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Received: 26 September 2020 | Revised: 5 September 2021 | Accepted: 6 September 2021

DOI: 10.1111/csp2.540

Conservation Science and Practice
A journal of the Society for Conservation Biology
Open Access
WILEY

RESEARCH NOTE

# The potential for applying "Nonviolent Communication" in conservation science

**Brooke A. Williams**[1,2] | **B. Alexander Simmons**[1,3,4] | **Michelle Ward**[1,2] | **Jutta Beher**[5] | **Angela J. Dean**[3] | **Tida Nou**[1,2] | **Tania M. Kenyon**[2,6] | **Madeline Davey**[2,6] | **Courtney B. Melton**[1,2] | **Phoebe J. Stewart-Sinclair**[1,2,6] | **Niall L. Hammond**[7] | **Emily Massingham**[2,6] | **Carissa J. Klein**[1,2]

[1]School of Earth and Environmental Sciences, The University of Queensland, Queensland, Australia

[2]Centre for Biodiversity and Conservation Science, The University of Queensland, Queensland, Australia

[3]Centre for the Environment, School of Biology and Environmental Science, Queensland University of Technology, Queensland, Australia

[4]Global Development Policy Center, Boston University, Boston, Massachusetts, USA

[5]School of Biosciences, The University of Melbourne, Melbourne, Victoria, Australia

[6]School Of Biological Sciences, The University of Queensland, Queensland, Australia

[7]Centre for Planetary Health and Food Security, Griffith University, Queensland, Australia

**Correspondence**
Brooke A. Williams, School of Earth and Environmental Sciences, University of Queensland, St Lucia 4072, Australia.
Email: brooke.williams@uq.edu.au; and brooke.williams@uqconnect.edu.au

**Funding information**
Australian Research Council Future Fellowship; Centre for Biodiversity and Conservation Science

## Abstract

The role of a conservation scientist has never been more challenging. Amidst the rapid degradation occurring across Earth's natural ecosystems and the loss of biodiversity and ecosystem services, conservation scientists must learn new and effective ways to build trust and engage with the wider community. Here, we discuss the potential utility of a particular communication technique, Nonviolent Communication (also known as Compassionate Communication or Collaborative Communication), in conservation science. Nonviolent Communication is a structured form of communication, developed in the 1960s by Dr. Marshall Rosenberg, that seeks to foster interpersonal understanding and connection through communication of judgment-free observations, recognition of people's feelings, needs and values, and requests for specific actions to meet those needs. It has delivered positive outcomes in diverse fields such as prisoner reform, health science, and social work, and holds great promise for conservation applications. While there is no single communication strategy that resonates with all people, we argue that Nonviolent Communication could be used by conservation scientists and practitioners when communicating with colleagues, politicians, and the general public about important and sometimes contentious environmental issues.

**KEYWORDS**

climate change, conflict mitigation, conflict resolution, conservation conflict, conservation debate, effective communication, environmental conflict, NVC, science communication, stakeholder engagement

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## 1 | INTRODUCTION

Despite global conservation efforts, ecological degradation and biodiversity loss continue unabated (IPBES, 2019; Mace et al., 2018; Waldron et al., 2017). The failure to halt the continuous decline of biodiversity can be largely attributed to conflicts between conservation and human development or resource use goals (Butchart et al., 2010; IPBES, 2019; Mace et al., 2018; Maxwell, Fuller, Brooks, & Watson, 2016). Effective engagement and communication across conservation science, such as between scientists, politicians, individual industry or corporate representatives, and the general public, remains a challenge. Ultimately, effective communication will be critical to achieving the Global Sustainable Development Goals in the post-2020 era of conservation (Secretariat of the Convention on Biological Diversity, 2021; United Nations, 2019).

