1978, Daoust et al. 2002, Daoust and Caraguel 2012, Daoust et al. 2014) and fierce opposition from animal advocacy groups (Butterworth and Richardson 2013). Highly effective advocacy led to the European Union banning importation of nearly all Canadian seal products (except those harvested by Indigenous Canadians in specific regions) in 2009 (Sellheim 2015). In recent decades, there has been a steep decline in the magnitude of seal harvesting operations despite an increasing trend in the harvest quota allowed by government regulation (Fur Institute of Canada 2014). By 2016, commercial harvesting had virtually ceased, with the industry recognizing that they had lost social license (D. Dakins, Carino Processing, personal communication).

Although some peer-reviewed independent science has been produced related to animal welfare concerns in the industry (Daoust et al. 2002, Daoust and Caraguel 2012), some published work has been partisan and has used data biased by selection of video recordings by advocacy groups opposing the industry (Butterworth and Richardson 2013). However, science was likely overshadowed in public relations by the volume of well-funded marketing material produced by advocacy groups opposed to the harvest (e.g., International Fund for Animal Welfare Canada 2016). In the face of this opposition, a strategy of secrecy was employed by the seal harvesting industry, with few meaningful public discussions, engagement of stakeholders, or transparent demonstration of animal welfare outcomes. As a result, perceptions of poor animal welfare outcomes that were initially the concern of a small group of activists gained traction with the wider public, becoming enduring and being largely uncontested. Erosion of community support internationally led to an almost complete loss of social license, and accompanying loss of market access, for seal harvesting by non-Indigenous Canadians (Actman 2017). This process has also affected the livelihoods of Indigenous Canadian seal harvesters (Hossain 2013) and this issue was the focus of a documentary film (Arnaquq-Baril 2016).

The history of seal harvesting and animal welfare in Canada provides several important observations. Most importantly, it demonstrates that unaddressed animal welfare concerns can lead to loss of social license through lost market access for industries that are otherwise commercially viable, ecologically sustainable, and that support community development and Indigenous livelihoods (Hossain 2013). It also illustrates that policies of secrecy and limited public involvement are ineffective for countering opposition from advocacy groups that may ultimately threaten social license. We suggest that the unfortunate history of Canadian seal harvesting represents an example of how not to address animal welfare concerns for other wildlife use industries.

#### **Lessons for Wildlife Use Industries**

Fortunately, some lessons can be learned from what the Canadian seal harvesting industry and other failed industries have in common. First and foremost, denial of the importance of public opinions is the most likely outlook to doom industries to the dustbin of social license history. However, many industries have followed this path and have taken a recalcitrant approach to the concept of social license generally and animal welfare specifically (Buckingham-Jones 2018). Many commentators have debated the legitimacy of the concept of social license (McKitrick 2016) and its applicability to wildlife management (Kendal and Ford 2017). Others have claimed that engaging stakeholders is pointless. Common arguments supporting this position include claims of irreconcilable differences with opponents (Teh-White 2017), which are commonly expressed with statements such as "ideological opponents will never support its existence" (McKitrick 2016:1). Such conclusions may apply to animal rights groups (Decker et al. 1991), but there is abundant evidence to indicate that many animal welfare groups are willing to work with industries and will often approve activities if they are transparent and demonstrate continual improvement (Hampton et al. 2016*b*, Grandin

2017). Arguments that engagement is futile are likely to be self-defeating for industries facing scrutiny and ignore the numerous real-word examples illustrating how important public support is and how effective community engagement can be in maintaining it.

Second, industries may opt to operate behind a veil of secrecy once they are targeted by activists opposing their practices (Teh-White 2017). Ingraining refusal to allow transparency in policy is highly likely to back-fire for contentious industries (Arnot et al. 2016) because public mistrust is invariably raised by secretive organizations (Blokhuis et al. 2003). Secrecy may have been the most popular approach for contentious industries in the past (Boom et al. 2013), but it has become outdated and leads to public mistrust and may lead to reputational disaster when an industry's practices are exposed (Robbins et al. 2016). With the increasing frequency of hidden camera investigations (Robbins et al. 2016) and militant activism, it is inevitable that any industry attempting to operate in secrecy will eventually be exposed (Teh-White 2017). Even without exposure, industries refusing to allow inspections of their operations or to make public their welfare outcomes often leave themselves unable to counter the worst-case-scenario claims of opponents in a way that is convincing to the public (Boom et al. 2013).

Third, some approaches to communicating with stakeholders have the capacity to erode an industry's social license. Attacking concerned stakeholders is unlikely to win the trust of the public. There has been an unfortunate tendency for wildlife use (and other) industries to characterize all opponents of their practices with a broad and derogatory brush. Combative approaches have been used whereby opponents are demonized as radical, fringe elements, or otherwise untrustworthy. In Australia, reference is often made to greenies, whereas in the United States, similar sentiments would be applied to liberals (James 2015). Short of attacking stakeholders, some industries have adopted 1-way approaches to communication with stakeholders, whereby an animal welfare strategy is formulated without

consultation (Teh-White 2017). This approach to communicating with stakeholders may damage an industry's social license if stakeholders feel as though their expectations and concerns were not considered in the industry's activities (Teh-White 2017). This, in turn, can prompt community backlash and activism, and ultimately affect an industry's ability to operate.

Fourth, industries may recognize that public sentiment has turned against them only once it is too late to engage with stakeholders and seek solutions that may allow operations to continue, even if they require modification, refinement, or improved transparency (Prendergast et al. 2016). At this critical threshold, if industries instead opt to attack their opponents, lie and attempt to deceive the media (Teh-White 2017), or increase their secrecy measures, they are likely to have change forced upon them by markets or regulatory bodies. It is a reputational nightmare when an organization is forced to change its ways and few industries recover public trust from such events (Berger 2011). With so many examples of wildlife use industries that are currently in decline or have ceased operating because of public pressure, we question the wisdom in refuting the existence or validity of the concept of social license.

