Routledge
Taylor & Francis Group

Journal of Environmental Planning and Management

ISSN: 0964-0568 (Print) 1360-0559 (Online) Journal homepage: www.tandfonline.com/journals/cjep20

Investigating how relational values influence landowner participation in an endangered species conservation program

Jared A. Messick & Christopher Serenari

To cite this article: Jared A. Messick & Christopher Serenari (2025) Investigating how relational values influence landowner participation in an endangered species conservation program, Journal of Environmental Planning and Management, 68:6, 1263-1281, DOI: 10.1080/09640568.2023.2285728

To link to this article: https://doi.org/10.1080/09640568.2023.2285728

Journal of Environmental Planning and Management, 2025
Vol. 68, No. 6, 1263–1281, https://doi.org/10.1080/09640568.2023.2285728

Investigating how relational values influence landowner participation in an endangered species conservation program

Jared A. Messick* and Christopher Serenari

Department of Biology, Texas State University, San Marcos, TX, USA

(*Received 17 November 2022; final version received 14 November 2023*)

Research investigating landowner engagement in endangered species conservation (ESC) frequently cites value conflicts between landowners and ESC institutions, such as Voluntary Incentive Programs (VIPs), as driving landowner disinterest in VIPs. Existing ESC policy design mechanisms are incapable of resolving deficient engagement as they incorporate landowner values into decision-making without consideration of the meanings landowners attach to relationships with their land (i.e. Relational Values [RVs]). To identify RVs motivating ESC and points of alignment between landowner values and VIPs, we conducted 24 interviews with landowners about a VIP in East-central Texas. Results revealed that the program aligned with stewardship and management values but interfered with RVs of autonomy and social responsibility. Moreover, VIPs failed to provide incentives to compensate such losses. Bridging the rift between hegemonically designed VIPs and the values motivating ESC requires grassroots efforts to identify and incorporate landowner values into incentive structures that enhance and enable RVs motivating ESC.

Keywords: relational values; endangered species; human-nature relationships; incentive program; landowners

1. Introduction

Researchers argue that if key segments of society are to accept economic and socio-cultural costs in the name of environmental conservation, then the institutional values framing policies (i.e. values articulated through the rules, goals, and requirements of policies and programs; Vatn 2005) must align with a range of individual and collective values (see Chapman, Satterfield, and Chan 2019). Hence, meeting the challenge of a natural world in peril will require that environmental policymakers fully consider the polis and its plurality of environmental values (Díaz *et al.* 2015). However, policy development is historically predicated on intrinsic value ("inherent moral value [of] entities") independent of human wants and needs; Himes and Muraca 2018, 3) or instrumental (externally substitutable values assigned to processes, objects, or behaviors) environmental values (Chan *et al.* 2016; Himes and Muraca 2018). This dichotomy is exemplified by policies that provide instrumental value to buy behavior change or use regulatory statutes to protect nature's intrinsic value (Allen *et al.* 2018). The mass appeal of false dichotomies overlooks, however, the notion that humans are not merely abstract observers or commodifiers of nature.

*Corresponding author. Email: jam929@txstate.edu

Human existence is embedded within complex relationships with nature, and we construct value around these relationships by assigning meanings to our interactions with non-human and human components of our surroundings (Arias-Arévalo, Martín-López, and Gómez-Baggethun 2017). The subjective meanings and values attached to relational processes with nature and humans about nature are increasingly conceptualized as relational values (RVs; Chan, Gould, and Pascual 2018). In policy design processes, though, RVs are often overlooked in favor of doubling down on false dichotomies that yield inequitable, "one-size fits all" (i.e. homogenizing) environmental policies (Allen *et al.* 2018; Thomas and Thigpen 1996) and subject society to the costs of implementation without compensation because the value of the costs incurred are non-monetary (e.g. interference with landowner identity and autonomy—cultural ecosystem services tied to relationships with the land; see Kreye, Adams, and Ober 2018).

In recent years, scholars have sought to break up and rethink the dominant instrumental-intrinsic value dichotomy to make room for RVs and encourage more equitable environmental policy design (Himes and Muraca 2018). However, while in-roads have been made into incorporating RVs into studies of stakeholder engagement with environmental policy (via cultural ecosystem services, Fish *et al.* 2016), few studies have assessed the utility of RVs in investigations of landowner compliance with endangered species conservation (ESC) initiatives (see Chapman, Satterfield, and Chan 2019 and Kreye, Adams, and Ober 2018 for noteworthy exceptions). We address this need by exploring the utility of RVs to help troubleshoot value misalignment between landowners and voluntary incentive programs (VIPs). We ask: a) What values drive landowner participation in ESC? and b) How do ESC-motivating values interact with characteristics of VIPs (specifically, a Safe Harbor Agreement [SHA] for the critically endangered Houston toad [*Anaxyrus houstonensis*])?

2. Relational values

Relational values (RVs) pertain to nature's non-substitutable contributions to human well-being and are defined as a subject's (i.e. individual's, people's, culture's) subjective preferences, principles, and virtues about human-nature and human-human relationships (Chan *et al.* 2016; Himes and Muraca 2018). These relationally derived meanings define "appropriate" (i.e. legitimate) relationships with nature. Thus, RVs can serve as a framework to assess individual and socio-cultural expectations about how humans should interact with nature and others.

When considered in the context of environmental policy, RVs can be used to explain non-cooperation by stakeholders (Allen *et al.* 2018). Relational value alignment between stakeholders and environmental policy is of particular importance in areas dominated by privately owned land. In the United States, for example, an average of 74% of each state is held in private ownership (Morgan *et al.* 2019) and the efficacy of wildlife policies, in particular, relies on landowner support – a product of alignment with landowner values (Sorice *et al.* 2013; Chapman, Satterfield, and Chan 2019). In the United States, the archetype, neoliberal commodification approach to conservation (e.g. payments for ecosystem services; Corbera 2012) is reflected in wildlife conservation programs that favor instrumental valuations of wildlife in lieu of considering the RVs rural people associate with wildlife and co-inhabited landscapes (Tadaki, Sinner, and Chan 2017). As such, most American conservation programs

appeal to instrumental valuations of nature, and secure landowner participation through applications of material incentives (e.g. cost-share, direct compensation, tax benefits). Such corresponding "pay-for-change" incentive structures fail to consider the incommensurability of instrumental values with RVs (Sorice *et al.* 2013, 1152) and how instrumental values interact with landowner RVs.

Therefore, because VIPs encourage nature commodification by headlining extrinsic incentives and ignoring feedback between instrumental and relational values, they are destined for socio-political conflict and diminished landowner participation (Nielsen-Pincus *et al.* 2017; Rouleau *et al.* 2016). Data suggest that VIPs for wildlife will be especially ineffective in socio-political contexts where a combination of socio-cultural traditions and institutional shortcomings exacerbate the immaterial costs of participation (Wollstein and Davis 2017). Endangered species conservation on private lands exemplifies this confluence. Specifically, VIPs for endangered species often fail to generate adequate landowner engagement because of the financial and non-monetary costs (e.g. autonomy, privacy, and heritage) landowners associate with ESC (Messick, Serenari, and Rubino 2021). Institutions governing ESC, such as the US Fish and Wildlife Service (FWS), have created programs that attempt to enhance and support landowner RVs through the provision of regulatory protections and technical assistance. A growing number of studies, however, indicate that grand challenges to enrollment remain because extrinsic incentives alone appear to be insufficient to nullify landowner concerns about the interference of federal institutions with self-determined rural lifestyles (Kreye, Adams, and Ober 2018; Messick, Serenari, and Rubino 2021; Sorice *et al.* 2012).

