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REVIEW

Advancing procedural justice in conservation

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Abstract

Just participation in conservation decision-making is a moral imperative and critical to achieving social and ecological goals. However, understanding of what constitutes a just decision-making process in conservation remains limited. Integrating key literature from environmental justice, psychology of justice, and participatory conservation, we identify 11 procedural justice criteria, many of which have been overlooked in conservation literature. We develop a framework to help promote procedural justice in conservation decision-making which organizes the criteria into three key domains (Process properties, Agency of participants, Interpersonal treatment), which are underpinned by the justice dimension of recognition. We highlight seven policy levers that can be used to enhance procedural justice (e.g., scalar and contextual fit, conflict resolution, facilitation). However, advancing just decision-making using this framework requires addressing a number of key challenges, in particular those related to broader structural power inequalities, and elucidating and accounting for plural and situated conceptions of procedural justice. We outline a number of pathways to overcome these challenges, including promoting knowledge coproduction and self-reflexivity.

1 | INTRODUCTION

Stakeholder participation in decision-making processes is considered critical for achieving successful conservation (Convention of Biological Diversity 2010; Brooks et al., 2013; Persha et al., 2011). From a moral perspective, participation of those most affected by decision-making processes is a fundamental human right (e.g., Rio Declaration 1992, Arhus Convention 1998) and a key component of equitable or fair decision-making processes. From an instrumental perspective, stakeholder participation can enable social and ecological benefits by facilitating the inclusion of local and diverse knowledges, and by promoting management legitimacy, thereby fostering support and compliance with rules (de Vente et al., 2016; Epstein, 2017; Reed, 2008).

Much attention has been given to participatory decision-making processes in conservation literature (hereafter "participatory conservation literature") and practice over the last few decades. Participation typologies have commonly been used to describe different levels of participation across a spectrum of stakeholder power and control (e.g., Pretty, 1995; Lawrence, 2006; Pomeroy & Douvere, 2008). For instance, Pomeroy and Douvere (2008) adapted Arnstein's (1969) Ladder of Participation to the conservation context and identified six types of participation that range from "communication" at the bottom of the ladder to "negotiation" at the top. Principles or criteria of best practice have also been commonly used to conceptualize meaningful participation in conservation (e.g., Dalton, 2005; Reed, 2008), such as Reed's (2008)

influential eight participation principles of good practice. However, despite increasing attention to participation in conservation, efforts to enhance participation in conservation practice have been shown to not always lead to positive outcomes across the range of conservation approaches (e.g., community-based conservation, collaborative management) (Wells et al., 1992; Brechin et al., 2003; Meguro & Inoue, 2011; Quimby & Levine, 2018). For example, a study of forest-dependent communities found that those who participated more in conservation decision-making were less likely to be satisfied with participation (Friedman et al., 2020). And a growing body of literature on marine ecosystem governance has found that efforts to increase participation are often associated with low levels of trust and legitimacy, which is known as the "legitimacy paradox" (Fudge, 2018).

We suggest that achieving meaningful participation that leads to positive outcomes in conservation requires a more nuanced understanding of procedural justice[1] in conservation. Procedural justice is concerned with the fairness of how decisions are made and by whom (Martin et al., 2015). Perceptions of procedural justice influence emotions and attitudes, with important implications for subjective well-being and people's behavior (Lind & Tyler, 1988), especially in-group settings (Tyler, 2015). Importantly, because perceptions of procedural justice are thought to be a key driver of perceived legitimacy (Tyler, 2006; Levi et al., 2009), limited attention to procedural justice in participatory marine decision-making processes could provide one potential explanation for the legitimacy paradox described above. Further, procedural justice has critical implications for the ecological outcomes of conservation because environmental management and conservation often rely on cooperation and collaboration with local stakeholders (Pascual et al., 2014). For example, a lack of procedural justice has been linked to anti-environmental behavior (Mariki et al., 2015; Raycraft, 2020) and frustration and dissatisfaction with participatory processes (Booth & Halseth, 2011). Additionally, promoting procedural justice can contribute to decolonizing conservation science and practice by fostering knowledge coproduction, including in relation to the integration of scientific and traditional knowledges in framing conservation problems and shaping solutions (Reyes-García & Benyei, 2019).