## INDUSTRIES WITH TENUOUS CURRENT SOCIAL LICENSE

There are several wildlife use industries worldwide that appear to be currently clinging to tenuous social license and could be highly vulnerable to further opposition from animal advocacy groups. We argue that these include recreational hunting (and especially trophy hunting), the fur industry, and commercial kangaroo harvesting, among others.

## **Recreational Hunting**

Worldwide, recreational hunting may face stern tests to its social license in coming years.

Many animal welfare advocacy groups oppose recreational hunting (Royal Society for the

Prevention of Cruelty to Animals [RSPCA] Australia 2017) and the popularity of hunting has been declining for decades in some countries (e.g., USA) because of social forces including urbanization (Larson et al. 2014). Long-term social license may be especially tenuous for trophy hunting (Nelson et al. 2016, Darimont et al. 2017, Wanger et al. 2017). Already, rising opposition to non-consumptive hunting has begun to threaten community approval for all forms of hunting (Darimont 2018). Some opposition to trophy hunting has cited sustainability concerns (Brink et al. 2016), but other authors have argued that hunting and environmentalism are compatible (Knezevic 2009). Much more furor has concerned trophy hunting, animal welfare, and ethics (Nelson et al. 2016, Batavia et al. 2018). The recent level of community outrage has manifested as regulatory bans, for example airlines refusing to transport hunting trophies (Larimer 2015, Steyn 2015, Spivey 2016). The conspicuous recent media coverage surrounding the killing of Cecil the lion is likely to have eroded the social license of trophy hunting (Actman 2016, Macdonald et al. 2016, Nelson et al. 2016). That exposure coupled with a documentary film (Chevalier and Young 2015) may have affected public sentiment similarly to the way in which another film (Cowperthwaite 2013) galvanized opposition to keeping killer whales in captivity (Actman 2016). Trophy hunting is likely to face tightening sanctions and less market access unless the industry can address the animal welfare and ethical concerns of their critics.

Beyond intentional killing of target animals, indirect and unintentional harms associated with hunting are increasingly being recognized. Of high contemporary importance is the effect of spent lead-based bullets on threatened species such as California condors (*Gymnogyps californianus*). The failure of hunting groups to recognize the compelling science behind threats to scavenging animals posed by lead and the failure to voluntarily switch to lead-free based bullets is threatening the sustainability and social license of hunting (Kanstrup et al. 2018). Despite consistent calls from scientists for a voluntary transition to

lead-free bullets for over a decade (Cade 2007), hunting groups have opposed this proposition and have lobbied for reversal of legislation restricting the use of lead-based bullets (Volcovici 2017). Despite the short-term gains achieved by such advocacy, we suggest that the long-term social license of hunting may be threatened by such moves that show little concern for the welfare of unintentionally affected wildlife.

## The North American Fur Industry

The fur industry has long been a target of animal advocacy groups (Gentile 1987), including long-term opposition to seal harvesting (Wenzel 1978). Controversy over animal welfare outcomes has recently focused on coyotes (*Canis latrans*) trapped and harvested to provide fur for designer products such as jackets (Harris 2016). Similar scrutiny has been applied to harvesting of fur from wolverines (*Gulo gulo*; Kukka et al. 2017). Such opposition has already seen loss of social license for trapping of fur bearers via legislative change at a state level in the United States (Vantassel et al. 2010). Opposition to the killing of carnivores for fur is likely to intensify in North America (Darimont 2018) unless effective animal welfare initiatives are developed by fur industries.

### **Commercial Kangaroo Harvesting**

Kangaroo harvesting in Australia also faces determined opposition from animal activists.

Forms of opposition range from documentary movies (McIntyre and McIntyre 2017) to ethical critiques (Ramp 2013) to protesting and vandalism (Smith 2014). Highly effective lobbying arising from this advocacy has seen bans imposed on kangaroo products in California and elsewhere (Johnson et al. 2015). The kangaroo industry in Australia has maintained a culture of secrecy in the face of these threats (Boom et al. 2013). The industry has engaged in very little transparent demonstration of animal welfare outcomes (McLeod and Sharp 2014), has an absence of independent inspection and reporting (Boom et al. 2013), and has little engagement with stakeholders opposed to current practices. This has culminated

in the industry facing potential new bans in other export markets such as China (York and Bale 2017) and Europe (Buckingham-Jones 2018). Given similar themes associated with blunt trauma, killing of juvenile animals, cultures of secrecy, and attacking of urban critics, there is every possibility that the kangaroo industry could go the way of the seal hunt if their approach to animal welfare is not modernized.

The kangaroo industry in Australia shares another similarity with the seal harvest in Canada: inaccurate marketing materials related to the killing of juvenile animals used by opponents. Activist media material has continued to depict newborn harp seals with white fur as victims of harvesting operations up to the present day (People for the Ethical Treatment of Animals 2018) despite their harvesting being made illegal in Canada in 1987 (Daoust et al. 2002). Likewise, images of kangaroo pouch young continue to be presented as victims of commercial harvesting (McIntyre and McIntyre 2017) despite the industry changing to maleonly harvest in the past few years (Ben-Ami et al. 2014, Borda 2016). This deliberate or accidental inaccuracy on the part of opponents emphasizes the need for under-siege industries to provide transparent depictions of their contemporary practices to the community to dispel these misconceptions (Jasper 1993). Relying on secrecy and silence in the face of inaccurate allegations is not likely to win the public's trust or to dispel misunderstandings arising from inaccurate media or marketing materials. It is not enough for an industry to change its practices to improve animal welfare if the community is unaware of the fact. The onus is on under-siege industries to effectively promote their welfare improvements to ensure that the public can make a balanced decision.