2.1. Relational values framework

The concept of "values" lends itself to a variety of fields of study and epistemologies (e.g. environmental psychology, environmental ethics, constructivism, relativism), each of which utilize the term to pursue specific, heterogenous inquiries (Stålhammar and Thorén 2019). The result of this diversity of use is ambiguity surrounding "values" and a need for clearly articulated operationalizations of the concept. For example, in social psychology, values may be moral ideals that guide behavior through their influence on beliefs and attitudes (Chan, Gould, and Pascual 2018; Stålhammar and Thorén 2019). "Values" are also frequently used in studies of ecosystem services to determine the worth or meaning of a natural system's contribution to human well-being (Kenter *et al.* 2015). Kenter *et al.* (2015) defined these two different types of values as transcendental values (trans-situational guiding principles, similar to social psychological values; Kenter *et al.* 2015; Schwartz 2012) and contextual values (subjective evaluations of an object's worth or importance; Kenter *et al.* 2015). Contextual values are the cornerstone of increasingly popular neoliberal conservation policies that argue for nature conservation on the grounds of its anthropocentric benefits (Corbera 2012) but are poorly understood in the context of private landowner decision-making (Lam *et al.* 2019). Thus, we will conceptualize values as contextual (i.e. intrinsic, instrumental, and relational values; Azzopardi *et al.* 2022) for the remainder of this case study. In doing so, we will employ a plural contextual values framework (Figure 1) to provide an account of the values that motivate landowner engagement in ESC and understand how VIPs do or do not align with these values (Himes and Muraca 2018).

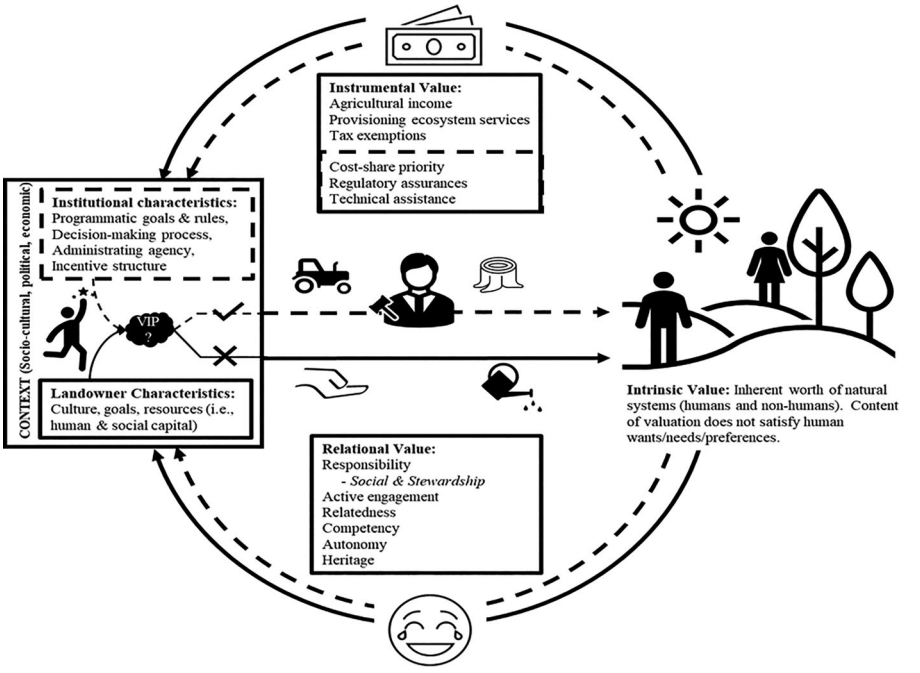

Figure 1. Conceptual framework of the interaction between landowner values, ESC, and VIPs. Landowner ESC behavior is determined within specific decision-making contexts that are influenced by external, institutional, and personal factors. As landowners engage in ESC relationships with human and non-human others, they associate: (1) intrinsic value with entities who are important without consideration of human-nature relationships (i.e. nature's inherent value; Chan *et al.* 2016); (2) instrumental value with substitutable, anthropocentric ESC outcomes (e.g. production value); and (3) relational value with the non-substitutable anthropocentric ends (e.g. self-determination) that they associate with their relationships. Involvement with policies that represent institutional values (e.g. VIPs; Chapman, Satterfield, and Chan 2019) influences the way landowners experience values attached to human-nature/human-human relationships as a function of institutional characteristics, decision-making context, and landowner characteristics. Values with anthropocentric ends (i.e. relational and instrumental values) are recognized by the landowner, integrated as evaluative criteria in decision-making (Trainor 2006), and can then support or undermine: (a) VIP participation and (b) the ESC relationship.

Alongside intrinsic and instrumental values, RVs are alternative evaluative criteria that landowners use to make decisions about program participation. They are necessary to identify aspects of ESC policies and programs that align or contend with the way landowners value nature and their land. Relational values cannot be conceptualized as intrinsic, because they are anthropocentric in nature but are beyond instrumental values as RVs are about the meaning of relational processes and are irreducible to substitutable, desired end states (Himes and Muraca 2018). For example, landowners whose virtues of property ownership are defined by responsibility towards the land (i.e. stewardship responsibility) adhere to relational stewardship principles through active engagement with their property (Chapman, Satterfield, and Chan 2019). Indeed, RVs of stewardship responsibility and active engagement go hand in hand as the process of stewardship via land management becomes meaningful in and of itself. Living up to their relational standards (i.e. stewardship through active engagement) of property ownership could produce instrumental benefits (e.g. agricultural and timber production;

Iniesta-Arandia *et al.* 2014) but is also meaningful as landowners identify themselves as good stewards of the land (i.e. RVs of identity; Kreye, Adams, and Ober 2018) and enhance important social connections (i.e. social cohesion; Kaltenborn *et al.* 2017). Identifying RVs that lie at the heart of landowner engagement in ESC can inform pathways to strategically align VIPs with key determinants of landowner behavior.

Research investigating landowner engagement with VIPs suggests that RVs tied to a landowner's right to self-determination could be the crux point of landowner participation. A person's right to self-determination includes their freedom to act autonomously, in a "psychologically empowered manner" (i.e. competently), and towards the formation of groups (i.e. towards social cohesion) that secure autonomy and empowerment (Shrinkhal 2021, 75). For people groups living closest to nature (e.g. Indigenous peoples), rights to self-determination are realized through RVs tied to the land (Sheremata 2018). For example, relationships with the land in Inuit communities across Canada mediate group formation and define Indigenous knowledge systems and epistemologies (i.e. psychological empowerment) (Sheremata 2018). In the context of landowners and VIPs, rights to self-determination are also inextricably tied to RVs about the land and may be impacted (undermined or supported) by the values articulated by VIPs (Ramsdell, Sorice, and Dwyer 2016). For example, feeling their autonomy threatened, landowners often shirk or opt out of VIPs because they are an instrument of federal conservation institutions (Sorice *et al.* 2013). Moreover, conflicts between landowners and the current ESC governance regime can prevent group formation between implementing agencies and landowners (Henderson, Reed, and Davis 2014). On the other hand, in instances where landowners do not feel threatened by federal ESC initiatives, VIPs may support self-determined relationships with the land as cooperation facilitates relationships with agency staff (Ramsdell, Sorice, and Dwyer 2016) and psychological empowerment or competency (i.e. perceived efficacy in upholding/adhering to RVs; Cetas and Yasue 2016; Chapman, Satterfield, and Chan 2019) through the provision of technical assistance (Bennett *et al.* 2018).