However, understanding procedural justice and how it can be promoted in conservation is limited (Dawson et al., 2018a). Justice and equity are often mentioned in the participatory conservation literature but are rarely defined. For example, although Reed (2008) points to equity in his eight participation principles (specifically, that "participation needs to be underpinned by a philosophy that emphasizes empowerment, equity, trust and learning"), he does not unpack what equity entails. Indeed, a recent review of the conservation literature (Friedman et al., 2018) found that procedural justice tends to be operationalized simply as involvement in decision-making, with the level of participation generally not specified. Thus, a more nuanced understanding of procedural justice in the context of conservation is needed.

To this end, we build on the participatory conservation literature by integrating insights on procedural justice from two key bodies of literature: environmental justice and psychology of justice. These literatures have arisen from the broad body of literature on social justice, which has developed over the centuries in multiple disciplines from both a normative and empirical standpoint (Sabbagh & Schmitt, 2016). In general, philosophers, such as Rawls, Cohen, and Habermas, have focused on identifying normative justice principles (i.e., what is morally right in universal terms), while multiple social science disciplines (e.g., economics, sociology, psychology) have examined empirical conceptions of justice (i.e., what is perceived as just in a particular context)—with some exceptions, (e.g., some philosophers, such as Miller, have focused on contextual approaches, while some psychologists, such as Haidt, have focused on universal approaches).

Justice literature from social psychology (hereafter "psychology of justice") has tended to focus on empirical understanding of procedural justice (Sabbagh & Schmitt, 2016), including in relation to what people perceive as fair or unfair, and the drivers (e.g., contextual factors) and consequences (e.g., emotions, well-being, behavior) of justice perceptions, often in legal (e.g., legal dispute resolutions) and organizational (e.g., workplace) settings. Yet, the integration of psychology of justice in the participatory conservation literature remains nascent.

Environmental justice has advanced understanding of justice in multiple environmental contexts, such as climate change (Jamieson, 2010), water management (Syme et al., 1999), and Indigenous land rights (Agyeman et al., 2016). Environmental justice has tended to take a normative approach drawing on the work of political philosophers such as John Rawls, Nancy Fraser, and Iris Marion Young. Early scholarship focused on the unequal distribution of environmental hazards among different societal

[1] Use of the terms "equity" and "justice" varies by discipline (Luckasiewicz et al., 2017). In conservation, these concepts are often used interchangeably (Friedman et al., 2018), although "equity" is most mainstream in conservation policy (e.g., Convention of Biological Diversity, 2010) and practice (Martin, 2017). Some scholars suggest that "equity" is a less political and narrower concept than "justice," with less emphasis given to the structural issues of injustice (Martin, 2017). In this paper, we use the term "justice" because we acknowledge the importance of engaging with power asymmetries in participation, and justice is at the core of the criteria we have identified.

groups (Agyeman et al., 2016), whilst more contemporary literature has focused more broadly on three key justice dimensions: distribution (i.e., fair distributions of costs and benefits), procedure, and recognition (i.e., acknowledging and respecting sociocultural diversity) (Schlosberg, 2007). Recently, the conservation literature has drawn on environmental justice (Sikor et al., 2014; Schreckenberg et al., 2016; Dawson et al., 2018b), including to assess the justice perceptions of local stakeholders (e.g., Martin et al., 2014, 2019; Gurney et al., 2021b) and protected area managers (Zafra-Calvo et al., 2019). Nevertheless, most studies to date have focused either solely on the dimension of distribution, or on the three justice dimensions together, with very little scholarship drilling down on the dimension of procedure (but see Friedman et al., 2020).