#### WHAT IS NEXT FOR WILDLIFE USE INDUSTRIES?

At its inception, the term social license was coined to convey the message that a failure to acknowledge and accommodate the concerns of society constitutes a real threat to an industry's state-sanctioned licenses to operate (Garnett et al. 2018). We contend that many

wildlife use industries have not yet grasped the importance of that message. The nature of the responses of organizations under attack by protestors have often been overlooked but are important determinants of the outcomes of activism campaigns (Jasper and Poulson 1993). Wildlife use industries now have a choice. One option is digging in their heels, ignoring the changing times, and going the way of the seal hunt (Darimont 2018). The other option is to concede that all wildlife management must not only be informed by science but must also be supported by public values (van Eeden et al. 2017). This second option involves having difficult and potentially protracted conversations with the public, including critics, but will pave the way for continued community support. We contend that wildlife use industries can no longer wait for outrage to trigger a reaction; they must adopt a social license mindset to identify and mitigate risks proactively, particularly those relating to animal welfare.

For wildlife use industries, such approaches are not only theoretical, they have been applied in recent high-profile wildlife management operations. For example, the Australian Feral Camel Management Program (AFCMP; 2009–2013) aimed to remove large numbers (hundreds of thousands) of a wild species considered charismatic by large sections of Australian society, the dromedary camel (*Camelus dromedarius*; Hart and Bubb 2016). The AFCMP experienced considerable opposition to the large-scale killing of a large mammal and they made the decision to employ proactive stakeholder engagement (Digby et al. 2016, Kaethner et al. 2016) and transparent and proactive assessment of animal welfare outcomes (Hampton et al. 2016b) to ensure that societal expectations were met. This approach to stakeholder engagement, which was inclusive of Australia's largest animal welfare advocacy group, RSPCA Australia, yielded desirable results for community approval (Digby et al. 2016, Hart and Bubb 2016, Kaethner et al. 2016). Similar approaches have been used for stakeholder engagement (Sharp et al. 2011) and animal welfare assessment (Green et al. 2011, 2013) for management of wild horses in the United States.

## **How to Implement Transparent Animal Welfare Outcome Monitoring**

There is an important difference between industries that say animal welfare is a priority and those that demonstrate it. Public relations materials or procedural documents stating that animal welfare standards are high (Hampton et al. 2016a) may be an appealing option for beleaguered industries (Choquenot et al. 1998). However, modern consumers desire evidence for such claims and increasingly demand transparency in how evidence is produced (Arnot et al. 2016). An ideal monitoring system comprises quantitative reporting of animal welfare outcomes (e.g., adverse events such as mortalities during capture; Hampton et al. 2016b) performed by independent scientists and demonstrating continual improvement (Mellor and Bayvel 2008). A high-profile example of implementing such a system is that of McDonald's<sup>®</sup>.

As an obvious target for animal welfare advocates, McDonald's® Corporation found itself in a position where it could be a role model for social license and animal welfare. The multinational restaurant chain weathered sustained opposition from advocacy groups criticizing McDonald's® for animal welfare and human health and sustainability in the early 2000s. Despite the volume and high profile of these attacks, McDonald's® has not suffered a loss of social license but rather has emerged in recent years as in industry leader in animal welfare, receiving wide acclaim for their progressive policies (Glennen 2017, Vitasek 2017). McDonald's® identified there was a widening gap between its animal welfare practices and societal expectation. To address this gap, they were able to maintain social license through their willingness to listen to opponents and stakeholders, develop transparent monitoring systems, and introduce industry-leading animal welfare practices. This was achieved through working with independent scientists (Grandin 2000, 2005, 2006, 2017), rather than relying on in-house advice (i.e., the endorsement of experts salaried by the industry in question).

McDonald's® did not opt for a policy of secrecy, they did not attack their critics, and the

animal welfare policies they put in place were not merely superficial public relations exercises. In fact, the animal welfare assurance schemes introduced by McDonald's<sup>®</sup> involve transparent regular auditing, with their outcomes being published in peer-reviewed journals (Grandin 2000). This progressive and proactive approach has starved their critics of oxygen and is a demonstration of how to maintain social license. Wildlife use activities must similarly convince the wider community that animal welfare is a priority.

We do not intend to be unrealistic and claim that initiating stakeholder engagement and welfare monitoring processes is always painless for industries. There will invariably be an economic cost to these initiatives and industries may be forced to change or abandon some of their activities (e.g., shooting of female kangaroos; Borda 2016) if most stakeholders consistently oppose them. For industries producing products (e.g., fur), this approach may necessitate more expensive products (van Riemsdijk et al. 2017). However, consumers have demonstrated a willingness to pay for improved welfare (e.g., free-range eggs; Baltzer 2004, Michaelidou and Hassan 2010). Any costs incurred in improving animal welfare must be compared to the very real possibility that the alternative for many contentious activities may be no industry at all.

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### LITERATURE CITED

Actman, J. 2016. Cecil the lion died one year ago—here's what's happened since. National Geographic. 30 June 2016. < https://news.nationalgeographic.com/2016/06/cecil-african-lion-anniversary-death-trophy-hunting-zimbabwe/>. Accessed 1 May 2018.

Actman, J. 2017. Demand for seal products has fallen—so why do Canadians keep hunting?

National Geographic. 5 April 2017.

- <a href="http://www.nationalgeographic.com.au/animals/demand-for-seal-products-has-fallenso-why-do-canadians-keep-hunting.aspx">http://www.nationalgeographic.com.au/animals/demand-for-seal-products-has-fallenso-why-do-canadians-keep-hunting.aspx</a> Accessed 11 Apr 2018.
- Anderson, R., R. Waayers, and A. Knight. 2016. Orca behavior and subsequent aggression associated with oceanarium confinement. Animals 6:49.
- Arnaquq-Baril, A. 2016. Angry Inuk. National Film Board of Canada, Montreal, Quebec, Canada.
- Arnot, C., Y. Vizzier-Thaxton, and C. G. Scanes. 2016. Values, trust and science–building trust in today's food system in an era of radical transparency. Poultry Science:pew168.
- Baltzer, K. 2004. Consumers' willingness to pay for food quality—the case of eggs. Food Economics-Acta Agriculturae Scandinavica, Section C 1:78–90.
- Batavia, C., M. P. Nelson, C. Darimont, P. C. Paquet, W. J. Ripple, and A. D. Wallach. 2018.