Despite past scholarly elicitations of RVs aligned with different facets of rights to self-determination (e.g. autonomy, social cohesion, and competency; see Arias-Arévalo, Martín-López, and Gómez-Baggethun [2017] and Chapman, Satterfield, and Chan [2019]) and their potential to explain VIP participation, these RVs have yet to be explicitly incorporated into a plural values framework describing the nexus of landowners and VIPs. Considering the interface between VIPs and RVs used to express rights to self-determination (Sheremata 2018) is a crucial step forward in getting to the root of deficient VIP participation and offering landowners a voice in the VIP policy process.

3. Methods

3.1. Study context

Houston toads are habitat specialists that require sandy soils and ephemeral pools typical of pine and mixed post-oak woodlands (FWS 2016). Suitable Houston toad habitat spans nine counties in the piney woods and post-oak savannahs of East-central Texas where rapid population growth and land parcelization have contributed a great deal to the rise of heterogenous land use goals (Sorice *et al.* 2014). Houston toads are currently protected under habitat conservation plans, critical habitat designations, and a programmatic SHA. Programmatic SHAs are agreements between a landowner and the

administrator of an Enhancement of Survival Permit where landowners agree to participate in contractually negotiated ESC in exchange for assurances against increased regulatory burden (Byl 2019). The Houston toad SHA was designed to reach landowners across the entire nine county range where little research has been conducted regarding the landowner-Houston toad interface. The Houston toad SHA is administered by Texas Parks and Wildlife Department (TPWD), which cooperatively coordinates recovery actions with landowners to promote habitat connectivity, increase habitat patch size, and pilot new conservation techniques (FWS 2016). As of 2022, the Houston toad SHA currently covers 12 enrolled properties and 2,455 acres.

3.2. Study design, sampling, recruitment, and administration

A thorough review of the ESC and RV literature informed the iterative development of interview protocols. Specific domains of inquiry focused on uncovering: a) the meanings associated with landowner relationships (with their land, community, and wildlife); b) the drivers behind these relationships; and c) how the SHA interacts with landowner RVs. To encourage discussions that allowed informants to conversationally articulate plural values in their own words (Topp *et al.* 2021), we used semi-structured interview prompts with open-ended questions about primary land-uses, land-use motivations, and nature of involvement with ESC/VIPs and local communities. Different protocols were used based on whether an informant was or was not involved in an SHA or ESC (See Appendices A and B for interview protocols [online supplementary material]).

We employed selective, chain referral sampling (Guest 2014) where key landowner informants within the Houston toad home range, identified by a TPWD-provided sampling frame, were asked to refer other participants who met at least one of the following criteria: a.) owned land with toad habitat, b.) identified as interested or involved in the SHA, c.) had ESC interest/experience. Our aim was to elicit from pertinent landowner groups the range of responses and diversity of perspectives (Lincoln and Guba 1985) about the Houston toad and the Houston toad SHA. We ceased recruitment when interview responses from different informants ceased to provide new/unique responses regarding previously undiscovered topics (theoretical saturation; Nascimento *et al.* 2018). The sampling methodology and interview protocol were approved by Texas State University IRB protocol #6188 on 18 November 2018.

We tested interview protocols with colleagues both on and off the research team to ensure proper wording, reduce ambiguity, and remove jargon (Topp *et al.* 2021). Landowner interviews took place between February and June of 2019 and were conducted over the phone or face-to-face in a location of the respondent's choosing (e.g. coffee shop, barn, residence). Interviews ranged from 30–150 minutes and typically lasted 60 minutes. Primary data sources included audio recordings, notes transcribed during the interview, and post-interview voice memos.

3.3. Data analysis

We converted interview audio files to text and coded interviews using NVivo qualitative software (QRS International 2018). We broadly categorized relevant landowner expressions of motivations and meanings based on the intrinsic, instrumental, and relational plural values framework outlined by Arias-Arévalo *et al.* (2017, 2018) and

Himes and Muraca (2018). Following Chapman, Satterfield, and Chan (2019), we then used a deductive approach to apply a priori codes from the ESC and RV literature (e.g. stewardship responsibility, social cohesion, and active engagement) to categorized value expressions. We also iteratively developed codes to capture when landowners articulated RVs specific to VIP participation and ESC (e.g. autonomy and competency).

We coded RVs as informants articulated the meaning of specific connections between entities (e.g. land management, VIP participation, community engagement; Grubert 2018) Specifically, we identified RVs as informants described the importance of a relationship relative to meeting and/or upholding their subjective principles, preferences, and virtues about human-nature or human-human relationships absent a material outcome (Chan *et al.* 2016). We coded instrumental values as informants expressed a relationship's worth in terms of its contribution to substitutable, material outcomes (e.g. provision of financial benefits; Himes and Muraca 2018). We coded intrinsic values as informants expressed the importance of nature outside of its contribution to human-nature relationships (Arias-Arévalo *et al.* 2018; Himes and Muraca 2018, 3). Intrinsic value expressions are often embedded in statements of universal ethical duties or codes and, thus, we differentiated intrinsic from relational values based on whether a value expression was based on personal virtues or universal standards of nature's right to exist (Arias-Arévalo *et al.* 2018; Chan, Gould, and Pascual 2018). For a full list of coded values, key coding concepts, and an exemplary interview reference, see Appendix C (online supplementary material).

We do not assert the generalizability of our findings to a broader rural population. Rather, we champion the value nested in naturalistic inquiries wherein "working hypotheses" or context-specific knowledges, are developed and compared across case-studies (Guba 1981). Hence, we established the validity of our research via 15 months of engagement with the topic of study in the study area, member checks via respondent validation and informant feedback (Varpio *et al.* 2017), and correspondence with key informants (i.e. informants provided by TPWD) throughout (Guba 1981).

4. Results

The results of our case study are presented as follows. First, we provide sample characteristics, followed by a discussion of the plural values that motivated landowner ESC behavior. In the final section of the results, we discuss points of value alignment and contention between landowners and the characteristics of the Houston toad SHA. The numbers in parens represent the number of informants who articulated the value and the percentage they constitute of the total informant sample.

4.1. Sample characteristics

We conducted 24 interviews with 25 total informants (informant pairs [$n = 2$]) in six Texas counties within Houston toad habitat (Austin, Colorado, Bastrop, Lavaca, Lee, Milam). Informants were mostly retired, college educated, and over 55 years of age. Property size and tenure were highly variable among informants, with most owning parcels for at least 15 years. Parcel size ranged from approximately 20 to 800 acres with informants expressing multiple uses for their land. Over half of informants expressed that their properties were solely used for residence, conservation, and

recreation while only two informants expressed cow-calf operations as their primary land-use. Twelve were engaged in a formal ESC initiative (e.g. Houston toad programmatic SHA, Lost Pines Habitat Conservation Plan, other individual habitat conservation plan or SHAs), nine were managing for endangered species informally, and four were not engaged in ESC whatsoever. The prevalence of recreational and residential landowners in our sample is reflective of the well-documented, socio-cultural and demographic shift away from dependence on agricultural production in rural Texas (Sorice *et al.* 2014).