We undertook a nonsystematic review of three bodies of literature (participatory conservation, environmental justice, and psychology of justice) to identify and integrate procedural justice criteria. We then conducted three Scopus searches to find key papers in the environmental justice, participatory conservation, and psychology of justice literatures. We used the following keywords: procedural justice [OR] procedural equity [OR] procedural fairness; [AND] environmental justice [OR] participation [OR] stakeholder engagement; [AND] conservation [OR] natural resource management [OR] environmental management. The participatory conservation literature often refers to procedural justice without using specifically the term "procedural justice" (or "procedural equity" or "procedural fairness"). Therefore, our second Scopus search used the following key words: justice [OR] fairness [OR] equity; [AND] stakeholder engagement [OR] participation; [AND] conservation [OR] natural resource management [OR] environmental management. To find key reviews theories and frameworks in psychology of justice literature, we used the terms: procedural justice [OR] procedural equity [OR] procedural fairness; [AND] social psychology. We selected reviews and frameworks that provided procedural justice criteria. From the key papers found, we forward and backward tracked them (i.e., we looked at the papers they cited and the papers that cited them) to find other key papers.

2 | A PROCEDURAL JUSTICE FRAMEWORK

We identified 11 procedural justice criteria, which we grouped under the three domains of process properties, agency, and interpersonal treatment (Figure 1, Table S1). In addition, we identified recognition of sociocultural diversity as a justice dimension that underpins procedural justice domains (Figure 1), and identified policy levers that promote procedural justice via the three domains and the justice dimension of recognition.

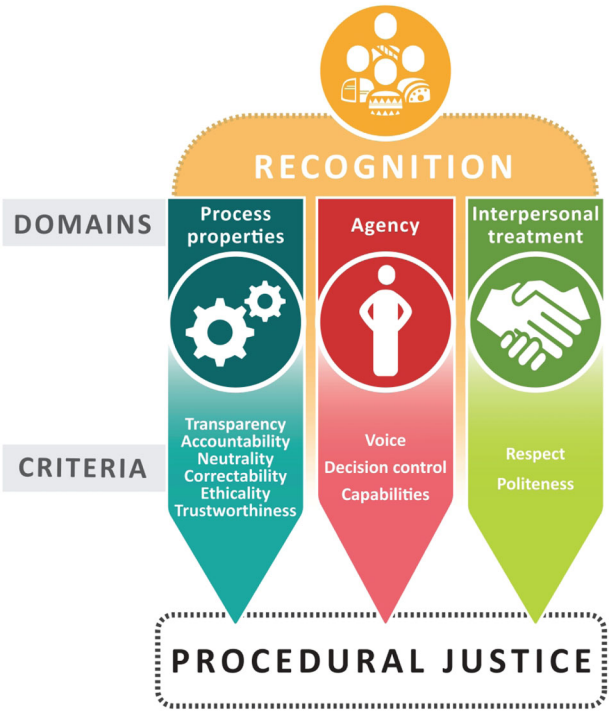

FIGURE 1 A framework for promoting procedural justice in conservation decision-making. Integrating key literature from environmental justice, psychology of justice, and participatory conservation, we identify 11 procedural justice criteria. These criteria are organized into three key domains (Process properties, Agency of participants, Interpersonal treatment), which are underpinned by the justice dimension of recognition

2.1 | Recognition

Recognition refers to acknowledging and respecting sociocultural diversity, including in relation to values, identities, cultures, types of knowledge, institutions, power, capacities, and rights (Martin et al., 2016). Recognition is concerned with the societal structures that lead to injustices (Young, 1990; Fraser, 1997); for example, value systems institutionalized in conservation that fail to recognize diverse forms of knowledge, including that held by Indigenous peoples and local communities (Martin, 2017). While recognition tends to be considered a dimension of justice at the same conceptual level as distributional and procedural justice (e.g., Sikor et al., 2014), emerging scholarship suggests that recognition underpins the other two dimensions (Lecuyer et al., 2018; Lau et al., 2021a). Aligning with the latter scholarship, we posit that the domains of recognition and procedural justice are so inextricably intertwined that procedural justice cannot be considered without attention

to recognition justice. We thus include recognition justice in this framework (Figure 1).