  The elephant (head) in the room: a critical look at trophy hunting. Conservation

  Letters 11:in press.
- Ben-Ami, D., K. Boom, L. Boronyak, C. Townend, D. Ramp, D. Croft, and M. Bekoff. 2014.

  The welfare ethics of the commercial killing of free-ranging kangaroos: an evaluation of the benefits and costs of the industry. Animal Welfare 23:1–10.
- Berger, C. 2011. Losing a social licence can hurt. Sydney Morning Herald. 18 July 2011. <a href="https://www.smh.com.au/business/losing-a-social-licence-can-hurt-20110717-1hk11.html">https://www.smh.com.au/business/losing-a-social-licence-can-hurt-20110717-1hk11.html</a>. Accessed 20 Mar 2018.
- Blokhuis, H. J., R. B. Jones, R. Geers, M. Miele, and I. Veissier. 2003. Measuring and monitoring animal welfare: transparency in the food product quality chain. Animal Welfare 12:445–456.
- Boffey, D. 2018. Iceland sets target of 191 kills as country resumes whaling. The Guardian.

  18 April 2018. <a href="https://amp.theguardian.com/environment/2018/apr/18/iceland-sets-target-of-191-kills-as-country-resumes-whaling">https://amp.theguardian.com/environment/2018/apr/18/iceland-sets-target-of-191-kills-as-country-resumes-whaling</a>. Accessed 2 May 2018.

- Boom, K., D. Ben-Ami, L. Boronyak, and S. Riley. 2013. The role of inspections in the commercial kangaroo industry. International Journal of Rural Law and Policy 2:1–19.
- Borda, R. 2016. Why a male only harvest of kangaroos? Conservation Through Sustainable
  Use of Wildlife Conference. The University of Queensland, 30 August–1 September
  2016, Brisbane, Queensland, Australia.
- Braunsberger, K., and B. Buckler. 2011. What motivates consumers to participate in boycotts: lessons from the ongoing Canadian seafood boycott. Journal of Business Research 64:96–102.
- Brink, H., R. J. Smith, K. Skinner, and N. Leader-Williams. 2016. Sustainability and long term-tenure: lion trophy hunting in Tanzania. PloS One 11:e0162610.
- Broom, D. M. 2011. A history of animal welfare science. Acta Biotheoretica 59:121–137.
- Buckingham-Jones, S. 2018. David Littleproud says Greens push to end kangaroo trade is treason. The Australian. 9 March 2018. <a href="https://www.theaustralian.com.au/national-affairs/foreign-affairs/david-littleproud-says-greens-push-to-end-kangaroo-trade-is-treason/news-story/f911a8141ba68e5e744c983cef970246">https://www.theaustralian.com.au/national-affairs/foreign-affairs/david-littleproud-says-greens-push-to-end-kangaroo-trade-is-treason/news-story/f911a8141ba68e5e744c983cef970246</a>. Accessed 25 Jul 2018.
- Butterworth, A., and M. Richardson. 2013. A review of animal welfare implications of the Canadian commercial seal hunt. Marine Policy 38:457–469.
- Byrd, E., N. O. Widmar, and J. Fulton. 2017. Of fur, feather, and fin: human's use and concern for non-human species. Animals 7:22.
- Cade, T. J. 2007. Exposure of California condors to lead from spent ammunition. Journal of Wildlife Management 71:2125–2133.
- Choquenot, D., J. Caughley, and S. McLeod. 1998. Scientific, economic and social issues of commercial use of wild animals in Australia. Bureau of Resource Sciences, Canberra, Australian Capital Territory, Australia.

- Conrad, J., and T. Bjørndal. 1993. On the resumption of commercial whaling: the case of the minke whale in the northeast Atlantic. Arctic 46:164–171.
- Cowperthwaite, G. 2013. Blackfish. CNN International, Atlanta, Georgia, USA.
- Crozier, G. 2018. Revisiting the social license of zoos and aquariums in light of evolving social norms. Rotman Institute of Philosophy, London, Ontario, Canada.
- Daoust, P., and C. Caraguel. 2012. The Canadian harp seal hunt: observations on the effectiveness of procedures to avoid poor animal welfare outcomes. Animal Welfare 21:445–455.
- Daoust, P.-Y., A. Crook, T. K. Bollinger, K. G. Campbell, and J. Wong. 2002. Animal welfare and the harp seal hunt in Atlantic Canada. Canadian Veterinary Journal 43:687–694.
- Daoust, P.-Y., M. Hammill, G. Stenson, and C. Caraguel. 2014. A review of animal welfare implications of the Canadian commercial seal hunt: A critique. Marine Policy 43:367–371.
- Dare, M., J. Schirmer, and F. Vanclay. 2014. Community engagement and social licence to operate. Impact Assessment and Project Appraisal 32:188–197.
- Darimont, C. 2018. Hunters: to protect our social licence, we have to stop killing animals we don't eat. The Globe and Mail. 23 January 2018.