Conservation science and evidence-based approaches to policy development and implementation need the support of a broad range of stakeholders to be effective (Pretty & Smith, 2004; Pullin & Knight, 2001; Saunders, 2003; Wilson et al., 2016). Political action can be hindered by a lack of effective communication surrounding an issue (Habel et al., 2013; Nisbet & Scheufele, 2009; Saunders, 2003). For example, scientific solutions to conservation problems are often described as incomprehensible and difficult to implement on the ground (Habel et al., 2013), targeted only to scientific audiences (Habel et al., 2013), and blind to stakeholder interests (Bennett et al., 2017; Fox et al., 2006). While communicating evidence and the novelty of research in peer-reviewed platforms supports the validity of the science, this is not enough to create change. The polarization of environmental views and the associated divide between science and policy could potentially be overcome through effective engagement, and communication strategies that focus on multidirectional dialogue and negotiation between a variety of stakeholders (Habel et al., 2013; Sterman, 2008). Consideration of how others might think and feel is crucial to this effort (Chaudhury & Colla, 2021; Shapira, Housh, & Broitman, 2019).

There is no one-size-fits-all method for effectively communicating science (Kopelman, Rosette, & Thompson, 2006), but there are a range of tools available for conservation scientists and practitioners to utilize (Kidd et al., 2019; Metcalfe, 2014). One communication strategy that is effectively used in other situations, yet under-explored in conservation-related communication, is Dr. Marshall Rosenberg's "Nonviolent Communication" (hereafter "NVC"), also known as "Compassionate Communication" or "Collaborative Communication," which aims to foster connection and mutual understanding through communication of judgment-free observations, greater recognition of people's feelings, needs and values, and requests for specific actions to meet those needs.

Just as NVC seeks to foster connection between two (or more) people, the importance of considering the needs and values of the audience is well recognized within conservation science and practice. For example, studies on environmental conflict mitigation recommend incorporating the needs of others into their frameworks for addressing human-wildlife conflict (Jolibert, Max-Neef, Rauschmayer, & Paavola, 2011; Kansky, Kidd, & Knight, 2016), and structured decision-making processes explicitly state the need to address the values of key participants (Gregory et al., 2012). Many popular approaches to communicating conservation science also emphasize audience values. For example, focusing communication content on "ecosystem services" (the benefits that people derive from nature, such as freshwater- and climate-regulation; Layke, 2009; Dean, Fielding, & Wilson, 2019) or "flagship species" (likeable species or "mascots" with popular appeal; Kellert, 1993; Clucas, McHugh, & Caro, 2008; Brambilla, Gustin, & Celada, 2013; Colléony, Clayton, Couvet, Saint Jalme, & Prévot, 2017) can strengthen public support by aligning conservation topics with audience values and interests. Despite the recognized importance of considering audience needs and values, there is not always clear guidance on how a scientist can improve their reciprocal communication skills.

Here, we suggest that NVC can be adapted for communicating conservation science, as it provides step-by-step guidance that enables people who hold different views to interact honestly and calmly to build rapport and trust, fostering the positive relationships necessary to deliver conservation outcomes. We focus our discussion on direct communications between individuals or small groups of people, rather than between individuals and larger entities that have comparatively disproportionate power, such as corporations, conglomerates, or political parties, as more complex and targeted communication strategies may be required in these circumstances (Malin & Ryder, 2018; Pezzullo, 2016). Nevertheless, it is possible to use NVC in exchanges with representatives of larger entities, assuming the representatives participate without a hidden agenda and with a genuine interest in constructive dialogue.

## 2 | WHAT IS NONVIOLENT COMMUNICATION?

Created in the early 1960s (Rosenberg, 2002), NVC is a form of communication that assumes people are, by

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nature, compassionate and share the same basic human needs. This assumption is useful within the NVC process because it allows for communication to be directed towards meeting a relatable human need, which can facilitate interpersonal connection (Rosenberg, 2002). To resolve conflict using the NVC model, parties refrain from using judgmental language and, instead, look to understand the underlying needs of all parties involved. NVC emphasizes the need for all parties to come to a mutual understanding of what the conflict is about and what aspects of the issue are important to each of them. It provides a concrete structure that improves the likelihood of all parties reaching that mutual understanding. NVC is based on four main steps: (i) observations, (ii) feelings, (iii) needs, and (iv) requests; however, their use can be fluid and the order can be changed throughout a dialogue. Some steps may need repeating based on responses, and some steps may require greater emphasis based on the audience interpretation or conversational progress.