The need to consider recognition begins with the very concept of conservation. Conservation is deeply imbued with Western concepts and values around people's relationships with nature (e.g., humans being *apart* from nature), which may not align with local values (e.g., many Indigenous peoples hold a relational value of humans as *part* of nature) (Lee, 2016; Jupiter, 2017). Given conservation approaches implemented across the globe tend to be developed in the Global North—for example, conservation plans designed for Fiji are commonly led by Australian organizations (Álvarez-Romero et al., 2018)—attention to recognition in the Global South is particularly needed (Martin et al., 2016; Gurney et al., 2021b). Recognizing other forms of knowledge, values, and human–nature relationships, especially those of Indigenous peoples, is crucial because what is recognized will shape who is involved in decision-making and whose voices are heard (Lecuyer et al., 2018; Lau et al., 2021a). Further, recognition is also about acknowledging that communities are heterogeneous. In conservation, communities have often been conceptualized based on residential location or resource use and assumed to be unified social structures (Agrawal & Gibson, 1999). However, communities host multiple actors who hold different interests, values, power, and identities (Gurney et al., 2017).

2.2 | Domains of procedural justice

2.2.1 | Decision-making process properties

Decision-making process properties are key conditions to help enable a fair process, specifically to foster recognition, agency, and interpersonal treatment. For instance, process properties help level the playing field and facilitate interpersonal relationships. Reciprocally, processes criteria are unlikely to be fulfilled for people suffering from low recognition, agency, and poor interpersonal treatment. Process properties have six criteria: transparency, accountability, neutrality, correctability, ethicality, and trustworthiness (Figure 1).

Transparency refers to whether the decision-making process is visible, reasoning is communicated clearly, and goals and expectations are clear and agreed upon among participants from the outset (Rowe & Frewer, 2000; Colquitt et al., 2001; Reed, 2008). Transparency also involves providing information in an appropriate form and timeframe (Schreckenberg et al., 2016). For example, in Nova Scotia, fishers perceived procedural injustice because they could not understand the lawyers and government actors involved in decision-making regarding fisheries management (Barnett & Eakin, 2015).

Accountability refers to holding responsibility for the decisions made and being answerable to the people affected by those decisions (Agrawal & Ribot, 1999). When decision-making powers are transferred to local representatives, administrative bodies, or NGOs, downward accountability (i.e., being accountable to the local population) is critical to ensure procedural justice (Ribot, 2001). For example, following the demarcation of a protected area in Laos, managers were not downwardly accountable because they did not comply with the agreements made with local communities and failed to deliver on promises of livelihood support (Dawson et al., 2018b). Mechanisms to promote accountability include elections, information provision, third-party monitoring, and sanctioning (Ribot et al., 2006). Poor accountability can impede decentralization processes (Agrawal & Ribot, 1999) and lead to inequitable distribution of benefits (Schlosberg, 2007).

Neutrality refers to a decision-making process that is perceived as lacking bias, involving accurate use of information, honesty and consistency in treatment across time and people (e.g., lack of favoritism to certain social groups) (Leventhal, 1980; Tyler, 1989). Neutrality reduces the influence of harmful stereotypes and prejudice in decision-making (Lind & Tyler, 1988; Tyler, 1989). A lack of neutrality can lead to perceptions of unjust process. For example, Barnett and Eakin (2015) found that fishers perceived decision-making processes related to quotas were unjust due to a lack of accuracy and neutrality of the information used by the federal government to determine quotas. Specifically, fishers thought that the techniques used to determine quotas did not account for the temporal and spatial heterogeneity of the resource and thus were inappropriate.