4.2. Plural values motivating ESC

4.2.1. Relational values: stewardship and active management

Informants consistently described appropriate human-nature relationships as guided by virtues of stewardship responsibility ($n = 22$, 88%) (See Appendix B [online supplementary material]). Landowners articulated the importance of their responsibility to manage natural resources (e.g. their land, wildlife habitat, or endangered species, specifically) on their land through discourses of care, protection, preservation, restoration, conservation, and improvement. Self-identification ($n = 14$, 56%) as "conservationists" [Interview 09], "environmentalists" [Interviews 06 and 19], or "stewards of the land" [Interviews 17 and 22] by being actively engaged on their property influenced meaning-making. One informant provided an example of how his family's stewardship responsibility to restore natural processes is linked to their identity and actualized through involvement in property management:

> Well, we are both long-term environmentalists and we wanted a piece of land so that we could enjoy nature, and we feel like we have a responsibility to manage that land … so it could be the best habitat as can be and make it more like it was before people interrupted all the natural processes here. [Interview 06]

Active engagement in property management ($n = 19$, 86%) was a way for informants to exercise their personal stewardship ethic through management activities. Informants were involved in management practices including brush clearing, native prairie restoration, and prescribed burns and, in some cases, invested significant amounts of financial and physical capital into their conservation operations. Active engagement in land management was tied to RVs of social cohesion and natural and cultural heritage as life-long relationships with the environment prompted perpetual immersion in outdoor activities (i.e. property management, hunting, nature walks). Being actively engaged with their property also allowed landowners to satisfy their preferences for living a good and meaningful life as it secured personal identities, rights to self-determination, and honored cultural and natural heritage. For example, one informant viewed his property in the country as a rural escape and expressed that his active land management and desire to enroll his parcel in a perpetual ESC program provided purpose, protected natural heritage, and exemplified his conservative identity:

> We bought this property in '95 as an escape from Galveston … This is my home. This is where I live. I'm in it every day. I've got something out there waiting on me every day. If it wasn't nasty today, I'd be out there right now probably instead of talking to you … It keeps me going. I could sit down in front of the couch and die watching

> television, but this [is what's] keeping me going … I don't want anybody ever taking my little piece of the Post Oak Savannah and destroying it. If I can put it into a conservation easement, someone can come buy it and they can use it and enjoy it like I am, but they can't destroy it … I'm a very conservative person anyway … it just upsets me when I have to cut a live tree down … You can't erase history. It's there when they keep it alive. This property I want to keep it alive. [Interview 04]

4.2.2. Instrumental value of ESC

Of 25 informants, 17 (68%) articulated the importance of instrumental values. Informants explained that active involvement with their land was instrumentally valuable as their management practices reduced the cost of environmental stewardship through property tax exemptions (i.e. property appraisals based on agricultural or wildlife production value). Informants expressed that property ownership in rural Texas was nearly impossible without some form of tax savings, adding an instrumental necessity to their involved relationship with the land (e.g. "It's important to have some kind of exemption if you own this much land. Otherwise, you would just have to sell it because you couldn't afford it" [Interview 15]). For most informants, property tax exemptions enabled RVs such as responsibility and active engagement (e.g. "We are [agriculture] exempt and we save money there and are very willing to … use it for good, for the wildlife on the property" [Interview 07]). In a joint interview, two landowners discussed the importance of tax exemptions and how they enhanced and aligned with their RVs about nature appreciation and active involvement with the land:

> The greatest thing that ever happened to Texas was they let you use wildlife management now as an [agricultural] exemption … The money incentive is tremendous … and it makes people appreciate wildlife more, I think. [Interview 20-A]

> Now, once you have a wildlife exemption, you have certain responsibilities you have to meet to maintain it, which means you do have to get involved with the land … you actually have to put your feet on the ground and go out there and get up close and personal with the land. [Interview 20-B]

Reduced property tax valuations were the most important instrumental values associated with human-nature relationships. However, informants expressed that a large portion of neighboring landowners and members of their communities relied on agricultural production value from their land for income. Five informants emphasized the importance of the instrumental value provided through production-oriented relationships with their land. Three of these informants expressed the importance of striking a balance between instrumental value and RVs. These cattlemen used their operations to produce income, but also implemented rotational grazing and kept a small herd to limit overgrazing, allowing them to actualize virtues of stewardship responsibility while expressing their ranching heritage.

4.2.3. Intrinsic value

Informants also expressed intrinsic values ($n = 5$, 20%) that motivated their participation in land management and ESC on their property. To some informants, taking care of the land that they owned was more than just a personal virtue and represented a

universal ethic that all landowners should adhere to (e.g. "as an owner of sensitive habitat anywhere, you have a responsibility to take care of it as best you can." [Interview 03]; "Like anybody that takes on the responsibility of something, you need to maintain it, keep it up, and treat it right, or it's not going to be there." [Interview 04]). One participant linked a landowner's obligation to care for the environment to their capacity to influence natural resources, explaining that humans' capacity to influence natural processes should be used to better the environment:

> I think that human beings have a huge responsibility to work with the ecosystem in terms of keeping things in harmony, that all living things deserve a certain amount of respect, and that because of our role as human beings, a highly influential species, we have a responsibility to do our best to try to improve ecosystem health. [Interview 02]

Intrinsic values were highly prioritized motivators for some informants; however, most landowners interviewed did not articulate the intrinsic value of human-nature relationships without reference to an anthropocentric relationship. Thus, the remainder of our analysis focuses on the diverse RVs that landowners associated with relevant human-nature and human-human relationships.

4.3. Interface of ESC values and VIPs

Informants engaged in the Houston toad SHA often expressed the importance of participation as it aligned with landowner RVs and was instrumental to their living a self-determined life in the country. The goal of SHAs (to promote proactive conservation effort) aligned with participant RVs about relationships with their land (i.e. stewardship responsibility, active involvement, and social cohesion). In the sections that follow, we provide a detailed description of how the SHA interacts with landowner RVs.

4.3.1. Social cohesion and responsibility

Informants who participated in VIPs saw the SHA's collaborative and flexible institutional design as an inherent strength of the program that aligned with RVs of social cohesion (i.e. cohesion with staff; $n = 15$, 65%). Enrolled landowners frequently engaged with agency staff in a highly individualized enrollment process to develop baseline habitat assessments and determine necessary conservation measures. As SHA-administrators were receptive to landowner input, landowners associated positive experiences with connections to agency staff that increased trust, goodwill, and rapport. Such trusting relationships with staff were critical to overcoming landowner-VIP value conflicts. A landowner with extensive VIP experience explained the importance of relationship building and negotiation in overcoming his initial reluctance to enroll in an SHA:

> "Y'all weren't reluctant?" I said, "Well, yeah, we were." But, we told them [FWS] this is what we're offering to do, and this is what we'll accept, and this is what we'll allow you to do to us. And, so, we all came to the table and, like I said, it almost took two years that we finally got it hashed out and made an agreement … If you got good people with good attitudes that don't stand there and talk down to you, and they want to hear your opinions and want to hear your take on what you've learned over the 40 something years you've been running around on it, then you start to build a rapport with people

> and then they're going to trust you a little bit more … It's all about relationship building. [Interview 09]

Engagement in VIPs also supported social cohesion between participants and members of their community (i.e. co-owners, neighbors, group affiliates; $n = 16$, 64%) as they supported shared responsibility for management tasks, opportunities to engage with neighbors, and social networks where participants could share experiences and information with like-minded friends and acquaintances (cohesion with community; $n = 16$, 64%).