The first step in the NVC model is communicating how you observe the situation, without blame or judgment of yourself or the other party. Observations are an important element in NVC, allowing for plain and factual communication between parties. When observation is combined with blame or judgment, however, the likelihood that others will hear our intended message decreases. Instead, they may hear criticism and thus resist what is being said. We illustrate this with an example pertaining to climate change action, a contentious topic. A judgmental observation from a conservation scientist might be, "You're not helping the fight against climate change by driving all the time'," which is different to judgment-free observation such as, "I noticed that you drive your car to work every day." An observation from the other position with blame or judgment might be, "you obviously don't care about job security and are willing to put livelihoods at risk," which is different to observation, "You seem concerned about climate change and peoples actions."

The second step is to identify your own feelings and/or the other party's, while being open and without expressing judgment, criticism, or blame. Communicating feelings, rather than opinions on contested actions or policy positions, can support continued dialogue between you and the other party. Following the climate change example, the second step of NVC from a conservation scientist's point of view might be, "I am frustrated because I want to see concern for the risk that this creates to my children's future." Resistance towards particular climate change actions have been referenced with respect to job security (Tvinnereim & Ivarsflaten, 2016), economic impacts (Bohr, 2016), scientific legitimacy (a lack of public trust in science as a consequence of the skewed representations or misinterpretations of scientific evidence from anti-environmentalist groups; Ladle, Jepson, & Whittaker, 2005), and the influence of vested interests (such as pushing a political agenda or climate scientists trying to further their own careers; Weingart, Engels, & Pansegrau, 2000). Therefore, an example from the opposing party might be, "I am scared that I am going to lose my job if we act on climate change and reduce the fossil fuel production that is necessary for our economy."

The second step is linked to the third, which ties the underlying need of a person to the identified feelings. The idea is that negative feelings may be a manifestation of an underlying need that is not being fulfilled. For a conservationist who works to protect coral reefs, this step in NVC might be expressed as, "I need to know that my children will be able to visit the Great Barrier Reef," and from the opposing party, "I need assurance that I will be able to financially support my family." For those citing concerns about employment or economic security, recognizing their need for job security, safety, well-being, and resilience may be the best way to foster a connection with them. Similarly, for those citing concerns regarding hidden agendas or false/misleading information, identifying and acknowledging their needs for truth, responsibility, and justice may be the most useful way to continue a productive dialogue through a shared connection.

The fourth step represents an informed and empathetic request that could satisfy both parties' needs. Building upon the climate change example, a conservation scientist might ask, "Would you be open to joining me on the bus once a week instead of driving?" When making a request of the other party under the NVC model, such as a request for action, it is important that it comes from a place of equality rather than in the form of a demand. Demands inherently threaten people with blame or punishment if they fail to comply, which may prevent parties from finding common ground (Rosenberg, 2003). Requests may even be as simple as asking for further clarity or information (known as a reflection request) to ensure messages are being interpreted correctly: "Would you mind repeating that? I want to make sure I'm understanding your concerns correctly." You may make several requests for action or reflection requests during a dialogue.

Part of the challenge of applying NVC to conservation communication is that conservation dialogue occurs in diverse settings with diverse types of stakeholder relationships, often in the presence of conflict; this means conservation scientists and practitioners may need to apply these principles flexibly (Figure 1). The likelihood of effective communication increases with engagement. In

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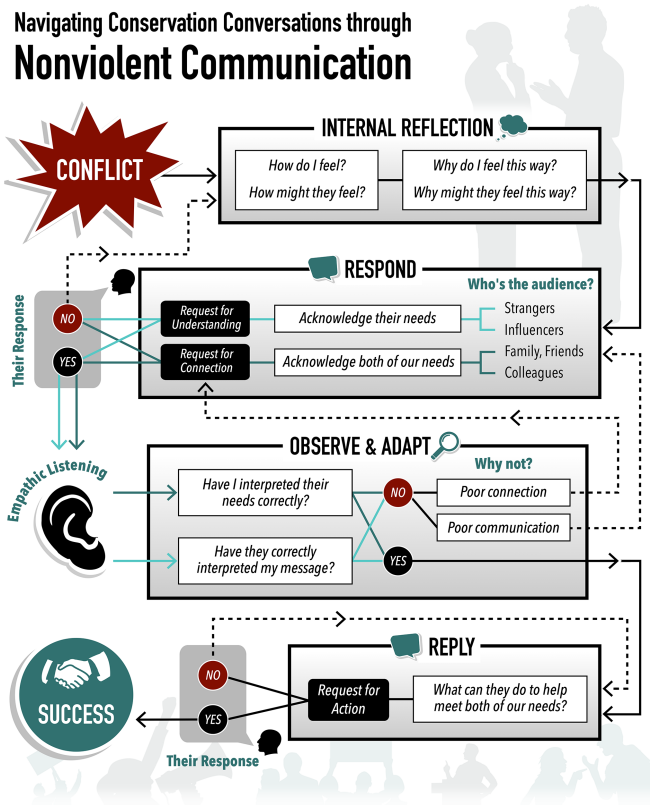