Correctability refers to the ability to modify or reverse decisions (Leventhal, 1980). Opportunities to appeal a decision is a critical principle of procedural justice, particularly when there is corruption. In the Calakmul Biosphere Reserve in Mexico, a major concern for local stakeholders was whether a mechanism to allow revisions to management decisions was present (Lecuyer et al., 2018).

Ethicality refers to whether the decision-making process conforms with participants' moral standards. People assess the ethicality of a process (Leventhal, 1980), and if ethical standards are not considered appropriate, people may perceive procedural injustice. For instance, ethicality may be associated with absence of bribery, deception, and invasion of privacy. Given moral standards differ with sociocultural context (Lau et al., 2021b), it is critical to consider situated ethical codes for decision-making processes.

Trustworthiness refers to whether decision-makers are perceived as benevolent, caring, and fair (Tyler, 1989). In decision-making processes, participants judge the motivations of decision-makers, including whether they are

concerned with participants' situations, needs, and what is right and fair (Tyler, 2015). These inferences provide stakeholders with insights into how they are likely to benefit in the long term, and these influence perceptions of procedural justice in the short term (Tyler, 1989). The trustworthiness of management authorities has been found to be a major procedural justice concern among local stakeholders in conservation settings (Lecuyer et al., 2018).

2.2.2 | Agency

Agency refers to the "capacity (or power) of an individual to act independently and to make their own free choices" (Brown & Westaway, 2011). If stakeholders have agency, they can defend their interests and postures, increasing the likelihood of obtaining favorable outcomes and perceiving procedural justice (Thibaut & Walker, 1975; Schreckenberg et al., 2016). In addition, agency provides relational benefits, such as self-validation, emotional support, and a sense of belonging, which also promotes procedural justice (Tyler, 2015). However, power inequalities embedded in social structures shape the capabilities of individuals to exercise agency (Cleaver, 2007). If power inequalities are not addressed, influential individuals can bias outcomes for their own benefit and marginalize others. Therefore, leaders and facilitators of decision-making processes (from both external or local organizations) should aim to redistribute power among participants by empowering (i.e., fostering the agency of) marginalized stakeholders by supporting their voice, decision-control, and capabilities (Cleaver, 2007).

Agency has three criteria: voice, decision control, and capabilities (Thibaut & Walker, 1975; Reed, 2008):

Voice and decision control together shape how stakeholders are represented in decision-making processes (Thibaut & Walker, 1975; Leventhal, 1980). Voice is the ability to express one's interests, needs, and priorities and provide information that can indirectly influence decisions. Decision control is the capacity to directly influence decisions. In some situations, having a voice promotes perceptions of procedural justice, even in the absence of decision control. In other words, if people feel decision-makers are seriously considering their opinions, needs and concerns, they may consider decision-making is fair even if the final decision does not align with their interests (Tyler, 2015).

Capabilities refer to the actual ability of participants to have a voice and control over decisions. More specifically, capabilities refers to participants' access to the necessary resources, such as time, information, human, and material resources and skills to exercise agency (Rowe & Frewer, 2000; George & Reed, 2017). For example, building participants' capacity to understand technical knowledge (Buchy & Hoverman, 2000; Reed, 2008) or developing knowledge and awareness through relationship building and collaborative learning (George & Reed, 2017) may be essential to ensuring procedural justice.

2.2.3 | Interpersonal treatment

Interpersonal treatment refers to how people treat each other during interaction processes. High-quality interpersonal treatment is a manifestation of the belief in the other person's value during direct interaction processes (Grover, 2014), and thus, one way in which recognition can be exercised. Interpersonal treatment has important psychological implications; for instance, treating someone with respect provides information about a person's standing in society or a group, which leads to feelings of self-worth and a sense of belongingness (Lind & Tyler, 1988; Tyler & Lind, 1992). These are fundamental psychological and identity needs (Copranzano et al., 2001), which, if fulfilled, can promote well-being and perceptions of procedural justice (Lind & Tyler, 1988; Tyler & Lind, 1992). A handful of empirical studies have assessed the relationship between quality of interpersonal treatment and procedural justice in the context of conservation (Ebel et al., 2018; Lecuyer et al., 2018, 2019). One found that communities close to a protected area in Mexico perceived procedural injustice because government actors did not respect the information they provided and consequently they felt ignored (Lecuyer et al., 2018).