VIP participation also enhanced community cohesion as landowners saw the SHA as a means to actualize virtues of social responsibility ($n = 21$, 84%). Enrollment in an SHA offered participants the opportunity to educate their peers about VIPs, combatting rural fears of government intrusion and interference associated with ESC. Enrolled landowners used the SHA to: "set an example" [Interview 14]; "show that you can do agriculture and wildlife habitat at the same time" [Interview 05]; and "be a role model" [Interview 06]. SHA participation also enabled social responsibility towards local agencies as informants worked to foster local positivity towards government agencies. One landowner offered that a primary benefit of SHA enrollment was to help "TPWD to have better curb appeal to surrounding landowners" [Interview 09].

For some informants, though, enrollment in the SHA undermined social cohesion and responsibility. Informants expressed that their (potential) enrollment was a sensitive topic within their communities that could create conflict with co-owners and put them at odds with their peers. Thus, informants had to balance the importance of their responsibility to family and friends with the potential SHA-related benefits to stewardship-related RVs (e.g. identity and heritage). For example, one property manager for a local land trust explained the relational conflict between SHA participation and social responsibility as enrollment stymied an important relationship with a neighboring landowner:

> I think one of the challenges, especially for enrolling, was the relationship with our landowners to the north that [are] leasing that 70 acres … we went through something similar with one of our other properties and [it] ended really negatively. We were doing a lot of prairie restoration, so we stopped our cattle lease … it was a pretty negative experience, and I didn't want to ruin that relationship with this landowner. [Interview 05]

Overall, informants highly prioritized RVs of cohesion and social responsibility. Whether SHAs supported or undermined these RVs depended on a landowner's existing social and human capital with co-owners, community members, and government agencies.

4.3.2. Competency

Informants highly valued the ability to adhere to RVs (e.g. stewardship responsibility, heritage, identity) through active engagement with their land. Informants used the positive results of their management behaviors to legitimize their stewardship competency (i.e. perceived ability "to leave [their] place better than [they] got it" [Interview 10]) ($n = 15$, 60%). Informants were quick to describe the variety of tasks that they had completed on behalf of nature and wildlife (i.e. habitat management, conservation-group membership, and workshop attendance) that manifested as restored native

habitats, increased game species populations (e.g. white-tailed deer), and increased endangered (or formerly endangered) species populations (e.g. Houston toads, Attwater Prairie Chickens, Bobwhite Quail). Informants also demonstrated stewardship competency by articulating detailed knowledge of their land. One SHA participant asserted that his place-based natural knowledge was integral to the success of VIPs:

> [FWS] realized that we had knowledge about the property that they could never have and [we showed] them where to look and what areas do this in certain times of the year; when does it become a wetland, when does it dry up. And they realized we'll give them all the insight they could ever want, and they're like, "Man, okay. This will work." [Interview 09]

In combination, informant RVs, the cooperative nature of the SHA, and the incentive of technical assistance enabled agency staff to enhance a sense of stewardship competency by providing informants with human capital (e.g. "help" and "guidance" to "best serve the land" [Interview 03]). This diffusion of information was closely tied to the development of social capital between landowners and agency staff. For example, one Colorado County landowner explained how relationships with staff go hand in hand with technical expertise to enhance stewardship efforts: "We work closely with [our TPWD biologist] and know him well. We use that relationship to be better stewards of our land as well as animals that are on it" [Interview 01].

For some informants, though, the technical assistance offered by SHAs did not support their sense of stewardship competency. Landowners with extensive conservation experience viewed their existing abilities as sufficient to manage their land effectively, negating the need for expert advice. If a landowner's competency was not supported by technical assistance from the SHA, they often saw little benefit to enrolling in the program. One self-identified steward of the land demonstrated his stewardship competency through designing and implementing wildlife management plans, and expressed that the sense of competency he associated with his management practices defeated the purpose of enrolling in an SHA:

> I felt that I had a good wildlife management plan in place. One of my target species was amphibians and I was protecting them to the best I could, and protecting their habitat, food sources, and water. And I didn't see any other advantage for me at that point in time to pursue a SHA. [Interview 18]

The interaction between SHAs and RVs of competency was highly dependent on an informant's human capital and RVs of social cohesion. Informants with ample conservation experience saw the SHA as superfluous to competent stewardship while less-experienced landowners who prioritized cohesion saw the SHA as imperative to self-determined relationships with their land.

4.3.3. Autonomy

Informants articulated that, in Texas, the relationship between a landowner and their property is characterized by principles of autonomy that deserve respect (e.g. "if you abide by what we say we deserve as landowners and our private property rights, we'll pretty much let you do whatever you want" [Interview 09]) ($n = 16$, 64%). Alignment between autonomy and the rules and requirements of VIPs play an integral role in

determining participation, as landowners questioned programs that suggested decreased control. Oftentimes, informants expressed that local landowners were suspicious of VIPs because of their close association with a non-local, federal ESC-institution that landowners felt disrespected rural autonomy. Informants expressed personal and communal concerns of restricted development and production rights, eminent domain, and property intrusion that developed through media, gossip, and experience. One informant, who had previously worked for the FWS, expressed how federal land seizure ignored property rights to protect endangered species habitat at the expense of human well-being:

> I've seen it firsthand on the Refuge [Attwater Prairie Chicken National Wildlife Refuge]. When I first went to work there, [the government] grabbed two pieces of property. In other words, like we used to call it, "condemn it", and these people were forced to sell it to them. And, I saw letters from those people pleading to the government to not buy their land. It really upset me. [Interview 20A]

Similar stories and experiences insighted "fear of enforcement" [Interview 22] among locals, leading informants to express that their communities "don't trust the government" and "don't want to be told what they can and cannot do on their land by some govie" [Interview 23]. One landowner expressed that his perception of the federal government as untrustworthy and socially irresponsible created an irresolvable conflict of values:

> I've already decided there's no frickin' way I'm going to enter into any agreement with the damn government … They will go back on their word. I will sign one thing and something else will happen, and to me, it's not worth losing my sovereignty over my own land … I've seen so many things that the government has screwed up and screwed up badly. And I've seen people's rights being taken away and rights being eroded every day. [Interview 20 C]

On the other hand, though, for some informants, SHAs preserved RVs of autonomy through the legal protections around endangered species and the provision of regulatory assurances. The SHAs promise of regulatory assurances was rarely a primary motivator for SHA enrollment, but was important to some informants as it secured freedoms to protect and manage their land in the face of changing economic markets, political climates, and public service infrastructure. The importance of using the SHA to preserve RVs of autonomy was mainly expressed by informants who wanted to protect and preserve the natural surroundings of their rural residence. One landowner expressed that he and his wife, motivated by eudaemonic ideas of ownership (e.g. "it was the idea of we're in Texas, let's have some property" [Interview 23]) determined that ESA-related restrictions were critical to limiting surrounding development and coincided with their land-use goals:

> We didn't want to move to an area that was mostly country to watch it infill and just become a city … and the light kind of went on. Oh, this means that development will be limited. This means that the Lost Pines will probably be here for a lifetime, and our kids' lifetimes and everything else … So that became an added benefit to us because we did not want to live in a dense urban area, and we knew that the protections under the ESA would limit development. [Interview 23]

The interaction of SHAs and RVs of autonomy was noted by most informants as the primary reason for the program's lack of landowner engagement. While our informants recognized the autonomy-securing benefits of the SHA, they also recognized the "tough road ahead" to "rebuild past endeavors" [Interview 17] as landowners in their community do not want to be involved with federal programs. Whether the SHA conflicted or aligned with RVs of autonomy depended on whether an informant's perception of control was threatened by developers or by the federal government