**FIGURE 1** An adaptation of the Nonviolent Communication framework for conservation science communication contexts. The four steps in Nonviolent Communication (observation, feelings, needs, and requests) should be worked through fluidly with the objective of creating a respectful connection with the other party. In this framework, observation, feelings, and needs fall under the headings "Internal Reflection" and "Observe and Adapt," while requests fall under the headings "Respond" and "Reply." There are many audiences with whom a conservation scientist or practitioner may interact, and the relationship with different audiences may influence responses. We use family/friends, work colleagues, strangers (e.g., community members, stakeholders, general public), and influencers (e.g., politicians, employers) as example audiences where familiarity can guide the most effective responses. In this adaptation, we suggest only the needs of the influencer or stranger be acknowledged as these interactions are often time limited and there may be less of a willingness for the counterpart to engage; however, this will vary on a case by case basis. While this framework assumes a conflict is in progress, the concepts of Nonviolent Communication may also be used to effectively communicate outside of existing conflict

the climate change debate, both parties likely share values around human prosperity and safeguarding future resources (Nisbet, 2009). Speaking to the needs of both parties can facilitate ongoing dialogue, enabling identification of solutions that are agreeable for both sides, while avoiding conflict that is often charged with emotion or preconceived judgment (West, 2011).

## 3 | EXAMPLES OF NONVIOLENT COMMUNICATION IN PRACTICE

To date, no study has empirically investigated the use of NVC in conservation contexts, though some have alluded to its potential relevance (e.g., Kansky, Kidd, & Fischer, 2021). Despite decades of conservation social science research, such as conservation marketing and environmental psychology and sociology (Bennett et al., 2017), as well as the growth of conservation messaging research (Kidd et al., 2019) and the promotion of conservation scientists' engagement in public outreach (e.g., Soapbox Science) and activism (e.g., March for Science, Global Climate Strike), NVC remains an untapped tool for enhancing communication of conservation science across disciplines, actors, and cultural contexts at the interpersonal level. The lessons learnt from cases in which NVC has successfully been applied in other contexts are relevant for its potential utility within conservation science.

The NVC model was originally designed to be used during face-to-face interactions (Rosenberg, 2002), but there are examples of NVC being used in media, marketing, and other non-direct forms of communication. NVC has also been used in a range of different contexts, including prisoner reform (Suarez et al., 2014), health science (Nosek, 2012; Sidhu, 2020), social work (Museux, 2016; Zandkarimi, 2019), family relationships (Vazhappily & Reyes, 2017), business (Abadi, 2018), education (Koopman et al., 2021), raising children (Rose, 2006), and refugee support (Alshughry, 2018).

For example, a recent study by Wacker and Dziobek (2018) sought to use NVC to address mental health problems of health professionals, which are often the result of personally-demanding encounters on the job. The authors evaluated an employee NVC training program within a public health organization to determine if it would help employees effectively manage interactions with clients, colleagues, and supervisors. They found that NVC training improved communication of negative emotions and reduced feelings of anxiety linked to stressful interpersonal interactions. Another study by Marlow et al. (2012) investigated the impact of NVC on the development of empathic communication skills in male parolees. The results revealed a significant increase in parolees' empathy levels at the end of 8 weeks of tailored NVC training. In his study on the social practices within an ecovillage in the United States, Boyer (2016) described the importance of interpersonal relationships in communities where collective ownership of resources leads to inevitable conflicts. He found that NVC had greatly improved relationships between community members and helped residents to navigate various

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conflicts pertaining to collective automobility and waste reclamation.