  <a href="https://www.theglobeandmail.com/opinion/hunters-to-protect-our-social-licence-we-have-to-stop-killing-animals-we-dont-eat/article37701186/">https://www.theglobeandmail.com/opinion/hunters-to-protect-our-social-licence-we-have-to-stop-killing-animals-we-dont-eat/article37701186/</a>. Accessed 15 Apr 2018.
- Darimont, C. T., B. F. Codding, and K. Hawkes. 2017. Why men trophy hunt. Biology Letters 13:20160909.
- Decker, D. J., A. B. Forstchen, E. F. Pomeranz, C. A. Smith, S. J. Riley, C. A. Jacobson, J. F. Organ, and G. R. Batcheller. 2015. Stakeholder engagement in wildlife management:

- does the public trust doctrine imply limits? Journal of Wildlife Management 79:174–179.
- Decker, D. J., J. F. Organ, A. B. Forstchen, C. A. Jacobson, W. F. Siemer, C. A. Smith, P. E. Lederle, and M. V. Schiavone. 2017. Wildlife governance in the 21st century–will sustainable use endure? Wildlife Society Bulletin 41:821–826.
- Decker, D. J., S. J. Riley, and W. F. Siemer, editors. 2012. Human dimensions of wildlife management. John Hopkins University Press, Baltimore, Maryland, USA.
- Decker, D. J., R. E. Shanks, L. A. Nielsen, and G. R. Parsons. 1991. Ethical and scientific judgements in management: Beware of blurred distinctions. Wildlife Society Bulletin 19:523–527.
- Digby, D., L. Bird, L. Severin, P. O'Leary, M. Jensen, R. Mills, and G. Edwards. 2016.

  Engaging the pastoral industry in the Australian Feral Camel Management Project

  (AFCMP). Rangeland Journal 38:135–142.
- Dubois, S., N. Fenwick, E. A. Ryan, L. Baker, S. E. Baker, N. J. Beausoleil, S. Carter, B. Cartwright, F. Costa, and C. Draper. 2017. International consensus principles for ethical wildlife control. Conservation Biology 31:753–760.
- Edwards, P., and S. Trafford. 2016. Social licence in New Zealand—what is it? Journal of the Royal Society of New Zealand 46:165–180.
- Fleming, P. A., T. Clarke, S. L. Wickham, C. A. Stockman, A. L. Barnes, T. Collins, and D. W. Miller. 2016. The contribution of qualitative behavioural assessment to appraisal of livestock welfare. Animal Production Science 56:1569–1578.
- Fur Institute of Canada. 2014. The state of sealing. Fur Institute of Canada, Ottawa, Ontario, Canada.
- Gales, N., R. Leaper, and V. Papastavrou. 2008. Is Japan's whaling humane? Marine Policy 32:408–412.

- Garnett, S. T., M. J. Lawes, R. James, K. Bigland, and K. K. Zander. 2016. Portrayal of sustainability principles in the mission statements and on home pages of the world's largest organizations. Conservation Biology 30:297–307.
- Garnett, S. T., K. K. Zander, and C. J. Robinson. 2018. Social license as an emergent property of political interactions: response to Kendal and Ford 2017. Conservation Biology 32:734–736.
- Gentile, J. R. 1987. The evolution of antitrapping sentiment in the United States: a review and commentary. Wildlife Society Bulletin 15:490–503.
- George, K. A., K. M. Slagle, R. S. Wilson, S. J. Moeller, and J. T. Bruskotter. 2016. Changes in attitudes toward animals in the United States from 1978 to 2014. Biological Conservation 201:237–242.
- Glennen, C. 2017. The rise of McDonald's: from super sized criticism to progressive burger company. World Finance. 28 June 2017.

  <a href="https://www.worldfinance.com/markets/the-rise-of-mcdonalds-from-super-sized-criticism-to-progressive-burger-company">https://www.worldfinance.com/markets/the-rise-of-mcdonalds-from-super-sized-criticism-to-progressive-burger-company</a>. Accessed 28 Mar 2018.
- Grandin, T. 2000. Effect of animal welfare audits of slaughter plants by a major fast food company on cattle handling and stunning practices. Journal of the American Veterinary Medical Association 216:848–851.
- Grandin, T. 2005. Maintenance of good animal welfare standards in beef slaughter plants by use of auditing programs. Journal of the American Veterinary Medical Association 226:370–373.
- Grandin, T. 2006. Progress and challenges in animal handling and slaughter in the US.

  Applied Animal Behaviour Science 100:129–139.

- Grandin, T. 2017. How to work with large meat buyers to improve animal welfare. Pages 569–579 *in* P. P. Purslow, editor. New aspects of meat quality: from genes to ethics. Elsevier, New York, New York, USA.
- Greene, E., C. Heleski, S. Ralston, and C. Stull. 2011. Academic assessment of equine welfare during the gather process of the Bureau of Land Management's wild horse and burro program. Journal of Equine Veterinary Science 31:352–353.
- Greene, E., C. Heleski, S. Ralston, and C. Stull. 2013. Independent Observer Pilot Program: an objective evaluation method for determining humane handling and welfare during wild horse gathers. Journal of Veterinary Behavior: Clinical Applications and Research 8:e7.
- Hall, N., J. Lacey, S. Carr-Cornish, and A.-M. Dowd. 2015. Social licence to operate: understanding how a concept has been translated into practice in energy industries. Journal of Cleaner Production 86:301–310.
- Hampton, J. O., T. H. Hyndman, M. Laurence, A. L. Perry, P. Adams, and T. Collins. 2016a.

  Animal welfare and the use of procedural documents: limitations and refinement.

  Wildlife Research 43:599–603.
- Hampton, J. O., B. Jones, A. L. Perry, C. J. Miller, and Q. Hart. 2016b. Integrating animal welfare into wild herbivore management: lessons from the Australian Feral Camel Management Project. Rangeland Journal 38:163–171.
- Harris, S. 2016. Canada Goose faces wrath of animal rights activists as it opens more stores. CBC News. 17 November 2016. <a href="http://www.cbc.ca/news/business/canada-goose-peta-anti-fur-animal-rights-1.3850411">http://www.cbc.ca/news/business/canada-goose-peta-anti-fur-animal-rights-1.3850411</a>. Accessed 21 Mar 2018.
- Harrop, S. R. 2003. From cartel to conservation and on to compassion: animal welfare and the International Whaling Commission. Journal of International Wildlife Law and Policy 6:79–104.