5. Discussion

Ameliorating value conflicts with VIPs requires the support and growth of RVs of social cohesion and responsibility between landowners, ESC institutions, and local communities. Our analysis demonstrated this type of RV was a requisite for cultivating human well-being and self-determined relationships with the land, but is historically undermined by institutional ESC policies that fail to cultivate trust and communication (Henderson, Reed, and Davis 2014). The pattern of deficient social capital between agencies, landowners, and local communities must be broken for SHAs to be efficient and effective in accomplishing their intended purpose. We observed that where TPWD invested in social capital (communication, cooperation, and trust; Bennett *et al.* 2018) with individual landowners, they had a better chance of motivating landowner participation by bringing SHAs into alignment with RVs of social cohesion. However, rather than focus on resource-intensive, face-to-face interactions and participatory methods, as is so commonly suggested (Brook, Zint, and de Young 2003; Henderson, Reed, and Davis 2014; Sorice *et al.* 2013), we believe that agencies should seek to diffuse social resources across landowner networks by increasing the SHA's relevancy to RVs of social responsibility and by creating a sense of communal shared responsibility for ESC (Ramsdell, Sorice, and Dwyer 2016). Niemiec *et al.* (2019) suggested that the diffusion of social resources across landowner networks can be enabled by strategically motivating recruitment and coordination behavior amongst landowners who are already engaged in conservation (Niemiec *et al.* 2019). However, future research is needed to determine whether non-agency recruitment in a politically charged context like ESC is feasible.

Where value conflicts persist, community-oriented RVs of social responsibility and cohesion may hinder SHA enrollment through infringed autonomy. For our informants, an appropriate relationship with the land is defined by their freedom to make their own decisions (i.e. autonomy) which problematizes characteristics of the SHA (e.g. contracts, new practices, and property access requirements) that express values of external control. To protect communal self-determination (i.e. autonomy and community cohesion) and protect themselves, co-owners, and neighbors from perceived threats of regulation, landowners may refuse to let implementing agencies on their property (Chapman, Satterfield, and Chan 2019). Collective prioritization of RVs of self-determination in anti-government contexts may then facilitate a closed-door policy that can prevent the collection of the biological required to coordinate landscape scale conservation plans (Brook, Zint, and de Young 2003; Sorice *et al.* 2012). The intention of the premiere incentive of the SHA, regulatory assurances, was to remedy conflicts regarding the paradoxical nature of autonomy, though evidence on its attractiveness would suggest it is ineffectual (Messick, Serenari, and Rubino 2021). Hence, a hegemonic (i.e. status quo) approach to developing and implementing VIPs is insufficient to accomplish landscape scale conservation goals in our study area. We conclude that

a re-imagined program designed to better align with landowner virtues and principles of self-determined stylings of stewardship will likely be more attractive to landowners.

Where issues of autonomy are not a concern among landowners, the interactions between instrumental and relational values stands to better align institutional ESC efforts with extant RVs. Research in the environmental education field suggests that RVs can be influenced by external processes, such as educational experiences (Santos and Gould 2018). Our results suggest that the provision of extrinsic incentives, particularly financial and technical assistance, is an external process that can supplement stewardship resources (e.g. human and social capital such as knowledge, experience, and communication; Bennett *et al.* 2018; Messick, Serenari, and Rubino 2021) and support landowner RVs through opportunities to actualize stewardship virtues. Thus, in an era of "rural restructuring" where potentially inexperienced urban and amenity migrants are buying and dividing land in rural America to experience a more country lifestyle (Gosnell and Abrams 2009, 303; Sorice *et al.* 2014), VIPs that headline technical assistance can enhance conservation outcomes and RVs related to self-determined stewardship through the provision of immaterial stewardship resources (Messick, Serenari, and Rubino 2021). However, where landowners possess the competency to manage land on their own, technical assistance may be less appealing than financial incentives (Messick, Serenari, and Rubino 2021). Therefore, while the competency-enhancing benefits of the SHA are attractive to some, TPWD might enhance the SHA's lucrativeness by promoting the program alongside existing policy mechanisms that offer financial incentives such as wildlife and agricultural tax exemptions.

An important advantage of the use of an RVs inclusive framework to investigate the interaction between landowners and VIPs rests in the utility of RVs as defining context-specific, "appropriate" relationships with the land. Thus, our findings can be used to identify il/legitimate (perceivably appropriate; Suchman 1995) ESC policies and points of mis/alignment between policies and landowners that define their intrinsic motivation to participate (Ryan and Deci 2000). Our results suggest that to landowners in Houston toad range, an appropriate relationship with the land is guided by virtues of stewardship and upheld by their leading a self-determined lifestyle. Legitimate environmental policies will ultimately recognize and support these kinds of relationships between landowners and their land. To increase the acceptability of the SHA, practitioners should re-orient the goals of the program towards conserving endemic Texas ecosystems instead of fixating on Houston toads because ESC specific programs can alienate landowners with incongruent stewardship goals (Kreye, Adams, and Ober 2018). Policies that express values of broad-scale stewardship responsibility and recognize ecosystem health instead of ESC behavior may reduce perceived value conflicts between self-determined environmental stewards and the Houston toad SHA (Sorice *et al.* 2021).

Our application of a plural values framework demonstrates the utility of relational investigations of the landowner-VIP nexus as RV conflicts and alignments were the cornerstone of landowner participation in the SHA. Our case study highlights the shortcomings of traditional conceptualizations of environmental values that have, to date, influenced the development of environmental policy including VIPs and the ESA. We conclude that insights based solely on considering of instrumental and intrinsic values is inappropriate in that this approach can put landowners at odds with legal institutions that they see as illegitimate. Further, insufficient consideration for landowner RVs has created social norms that limit ESC by breeding opposition between

ESC institutions and landowners. Re-aligning ESC policies with landowner values will require implementing agencies to pick low-hanging fruit (i.e. landowners who want to protect endangered species but lack the know-how). These types of landowners are likely to have fewer issues with shared decision-making (i.e. reduced autonomy; Gosnell and Abrams 2009), are less tied to social norms in rural communities (Sorice *et al.* 2014), and are already intrinsically motivated for ESC; they represent the most resource intensive way for agencies to increase formal endangered species protections. Taking on landowners whose values conflict with the characteristics of VIPs, however, will require more mindful considerations of how ESC is governed and can evolve to a) bridge value gaps with landowners, and/or b) influence collective social norms that define appropriate and socially responsible landownership. Both approaches are required to increase landowner engagement with federal institutions that have historically opposed "appropriate" rural lifestyles.

6. Conclusion

We applied a plural values framework to a case study of landowner engagement with a programmatic SHA for the critically endangered Houston toad in East-central Texas. Landowner responses to the SHA show that value conflicts between appropriate notions of self-determined landownership in Texas and the rules and requirements of the program can prevent participation. On the other hand, our results suggest that value alignment between landowners and the stewardship goals articulated by SHAs are fertile ground for nurturing cooperation between urban migrants, traditional landowners, local programmatic administrators, and formal ESC initiatives. Thus, RV-inclusive value frameworks show the deficiencies of existing, "one-size-fits-all" VIPs and illuminate paths toward uniting the conservation goals of landowners and policymakers alike. Our study suggests that past research investigating the interface of landowners and ESC rightfully argue that landowners evaluate decisions as more than instrumentally minded, self-interested beings (Sorice *et al.* 2013; Kreye, Adams, and Ober 2018) but fail to capture the diverse values accounted for in ESC decision-making. Relational value inclusive frameworks will provide researchers with a more complete way to inventory the contextual values influencing landowner behavior and will inform VIP design by revealing intra-programmatic value inconsistencies and conflicts between VIPs and landowners.