## 4 | WHAT ROLE CAN NONVIOLENT COMMUNICATION PLAY IN CONSERVATION SCIENCE?

The NVC approach is closely aligned with existing models of scientific communication. There are three main types of scientific communication: "deficit," "dialogue," and "participatory" (Metcalfe, 2014). Deficit models of communication typically assume that the public has a gap in their scientific knowledge, which can be addressed by unidirectional provision of factual information. In contrast, dialogical and participatory science communication emphasize multidirectional communication, including listening to audiences, addressing specific audience needs, and recognizing that audiences also have valuable knowledge or experience that can inform decision-making (Simis, Madden, Cacciatore, & Yeo, 2016). NVC is most aligned with dialogical and participatory approaches because it is a two-way communication style that *seeks* rather than *assumes* the "need" of the other party through empathic listening.

The NVC process could be easily adopted within two-way communications, including meetings between scientists, stakeholders, public panels/debates, and consultative panels. While recognizing the value of these dialogical approaches, there may be situations where information provision occurs without opportunities for dialogue. These may involve sharing scientific information as part of a campaign to promote awareness, policy support, or conservation behaviors. In these circumstances, audience needs and values may be ascertained through social research or expert elicitation methods, which could incorporate NVC approaches. Such processes allow these communication approaches to better align with audience needs and values (Kidd et al., 2019).

NVC can be used to cultivate greater recognition in both parties that the way an individual engages with conservation issues—from considering new information to active support for conservation initiatives—is influenced by multiple factors, including values, social and personal norms, identity, and socio-economic circumstances (Dean, Lindsay, Fielding, & Smith, 2016; Simmons, Wilson, & Dean, 2020). A sense of urgency to act now and address environmental crises can propagate aggressive and potentially less effective methods of communication by scientists. Consistent use of such styles of communication can undermine public perceptions of scientists (McConnell, 2003; Yuan, Besley, & Lou, 2018). Verbal aggression through blaming, condescension, illegitimizing other worldviews or experiences, or challenging the ways in which the audience self-identifies can elicit a defensive response from the audience, leading to inflexible thinking (Gudykunst, 2004; Martin, Anderson, & Thweatt, 1998; Rancer & Avtgis, 2006). It can also lead to scientists, both individually and as a professional group, being perceived as less credible, untrustworthy, and hard to understand (König & Jucks, 2019). Therefore, it would be beneficial for scientists to take into account the complexity of cultural values, belief systems, and social networks that affect people's perception of scientific information (Bickford, Posa, Qie, Campos-Arceiz, & Kudavidanage, 2012; Gudykunst, 2004).

Resolving human-wildlife conflict is a persistent challenge in conservation science (Madden, 2004). NVC would lend itself well to these contexts, as human–wildlife conflict often involves human–human conflict because people have different goals, attitudes, values, and feelings that stem from different needs or perspectives about the world (Madden, 2004). For example, there are frequent conflicts between people who seek to kill wildlife to protect livestock, crops, or other assets, and others who are concerned about protecting the targeted wildlife (Hamilton, Lambert, Lawhon, Salerno, & Hartter, 2020; Marchini, 2014). In Table 1, we illustrate some of the important differences in how these conservation concerns might be communicated with and without following the NVC approach. Without applying the steps of NVC, it may be easy for the concerned person to immediately impart judgment or blame on the audience (such as perceived ignorance) because they do not share the same concerns. Through the NVC application, however, emphasis is placed on generating greater connection with the audience, sharing their feelings and needs, and requesting alternative actions that might satisfy everyone's needs. This approach gives the person with the intent to kill the wildlife an opportunity to better understand the needs and points of view on the other side of the argument, rather than feeling attacked. While this does not guarantee that the ideal conservation outcome will result from this exchange, it could open the door to dialogue between parties, offering each a more complete picture of the situation that could help with identifying compromises that can benefit people and wildlife.