Interpersonal treatment has two criteria: respect and politeness, which are interrelated. Treating people respectfully and politely by listening and demonstrating consideration of their needs, opinions, and contributions promotes feelings of dignity and self-worth (Tyler & Blader, 2003). The literature recognizes two immediate motivations for respectful and polite treatment: due to the merit, related to, for example, ability, efforts, ideas, or position in a hierarchy (Grover, 2014), and the normative belief that all individuals have dignity and should be treated with respect (Bies & Moag, 1986). The psychology of justice research suggests that treating people with respect can serve as a motivation to cooperate in group settings (Tyler & Blader, 2003; DeCremer & Tyler, 2005) .

In summary, our framework integrates three key bodies of literature (psychology of justice, environmental justice, and participatory conservation) to provide a more nuanced understanding of procedural justice and how to promote it in conservation. Justice in recognition paves the way for justice in the three procedural justice dimensions of process properties, agency, and interpersonal treatment and should be considered at the start of decision-making processes. Process properties are key criteria that can promote

fair or just decision-making process. Processes with properties of transparency, ethicality, accountability, and neutrality, with mechanisms to correct decisions, and high levels of trustworthiness can promote perceptions of procedural justice and can foster the other procedural justice domains and the dimension of recognition. In addition, process properties can be fostered by promoting agency, recognition, and high-quality interpersonal treatment. For instance, ethicality is unlikely to be fulfilled if there is a lack of recognition. In order to ensure fair representation of stakeholders' interests and postures, agency in the form of voice and/or decision control is essential and may need to be strategically facilitated in order to equalize the distribution of power among participants. Finally, high-quality interpersonal treatment requires respect and politeness, influencing perceptions of social status, dignity, and procedural justice. Procedural justice criteria are interrelated; applying one criterion can promote other criteria (e.g., downward accountability is essential to promoting just representation) (Ribot, 2001). While some of our identified criteria—namely voice, decision control, capabilities, transparency, and accountability—are well known in the conservation literature, we call attention to additional criteria that have generally been overlooked (i.e., neutrality, correctability, ethicality, trustworthiness, respect, and politeness), and integrate of all these procedural justice criteria in a unified framework (Figure 1).

3 | PROCEDURAL JUSTICE LEVERS

We identified seven policy levers or actions that decision-makers can take to promote procedural justice criteria. These are: (1) contextual fit; (2) scalar fit; (3) conflict resolution; (4) facilitation; (5) free, prior, and informed consent (FPIC); (6) integrating knowledge systems; and (7) adaptable and flexible processes.

Contextual fit: Tailoring decision-making processes to the relevant context is essential to promote procedural justice. For instance, successful recognition requires identifying the social subgroups and justice concerns that are relevant in a particular context (Gurney et al., 2015; Dawson et al., 2018b). Context is also relevant for high-quality interpersonal treatment. Many cultures share the concept of treating people with respect. However, how respect is shown differs among cultures and social groups (Allan & Davidson, 2013).

Scalar fit: Attention should be given to scalar fit, including with respect to temporal and spatial scales. For example, time periods allocated to undertake conservation decision-making are not often adapted to Indigenous people's needs, leading to procedural injustice (Whyte, 2020). In regards to spatial scales, as the world becomes increasingly connected, people living far from a particular place can affect and be affected by the change to that place and thus warrant recognition (Gurney et al., 2017). For example, Gurney et al. (2017) found that people living outside Australia had strong emotional connections to Australia's Great Barrier Reef, highlighting the need for transnational participation processes to recognize and incorporate these stakeholders in the management of this globally iconic ecosystem. Caution should be exercised when considering scale because it is never neutral; what is defined as the appropriate decision-making level and who is considered a stakeholder or not shapes who has power in that process (Gurney et al., 2017) and "who is considered legitimate in making justice claims" (Boillat et al., 2018).