Disclosure statement

Neither the co-author nor I have any relevant financial or non-financial competing interests.

Supplementary material

Supplemental data for this article can be accessed online at https://doi.org/10.1080/09640568.2023.2285728.

Funding

This work was supported by Texas Parks and Wildlife Department under grant number 517057.

References

Allen, K. E., C. E. Quinn, C. English, and J. E. Quinn. 2018. "Embedding Relational Values in Agroecosystem Governance." *Current Opinion in Environmental Sustainability* 35: 108–115. doi:10.1016/j.cosust.2018.10.026.

Arias-Arévalo, P., B. Martín-López, and E. Gómez-Baggethun. 2017. "Exploring Intrinsic, Instrumental, and Relational Values for Sustainable Management of Social-Ecological Systems." *Ecology and Society* 22 (4): 43. doi:10.5751/ES-09812-220443.

Arias-Arévalo, P., E. Gómez-Baggethun, B. Martín-López, and M. Pérez-Rincón. 2018. "Widening the Evaluative Space for Ecosystem Services: A Taxonomy of Plural Values and Valuation Methods." *Environmental Values* 27 (1): 29–53. doi:10.3197/096327118X15144698637513.

Azzopardi, E., J. O. Kenter, J. Young, C. Leakey, S. O'Connor, S. Martino, W. Flannery, et al. 2022. "What Are Heritage Values? Integrating Natural and Cultural Heritage into Environmental Valuation." *People and Nature* 5 (2): 368–383. doi:10.1002/pan3.10386.

Bennett, N. J., T. S. Whitty, E. Finkbeiner, J. Pittman, H. Bassett, S. Gelcich, and E. H. Allison. 2018. "Environmental Stewardship: A Conceptual Review and Analytical Framework." *Environmental Management* 61 (4): 597–614. doi:10.1007/s00267-017-0993-2.

Brook, A., M. Zint, and R. de Young. 2003. "Landowners' Responses to an Endangered Species Act Listing and Implications for Encouraging Conservation." *Conservation Biology* 17 (6): 1638–1649. doi:10.1111/j.1523-1739.2003.00258.x.

Byl, J. P. 2019. "Perverse Incentives and Safe Harbors in the Endangered Species Act: Evidence from Timber Harvests near Woodpeckers." *Ecological Economics* 157 (2018): 100–108. doi:10.1016/j.ecolecon.2018.11.008.

Cetas, E. R., and M. Yasue. 2016. "A Systematic Review of Motivational Values and Conservation Success in and around Protected Areas." *Conservation Biology* 31 (1): 203–212. doi:10.1111/cobi.12770.

Chan, K. M. A., P. Balvanera, K. Benessaiah, M. Chapman, S. Díaz, E. Gómez-Baggethun, R. Gould, et al. 2016. "Why Protect Nature? Rethinking Values and the Environment." *Proceedings of the National Academy of Sciences of the United States of America* 113 (6): 1462–1465. doi:10.1073/pnas.1525002113.

Chan, K. M. A., R. K. Gould, and U. Pascual. 2018. "Editorial Overview: Relational Values: What Are They, and What's the Fuss About?" *Current Opinion in Environmental Sustainability* 35: A1–A7. doi:10.1016/j.cosust.2018.11.003.

Chapman, M., T. Satterfield, and K. M. A. Chan. 2019. "When Value Conflicts Are Barriers: Can Relational Values Help Explain Farmer Participation in Conservation Incentive Programs?" *Land Use Policy* 82: 464–475. doi:10.1016/j.landusepol.2018.11.017.

Corbera, E. 2012. "Problematizing REDD + as an Experiment in Payments for Ecosystem Services." *Current Opinion in Environmental Sustainability* 4 (6): 612–619. doi:10.1016/j.cosust.2012.09.010.

Díaz, S., S. Demissew, J. Carabias, C. Joly, M. Lonsdale, N. Ash, A. Larigauderie, et al. 2015. "The IPBES Conceptual Framework: Connecting Nature and People." *Current Opinion in Environmental Sustainability* 14: 1–16. doi:10.1016/j.cosust.2014.11.002.

Fish, R., A. Church, C. Willis, M. Winter, J. A. Tratalos, R. Haines-Young, and M. Potschin. 2016. "Making Space for Cultural Ecosystem Services: Insights from a Study of the UK Nature Improvement Initiative." *Ecosystem Services* 21 (B): 329–343. doi:10.1016/j.ecoser.2016.09.017.

Gosnell, H., and J. Abrams. 2009. "Amenity Migration: Diverse Conceptualizations of Drivers, Socioeconomic Dimensions, and Emerging Challenges." *GeoJournal* 76 (4): 303–322. doi:10.1007/s10708-009-9295-4.

Grubert, E. 2018. "Relational Values in Environmental Assessment: The Social Context of Environmental Impact." *Current Opinion in Environmental Sustainability* 35 (2018): 100–107. doi:10.1016/j.cosust.2018.10.020.

Guba, E. G. 1981. "Criteria for Assessing the Trustworthiness of Naturalistic Inquiries." *Ectj* 29 (2): 75–91. doi:10.1007/BF02766777.

Guest, G. 2014. "Sampling and Selecting Participants in Field Research." In *Handbook of Methods in Cultural Anthropology*, edited by C. C. Gravlee and H. Russell Bernard, 215–249. London: Roman & Littlefield.

Henderson, A. E., M. Reed, and S. K. Davis. 2014. "Voluntary Stewardship and the Canadian Species at Risk Act: Exploring Rancher Willingness to Support Species at Risk in the Canadian Prairies." *Human Dimensions of Wildlife* 19 (1): 17–32. doi:10.1080/10871209.2013.819595.

Himes, A., and B. Muraca. 2018. "Relational Values: The Key to Pluralistic Valuation of Ecosystem Services." *Current Opinion in Environmental Sustainability* 35: 1–7. doi:10.1016/j.cosust.2018.09.005.

Iniesta-Arandia, I., M. Garcia-Llorente, P. A. Aguilera, C. Montes, and B. Martin-Lopez. 2014. "Socio-Cultural Valuation of Ecosystem Services: Uncovering the Links between Values, Drivers of Change, and Human Well-Being." *Ecological Economics* 108 (2014): 36–48. doi:10.1016/j.ecolecon.2014.09.028.

Kaltenborn, B. P., J. D. C. Linnell, E. Gomez-Baggethun, H. Lindhjem, J. Thomassen, and K. M. Chan. 2017. "Ecosystem Services and Cultural Values as Building Blocks for 'the Good Life." *Ecological Economics* 140 (2017): 166–176. doi:10.1016/j.ecolecon.2017.05.003.

Kenter, J. O., L. O'Brien, N. Hockley, N. Ravenscroft, I. Fazey, K. N. Irvine, M. S. Reed, et al. 2015. "What Are Shared and Social Values of Ecosystems?" *Ecological Economics* 111: 86–99.

Kreye, M. M., D. C. Adams, and H. K. Ober. 2018. "Protecting Imperiled Wildlife Species on Private Lands: Forest Owner Values and Response to Government Interventions." *Ecological Economics* 149: 254–264. doi:10.1016/j.ecolecon.2018.03.016.

Lam, M. E., T. J. Pitcher, S. Surma, J. Scott, M. Kaiser, A. S. J. White, E. A. Pakhomov, and L. M. Ward. 2019. "Value- and Ecosystem-Based Management Approach: The Pacific Herring Fishery Conflict." *Marine Ecology Progress Series* 617–618 (617–618): 341–364. doi:10.3354/meps12972.