Another common source of conflict surrounds the negative effects of chemical run-off on surrounding ecosystems (Packer, 2019). Although the negative effects of chemical run-off on the environment (and on people) is increasingly well known, pesticide and herbicide application (often above recommended limits) is frequently applied to areas close to important natural ecosystems (Edge et al., 2020; Vandergragt, Warne, Borschmann, & Johns, 2020). We highlight this in Table 1 with an

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**TABLE 1** Two conservation examples of how a Nonviolent Communication (NVC) approach compares to a non-NVC approach

| Context | Non-NVC communication | NVC step | NVC communication |
|---|---|---|---|
| Example 1—A person or community seeks to kill wildlife (such as a panther or wolf) to protect agricultural (such as livestock) or other assets, while another member of the community may be concerned about protecting that same wildlife. | Why are you trying to kill wildlife? We live in one of the most beautiful and threatened ecosystems on Earth, and we have a duty to protect it. Do not you know how important this species is for us? You should educate yourself on wildlife conservation and find a better way to protect your livestock. | (i) Observation | When I see traps being set that will kill wildlife... |
| | | (ii) Feelings | ...I feel really worried because it is so important to me that this ecosystem, including all of its plants and animals, remains intact. |
| | | (iii) Needs | I grew up here, and I need to know that the next generation will be able to have the same wonderful experiences I did with nature. |
| | | (iv) Requests | Would you consider trying improved fencing as a solution instead of killing the wildlife? |
| Example 2—A national park ranger is worried about a chemical herbicide being applied near to the national park—An endangered wetland (adapted from https://infinitevolition.com/nonviolent-communication-climate-change/). | I cannot believe you would use chemical herbicide to treat weeds. And you are right next to this wetland, which is so irresponsible. Do not you know that it all runs into the river? Stop poisoning the environment and just use a shovel. | (i) Observation | I can see you spraying chemicals right next to this wetland... |
| | | (ii) Feelings | ...and I am afraid that this will cause a lot of damage to the ecosystem. I'm sure this is against council regulations. |
| | | (iii) Needs | I want this wetland and all of its biodiversity to be safe, and I would like to abide by the law. |
| | | (iv) Requests | Would you consider checking the council regulations, and not using chemicals—instead could you use tools like shovels and spades to do the same job? |

example of someone applying herbicide close to a national park. In this example, and in many situations especially in the heat of the moment, people often make passionate, exclamatory remarks when observing an action that they do not approve of. Even though the concerned person appears to be knowledgeable about regulations and the effects of chemical runoff on surrounding natural areas, such an aggressive and judgmental approach is unlikely to be as effective as an NVC approach. Like the previous example, following the steps of NVC gives the person applying herbicide a better understanding of your feelings, needs, and requests for alternative action.

NVC can help to avoid escalation of conflict through the facilitation of engaged listening and understanding of the underlying needs and values of those we interact with. When an initial disagreement has escalated into a heated conflict, people tend to disengage from the conversation and become more focused on preparing their own arguments instead of listening to others' perspectives. Solutions to environmental problems often require changing or implementing a set of actions, which typically necessitates negotiations about what these actions should be (Gregory et al., 2012). Therefore, when conservation practitioners aim to achieve societal transformation and positive environmental outcomes using a particularly forceful style of communication, they risk closing the door on constructive dialogue with the very groups they are trying to target for change (Fielding & Hornsey, 2016).

While NVC has the potential to help conservation scientists communicate with others, it cannot dismantle existing institutional or systemic biases or imbalances based on power, class, race, gender, or identity that influence whose voices are heard in conservation discussions. There is growing recognition of social inequity in conservation (Friedman et al., 2018), which can be distributive (how costs and benefits are distributed), procedural (who is involved in decision-making), recognitional (whose identities, interests, and histories are recognized), or contextual (what contextual factors influence one's ability to actively participate in the process) in nature (Guy &

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McCandless, 2012; McDermott, Mahanty, & Schreckenberg, 2013). Addressing such issues is outside the scope of NVC, yet other approaches exist that can help overcome these institutionalized barriers to communication, facilitating more meaningful, inclusive, and equitable exchanges of information prior to starting the interpersonal NVC process. For example, systems thinking approaches can facilitate conflict management by enabling diverse stakeholders to interact with one another in a shared systems understanding of the situation (Daniels & Walker, 2012). Additionally, collaborative learning (a hybrid of systems thinking and alternative dispute resolution concepts) is explicitly designed to address decision-making and conflict management needs in complex and controversial policy settings (Walker & Daniels, 2019). NVC could be used within these approaches to help facilitate open discussion between a variety of stakeholders.