- Hart, Q., and A. Bubb. 2016. Effective collaboration and governance processes to underpin large-scale natural resource management projects: the Australian Feral Camel Management Project experience. Rangeland Journal 38:117–123.
- Hickman, D. 2015. Blackfish: proof that documentary can be a powerful force for change.

  The Conversation. 12 December 2015. < https://theconversation.com/blackfish-proof-that-documentary-can-be-a-powerful-force-for-change-50494>. Accessed 2 Apr 2018.
- Hill, R., E. Halamish, I. J. Gordon, and M. Clark. 2013. The maturation of biodiversity as a global social–ecological issue and implications for future biodiversity science and policy. Futures 46:41–49.
- Hossain, K. 2013. The EU ban on the import of seal products and the WTO regulations: neglected human rights of the Arctic indigenous peoples? Polar Record 49:154–166.
- International Fund for Animal Welfare Canada. 2016. Canada's commercial seal hunt: past, present, and future. International Fund for Animal Welfare Canada, Ottowa, Ontario, Canada. <a href="https://s3.amazonaws.com/ifaw-pantheon/sites/default/files/legacy/IFAW-2016-Canada's-Commercial-Seal-Hunt-Past-Present-Future-0.pdf">https://s3.amazonaws.com/ifaw-pantheon/sites/default/files/legacy/IFAW-2016-Canada's-Commercial-Seal-Hunt-Past-Present-Future-0.pdf</a>. Accessed 24 Jul 2018.
- James, B. C. 2015. Poaching America's traditions: when animal extremists attack. Fox News. 5 May 2015. <a href="http://www.foxnews.com/opinion/2015/05/05/poaching-americas-traditions-when-animal-extremists-attack0.html">http://www.foxnews.com/opinion/2015/05/05/poaching-americas-traditions-when-animal-extremists-attack0.html</a>. Accessed 10 Apr 2018.
- Jasper, J. M., and J. Poulsen. 1993. Fighting back: vulnerabilities, blunders, and countermobilization by the targets in three animal rights campaigns. Sociological Forum 8:639–657.
- Johnson, C., J. Woinarski, and R. Cooney. 2015. Bans on kangaroo products are a case of emotion trumping science. The Conversation. 5 October 2015. <

- https://theconversation.com/bans-on-kangaroo-products-are-a-case-of-emotion-trumping-science-47924>. Accessed 26 Mar 2018.
- Kaethner, B., P. See, and A. Pennington. 2016. Talking camels: a consultation strategy for consent to conduct feral camel management on Aboriginal-owned land in Australia. Rangeland Journal 38:125–133.
- Kanstrup, N., J. Swift, D. A. Stroud, and M. Lewis. 2018. Hunting with lead ammunition is not sustainable. Ambio 47:in press.
- Kendal, D., and R. M. Ford. 2017. The role of social license in conservation. Conservation Biology 32:493–495.
- Knezevic, I., 2009. Hunting and environmentalism: conflict or misperceptions. Human Dimensions of Wildlife 14:12–20.
- Kukka, P. M., T. S. Jung, J.-F. Robitaille, and F. K. Schmiegelow. 2017. Temporal variation in the population characteristics of harvested wolverine (*Gulo gulo*) in northwestern Canada. Wildlife Research 44:497–503.
- Lacey, J., R. Parsons, and K. Moffat. 2012. Exploring the concept of a social licence to operate in the Australian minerals industry: results from interviews with industry representatives. CSIRO, Brisbane, Queensland, Australia.
- Larimer, S. 2015. While airlines ban hunting trophy shipments, UPS says it won't bow to controversy. Washington Post. 4 August 2015.

  <a href="https://www.washingtonpost.com/news/morning-mix/wp/2015/08/03/delta-air-lines-bans-freight-shipments-of-lion-hunting-trophies/?utm\_term=.2bef5bb6e6c8">https://www.washingtonpost.com/news/morning-mix/wp/2015/08/03/delta-air-lines-bans-freight-shipments-of-lion-hunting-trophies/?utm\_term=.2bef5bb6e6c8</a>.

  Accessed 22 Mar 2018.
- Larson, L. R., C. B. Cooper, and M. E. Hauber. 2016. Emotions as drivers of wildlife stewardship behavior: examining citizen science nest monitors' responses to invasive house sparrows. Human Dimensions of Wildlife 21:18–33.

- Larson, L. R., R. C. Stedman, D. J. Decker, W. F. Siemer, and M. S. Baumer. 2014.

  Exploring the social habitat for hunting: toward a comprehensive framework for understanding hunter recruitment and retention. Human Dimensions of Wildlife 19:105–122.
- Lester, L. 2016. Media and social licence: on being publicly useful in the Tasmanian forests conflict. Forestry: An International Journal of Forest Research 89:542–551.
- Lunney, D. 2012a. Wildlife management and the debate on the ethics of animal use. I. Decisions within a State wildlife agency. Pacific Conservation Biology 18:5–21.
- Lunney, D. 2012b. Wildlife management and the debate on the ethics of animal use. II. A challenge for the animal protection movement. Pacific Conservation Biology 18:81–99.
- Macdonald, D. W., K. S. Jacobsen, D. Burnham, P. J. Johnson, and A. J. Loveridge. 2016.