Lincoln, Y. S., and E. G. Guba. 1985. *Naturalistic Inquiry*. Thousand Oaks, CA: Sage.

Messick, J. A., C. Serenari, and E. C. Rubino. 2021. "Determinants of Private Landowner Participation in Endangered Species Conservation: A Comprehensive Review and Analytical Framework." *Society and Natural Resources* 34 (7): 980–998. doi:10.1080/08941920.2020.1865495.

Messick, J. A., C. Serenari, K. L. Daniel, J. L. Idema, E. Bates, P. Crump, and M. L. Lute. 2021. "Determinants Influencing Recruitment in the Houston Toad Programmatic Safe Harbor Agreement." *Human Dimensions of Wildlife* 27 (5): 472–488. doi:10.1080/10871209.2021.1959961.

Morgan, J. J., C. M. Rhoden, B. White, and S. P. Riley. 2019. "A State Assessment of Private Lands Wildlife Conservation in the United States." *Wildlife Society Bulletin* 43 (3): 328–337. doi:10.1002/wsb.997.

Nascimento, L. C. N., T. V. Souza, I. C. S. Oliveira, J. R. M. M. Moraes, R. C. B. Aguiar, and L. F. Silva. 2018. "Theoretical Saturation in Qualitative Research: An Experience Report in Interview with School Children." *Revista Brasileira de Enfermagem* 71 (1): 228–233. doi:10.1590/0034-7167-2016-0616.

Nielsen-Pincus, M., P. Sussman, D. E. Bennett, H. Gosnell, and R. Parker. 2017. "The Influence of Place on the Willingness to Pay for Ecosystem Services." *Society and Natural Resources* 30 (12): 1423–1441. doi:10.1080/08941920.2017.1347976.

Niemiec, R., R. Willer, N. M. Ardoin, and F. K. Brewer. 2019. "Motivating Landowners to Recruit Neighbors for Private Land Conservation." *Conservation Biology* 33 (4): 930–941. doi:10.1111/cobi.13294.

QRS International. 2018. "Nvivo Qualitative Data Analysis Software (12.1) [Computer Software]."

Ramsdell, C. P., M. G. Sorice, and A. M. Dwyer. 2016. "Using Financial Incentives to Motivate Conservation of an at-Risk Species on Private Lands." *Environmental Conservation* 43 (1): 34–44. doi:10.1017/S0376892915000302.

Rouleau, M. D., J. F. Lind-Riehl, M. N. Smith, and A. L. Mayer. 2016. "Failure to Communicate: Inefficiencies in Voluntary Incentive Programs for Private Forest Owners in Michigan." *Forests* 7 (12): 199–213. doi:10.3390/f7090199.

Ryan, R. M., and E. L. Deci. 2000. "Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions." *Contemporary Educational Psychology* 25 (1): 54–67. doi:10.1006/ceps.1999.1020.

Santos, N. B., and R. K. Gould. 2018. "Can Relational Values Be Developed and Changed? Investigating Relational Values in the Environmental Education Literature." *Current Opinion in Environmental Sustainability* 35 (2018): 124–131. doi:10.1016/j.cosust.2018.10.019.

Schwartz, S. H. 2012. "An Overview of the Schwartz Theory of Basic Values." *Online Readings in Psychology and Culture* 2 (1): 3–20. doi:10.9707/2307-0919.1116.

Sheremata, M. 2018. "Listening to Relational Values in the Era of Rapid Environmental Change in the Inuit Nunangat." *Current Opinion in Environmental Sustainability* 35 (2018): 75–81. doi:10.1016/j.cosust.2018.10.017.

Shrinkhal, R. 2021. "Indigenous Sovereignty" and Right to Self-Determination in International Law: A Critical Appraisal." *AlterNative* 17 (1): 71–82. doi:10.1177/11771801 21994681.

Sorice, M. G., C. J. Donlan, A. R. Santo, G. M. Luque, and C. A. Hagen. 2021. "Exploring Pathways to Participation in an At-Risk Species Conservation Program." *Conservation Science and Practice* 3 (9): 489–505. doi:10.1111/csp2.489.

Sorice, M. G., C. Oh, T. Gartner, M. Snieckus, R. Johnson, and C. J. Donlan. 2013. "Increasing Participation in Incentive Programs for Biodiversity Conservation." *Ecological Applications* 23 (5): 1146–1155. doi:10.1890/12-1878.1.

Sorice, M. G., J. R. Conner, U. P. Kreuter, and R. N. Wilkins. 2012. "Centrality of the Ranching Lifestyle and Attitudes toward a Voluntary Incentive Program to Protect Endangered Species." *Rangeland Ecology and Management* 65 (2): 144–152. doi:10.2111/ REM-D-10-00144.1.

Sorice, M. G., U. P. Kreuter, B. P. Wilcox, and W. E. Fox. 2014. "Changing Landowners, Changing Ecosystem? Land-Ownership Motivations as Drivers of Land Management Practices." *Journal of Environmental Management* 133: 144–152. doi:10.1016/j.jenvman. 2013.11.029.

Stålhammar, S., and H. Thorén. 2019. "Three Perspectives on Relational Values of Nature." *Sustainability Science* 14 (5): 1201–1212. doi:10.1007/s11625-019-00718-4.

Suchman, M. C. 1995. "Managing Legitimacy: Strategic and Institutional Approaches." *The Academy of Management Review* 20 (3): 571–610. doi:10.2307/258788.

Tadaki, M., J. Sinner, and K. M. A. Chan. 2017. "Making Sense of Environmental Values: A Typology of Concepts." *Ecology and Society* 22 (1): 7–18. doi:10.5751/ES-08999-220107.

Thomas, J. K., and J. Thigpen. 1996. "A Social Exchange Explanation of Participation in the U.S. Farm Program." *Journal of Rural Social Sciences* 12 (1): 1–23.

Topp, S. M., J. Tully, R. Cummins, V. Graham, A. Yashadhana, L. Elliott, and S. Taylor. 2021. "Unique Knowledge, Unique Skills, Unique Role: Aboriginal and Torres Strait Islander Health Workers in Queensland, Australia." *BMJ Global Health* 6 (7): e006028. doi:10.1136/ bmjgh-2021-006028.

Trainor, S. F. 2006. "Realms of Value: Conflicting Natural Resource Values and Incommensurability." *Environmental Values* 15 (1): 3–29. doi:10.1177/096327190601500102.

US Fish and Wildlife Service (FWS). 2016. *5-Year Review: Summary and Evaluation*. Austin, TX: US Fish and Wildlife Service Austin Ecological Services Field Office.

Varpio, L., R. Ajjawi, L. V. Monrouxe, B. C. O'Brien, and C. E. Rees. 2017. "Shedding the Cobra Effect: Problematising Thematic Emergence, Triangulation, Saturation and Member Checking." *Medical Education* 51 (1): 40–50. doi:10.1111/medu.13124.

Vatn, A. 2005. "Rationality, Institutions and Environmental Policy." *Ecological Economics* 55 (2): 203–217. doi:10.1016/j.ecolecon.2004.12.001.

Wollstein, K. L., and E. J. Davis. 2017. "A "Hammer Held over Their Heads": Voluntary Conservation Spurred by the Prospect of Regulatory Enforcement in Oregon." *Human-Wildlife Interactions* 11 (3): 258–273. 10.26077/wrwp-f416.