When an interpersonal, two-way communication setting has been established, the four-step structure of NVC (observations, feelings, needs, requests) has the potential to be useful in structuring clear conservation messages that are free of judgment and blame in conservation contexts, particularly where inequities or environmental injustices are present. In a situation where a conservation scientist is communicating with a victim of environmental injustice, the intersectional approaches needed to develop more democratic, multifaceted, and multiscalar solutions to these injustices lie outside the scope of what NVC can achieve (Malin & Ryder, 2018; Pezzullo, 2016); however, a conservation scientist can increase the effectiveness of their conversations with this person by following the NVC framework. This framework may take the form of the conservation scientist making a judgment-free observation of the person's experiences, understanding how they feel, identifying their needs that are not being met, and making requests for action based on their enhanced understanding of the person's unique history and needs. Wider adoption of these processes would facilitate better communication and understanding between individuals with different experiences and perspectives on a range of conservation issues.

## 5 | CONCLUSION

We argue that NVC has significant potential to improve dialogue and communication in conservation science. Given its effectiveness for creating a constructive dialogue between parties with conflicting points of view, we believe NVC has the potential to contribute towards effective communication of conservation science to guide public discourse, policy, and social change, while diminishing some of the partisan debate within science. However, effective communication strategies may not always result in behavior change, and the NVC approach may be less effective at creating change in certain contexts. As there are few examples of the application of NVC to conservation science, the next important step is to empirically test its utility in real-world situations of conservation conflicts. We suggest that NVC concepts and the context in which they can be successfully used should be explored in collaboration with social scientists. This could lead to improved outcomes for conservation science communication and, ultimately, both people and nature.

## ACKNOWLEDGMENTS

This contribution was part of a workshop funded by the Centre for Biodiversity and Conservation Science, at the University of Queensland. C. J. K. is funded by an Australian Research Council Future Fellowship. We would like to thank Professor James Watson for providing additional funding to run this workshop. B. A. W. and M. S. W. are supported by an Australian Government Research Training Program Scholarship. We would also like to acknowledge and thank Cate Crombie, Gail Wallace and Fraser McDonald for ensuring we adequately represented the Nonviolent Communication process throughout this manuscript.

## CONFLICT OF INTEREST

The authors have no conflicts to declare.

## AUTHOR CONTRIBUTIONS

Carissa J. Klein, Brooke A. Williams, B. Alexander Simmons, and Michelle Ward conceived the manuscript within input from all authors. B. Alexander Simmons created Figure 1 with input from Brooke A. Williams. Brooke A. Williams led the manuscript with the input from all authors.

## DATA AVAILABILITY STATEMENT

N/A.

## ETHICS STATEMENT

N/A.

## ORCID

*Brooke A. Williams* https://orcid.org/0000-0002-0692-7507
*B. Alexander Simmons* https://orcid.org/0000-0002-1918-3463
*Michelle Ward* https://orcid.org/0000-0002-0658-855X
*Jutta Beher* https://orcid.org/0000-0003-2119-0440
*Angela J. Dean* https://orcid.org/0000-0003-4017-4809

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*Madeline Davey* https://orcid.org/0000-0001-6778-1647
*Courtney B. Melton* https://orcid.org/0000-0002-0715-6927
*Phoebe J. Stewart-Sinclair* https://orcid.org/0000-0002-1569-4274
*Niall L. Hammond* https://orcid.org/0000-0003-0734-2903
*Emily Massingham* https://orcid.org/0000-0002-9498-2994
*Carissa J. Klein* https://orcid.org/0000-0002-6299-6451

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**How to cite this article:** Williams, B. A., Simmons, B. A., Ward, M., Beher, J., Dean, A. J., Nou, T., Kenyon, T. M., Davey, M., Melton, C. B., Stewart-Sinclair, P. J., Hammond, N. L., Massingham, E., & Klein, C. J. (2021). The potential for applying "Nonviolent Communication" in conservation science. *Conservation Science and Practice*, *3*(11), e540. https://doi.org/10.1111/csp2.540

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