  Cecil: a moment or a movement? Analysis of media coverage of the death of a lion,

  Panthera leo. Animals 6:26.
- Mawson, P. R., J. O. Hampton, and B. Dooley. 2016. Subsidized commercial harvesting for cost-effective wildlife management in urban areas: a case study with kangaroo sharpshooting. Wildlife Society Bulletin 40:251–260.
- McGrail, S., E. Halamish, K. Teh-White, and M. Clark. 2013. Diagnosing and anticipating social issue maturation: introducing a new diagnostic framework. Futures 46:50–61.
- McGreevy, P., and P. McManus. 2017. Why horse-racing in Australia needs a social licence to operate. The Conversation. 3 November 2017. <a href="https://theconversation.com/why-horse-racing-in-australia-needs-a-social-licence-to-operate-79492">https://theconversation.com/why-horse-racing-in-australia-needs-a-social-licence-to-operate-79492</a>. Accessed 30 Apr 2018.
- McIntyre, K. C., and M. McIntyre. 2017. Kangaroo: a love-hate story. Hopping Pictures, Sydney, New South Wales, Australia.

- McKitrick, R. 2016. Let's stop pretending 'social licence' is an actual thing. Financial Post. 20 April 2016. <a href="http://business.financialpost.com/opinion/ross-mckitrick-lets-stop-pretending-social-licence-is-an-actual-thing">http://business.financialpost.com/opinion/ross-mckitrick-lets-stop-pretending-social-licence-is-an-actual-thing</a>. Accessed 19 Mar 2018.
- McLeod, S. R., and T. M. Sharp. 2014. Improving the humaneness of commercial kangaroo harvesting. Rural Industries Research and Development Corporation, Canberra,

  Australian Capital Territory, Australia.
- McMahon, C. R., M. A. Hindell, and R. G. Harcourt. 2012. Publish or perish: why it's important to publicise how, and if, research activities affect animals. Wildlife Research 39:375–377.
- Mellor, D. J., and A. C. D. Bayvel. 2008. New Zealand's inclusive science-based system for setting animal welfare standards. Applied Animal Behaviour Science 113:313–329.
- Michaelidou, N., and L. M. Hassan. 2010. Modeling the factors affecting rural consumers' purchase of organic and free-range produce: a case study of consumers' from the Island of Arran in Scotland, UK. Food Policy 35:130–139.
- Muth, R. M., and W. V. Jamison. 2000. On the destiny of deer camps and duck blinds: the rise of the animal rights movement and the future of wildlife conservation. Wildlife Society Bulletin 28:841–851.
- Nelsen, J. L. 2006. Social license to operate. International Journal of Mining, Reclamation and Environment 20:161–162.
- Nelson, M. P., J. T. Bruskotter, J. A. Vucetich, and G. Chapron. 2016. Emotions and the ethics of consequence in conservation decisions: lessons from Cecil the Lion.

  Conservation Letters 9:302–306.
- Oakes, L. E., P. E. Hennon, N. M. Ardoin, D. V. D'Amore, A. J. Ferguson, E. A. Steel, D. T. Wittwer, and E. F. Lambin. 2015. Conservation in a social-ecological system experiencing climate-induced tree mortality. Biological Conservation 192:276–285.

- Paquet, P., and C. Darimont. 2010. Wildlife conservation and animal welfare: two sides of the same coin. Animal Welfare 19:177–190.
- People for the Ethical Treatment of Animals. 2018. 'Save the seals' celebrity ad series.

  <a href="https://www.peta.org/features/save-seals-celebrity-ad-series/">https://www.peta.org/features/save-seals-celebrity-ad-series/</a>. Accessed 27 Apr 2018.
- Peterson, C. C., and T. A. Messmer. 2010. Can public meetings accurately reflect public attitudes toward wildlife management? Journal of Wildlife Management 74:1588–1594.
- Prendergast, J., B. Varischetti, and B. Fitzgerald. 2016. Elders' exit from live export may be about social image, industry analyst says. ABC News. 12 September 2016. <a href="http://www.abc.net.au/news/rural/2016-09-12/elders-exit-may-be-about-social-licence/7836834">http://www.abc.net.au/news/rural/2016-09-12/elders-exit-may-be-about-social-licence/7836834</a>. Accessed 1 May 2018.
- Quigley, R., and J. Baines. 2014. How to improve your social licence to operate: a New Zealand Industry Perspective. Ministry for Primary Industries, Wellington, New Zealand.
- Ramp, D. 2013. Bringing compassion to the ethical dilemma in killing kangaroos for conservation. Journal of Bioethical Inquiry 10:267–272.
- Regan, T. 1983. The case for animal rights. University of California Press, Berkeley, California, USA.
- Robbins, J., B. Franks, D. Weary, and M. Von Keyserlingk. 2016. Awareness of ag-gag laws erodes trust in farmers and increases support for animal welfare regulations. Food Policy 61:121–125.
- Ross, M. 2016. SeaWorld shuts down killer whale shows, bowing to criticism. Bloomberg. 17 March 2016. <a href="https://www.bloomberg.com/news/articles/2016-03-17/seaworld-shuts-down-killer-whale-shows-in-wake-of-blackfish">https://www.bloomberg.com/news/articles/2016-03-17/seaworld-shuts-down-killer-whale-shows-in-wake-of-blackfish</a>. Accessed 10 Apr 2018.

- Rothman, H. 1998. The greening of a nation? Environmentalism in the United States since 1945. Wadsworth Publishing Company, Belmont, California, USA.
- Royal Society for the Prevention of Cruelty to Animals [RSPCA] Australia. 2017.

  Recreational hunting and animal welfare: an RSPCA Australia information paper.

  RSPCA Australia, Canberra, Australia.
- Russell, J. C., H. P. Jones, D. P. Armstrong, F. Courchamp, P. J. Kappes, P. J. Seddon, S. Oppel, M. J. Rauzon, P. E. Cowan, and G. Rocamora. 2016. Importance of lethal control of invasive predators for island conservation. Conservation Biology 30:670–672.
- Sellheim, N. 2015. The goals of the EU seal products trade regulation: from effectiveness to consequence. Polar Record 51:274–289.
- Sharp, R. L., L. R. Larson, and G. T. Green. 2011. Factors influencing public preferences for invasive alien species management. Biological Conservation 144:2097–2104.
- Sissler-Bienvenu, C. 2015. France closes its borders to import of lion trophies. International Fund for Animal Welfare. 20 November 2015.

  <a href="https://www.ifaw.org/africa/news/france-closes-its-borders-import-lion-trophies">https://www.ifaw.org/africa/news/france-closes-its-borders-import-lion-trophies</a>.

  Accessed 2 May 2018.
- Spivey, P. 2016. Conservation force et al. v. Delta Air Lines: the legality of an airline ban on big game hunting trophies. DePaul Journal of Sports Law & Contemporary Problems 12:108–133.
- Smith, C. 2014. Vandals target Parks and Conservation depot 'in kangaroo cull protest'. ABC News. 17 June 2014. <a href="http://www.abc.net.au/news/2014-06-17/vandals-target-tams-depot-to-protest-annual-roo-cull/5529574">http://www.abc.net.au/news/2014-06-17/vandals-target-tams-depot-to-protest-annual-roo-cull/5529574</a>. Accessed 14 Apr 2018.
- Teh-White, K. 2017. Greyhounds increase social licence risk. International Animal Health Journal 4:26–29.

- The Canadian Press. 2016. Pamela Anderson asks Prime Minister to end federal subsidies for seal hunt. CBC News. 1 March 2016. <a href="http://www.cbc.ca/news/canada/north/pamela-anderson-trudeau-seal-hunt-1.3471387">http://www.cbc.ca/news/canada/north/pamela-anderson-trudeau-seal-hunt-1.3471387</a>>. Accessed 23 Mar 2018.
- Urbanek, R. E., C. K. Nielsen, M. A. Davenport, and B. D. Woodson. 2015. Perceived and desired outcomes of suburban deer management methods. Journal of Wildlife Management 79:647–661.
- van Eeden, L. M., C. R. Dickman, E. G. Ritchie, and T. M. Newsome. 2017. Shifting public values and what they mean for increasing democracy in wildlife management decisions. Biodiversity and Conservation 26:2759–2763.
- van Riemsdijk, L., P. Ingenbleek, H. van Trijp, and G. van der Veen. 2017. Marketing animal-friendly products: addressing the consumer social dilemma with reinforcement positioning strategies. Animals 7:98.
- Vantassel, S. M., T. L. Hiller, K. D. Powell, and S. E. Hygnstrom. 2010. Using advancements in cable-trapping to overcome barriers to furbearer management in the United States.

  Journal of Wildlife Management 74:934–939.
- Vitasek, K. 2017. McDonald's secret sauce for improving animal welfare. Forbes. 26

  November 2017. <a href="https://www.forbes.com/sites/katevitasek/2017/11/26/mcdonalds-secret-sauce-for-improving-animal-welfare/#4de733607d05">https://www.forbes.com/sites/katevitasek/2017/11/26/mcdonalds-secret-sauce-for-improving-animal-welfare/#4de733607d05</a>. Accessed 29 Mar 2018.
- Volcovici, V. 2017. New Interior head lifts lead ammunition ban in nod to hunters. Reuters. 2

  March 2017. <a href="https://www.reuters.com/article/us-usa-interior-zinke/new-interior-head-lifts-lead-ammunition-ban-in-nod-to-hunters-idUSKBN16930Z">https://www.reuters.com/article/us-usa-interior-zinke/new-interior-head-lifts-lead-ammunition-ban-in-nod-to-hunters-idUSKBN16930Z</a>. Accessed 26

  Mar 2018.
- Wallach, A. D., M. Bekoff, C. Batavia, M. P. Nelson, and D. Ramp. 2018. Summoning compassion to address the challenges of conservation. Conservation Biology 32:in press.

- Wanger, T. C., L. W. Traill, R.Cooney, J. R. Rhodes, and T. Tscharntke. 2017. Trophy hunting certification. Nature Ecology & Evolution 1:1791–1793.
- Warburton, B., and B. Norton. 2009. Towards a knowledge-based ethic for lethal control of nuisance wildlife. Journal of Wildlife Management 73:158–164.
- Wenzel, G. 1978. The harp-seal controversy and the Inuit economy. Arctic 31:2–6.
- Whisson, D. A., G. J. Holland, and K. Carlyon. 2012. Translocation of overabundant species: implications for translocated individuals. Journal of Wildlife Management 76:1661–1669.
- White, J. B. 2018. Florida moves to ban captive orca shows and breeding. The Independent. 9

  October 2018. <a href="https://www.independent.co.uk/news/world/americas/florida-orca-ban-breeding-captivity-seaworld-a8156456.html">https://www.independent.co.uk/news/world/americas/florida-orca-ban-breeding-captivity-seaworld-a8156456.html</a>>. 20 Apr 2018.
- Widmar, N. J. O., C. J. Morgan, and C. C. Croney. 2018. Perceptions of social responsibility of prominent animal welfare groups. Journal of Applied Animal Welfare Science 21:27–39.
- York, C., and R. Bale. 2017. Australians hunt kangaroos commercially. Does it make sense?

  National Geographic. 22 November 2017.

  <a href="https://www.nationalgeographic.co.uk/animals/2017/11/australians-hunt-kangaroos-commercially-does-it-make-sense">https://www.nationalgeographic.co.uk/animals/2017/11/australians-hunt-kangaroos-commercially-does-it-make-sense</a>. Accessed 28 Mar 2018.

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Article summary: The concept of social license to operate is proposed as a useful approach to management of contemporary animal welfare issues for wildlife industries. When poorly addressed, animal welfare concerns can decimate public support for wildlife use activities and we examine why some industries have lost or retained social license in this context.

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Hampton, JO; Teh-White,	Κ

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