Conflict resolution mechanisms: Conflict often arises in conservation settings when stakeholders have antagonistic perspectives or some stakeholders impose their preferences at the expense of others (Redpath et al., 2013). In these situations, conflict resolution mechanisms should be available to mitigate or eliminate the destructive nature of conflicts and promote procedural justice. For instance, a study of marine protected area governance in 88 countries found that stakeholders' satisfaction with conflict resolution mechanisms was strongly associated with the measures of recognition and transparency in decision-making (Zafra-Calvo et al., 2019).

Facilitation: Skilled, unbiased, open-minded, approachable, and trusted facilitators can reduce misrecognition, promote equitable representation, mediate power imbalances, and support capabilities (Reed, 2008; de Vente et al., 2016; Reed et al., 2018). Facilitators may focus on promoting a well-structured dialogue among stakeholders (Habermas, 1984; George & Reed, 2017) or intervene strategically in situations where there is conflict, power asymmetries, and limited understanding among participants. Strategic initiatives may account for differences in background and education among participants, improve access to informational, human, or material resources, and ensure that reticent and powerless individuals voice their interests. In addition, facilitators can maintain positive group dynamics, move relations toward more respectful treatment, increase trust among stakeholders, promote neutral mediation, and open and effective communication (Reed, 2008; de Vente et al., 2016; Sterling et al., 2017; Dalton, 2005).

Ensure Free Prior and Informed Consent (FPIC): FPIC is a key principle of international human rights policies (e.g., United Nation Declaration on the Rights of Indigenous peoples, Convention 169) and recognizes Indigenous people's right to self-determination (UNHR, 2013). It can help guarantee the recognition and agency of Indigenous peoples, emphasize the importance of respectful and polite treatment, and ensure that procedures follow ethical

standards when Indigenous peoples or local communities are involved in conservation actions. FPIC promotes accountability, transparency, and the provision of clear, consistent, accurate, timely, and accessible information to everyone and helps to ensure conservation actions free of coercion and manipulation (Schreckenberg et al., 2016; Zafra-Calvo et al., 2017).

Integrating knowledge systems: Recognition, agency, and respect can be enhanced by promoting the use of multiple types of knowledge, iterative two-way learning, informed discussion, and deliberative communication (Habermas, 1984; Reed, 2008; Martin & Rutagarama, 2012). In Rwanda, local communities and other stakeholders engaged in deliberative workshops to identify and provide advice regarding national parks' objectives and priorities for management. These worskhops were based on debates and negotiations that integrated diverse knowledges and promoted perceptions of equitable representation (Martin & Rutagarama, 2012).

Adaptive and flexible: New stakeholders, information, or concerns may arise during a decision-making process. Thus, processes may require the establishment of new sharing information mechanisms or different forms of participation that adapt processes to stakeholder needs and justice concerns at a specific time. Finally, reflection and evaluation of decision-making processes are essential to improve existing practices (Rowe & Frewer, 2000; Sterling et al., 2017). Particularly, adaptive and flexible processes can promote the ability to correct wrong decisions (i.e., correctability).

4 | APPLICATION TO CONSERVATION PRACTICE

We suggest that our framework is relevant to promoting procedural justice in all forms of conservation. Regardless of the governance approach (e.g., stated-led, comanagement, community-based), the intended objective (e.g., biodiversity, resource management), or tool (e.g., Protected Area, Other Effective Conservation Measures [Gurney et al., 2021a], Biosphere Reserves [Reed & Price, 2020]), conservation initiatives involve decision-making amongst multiple groups (e.g., communities, NGOs, government, private sector) often operating at different scales (Berkes, 2007). Power inequalities are inherent in these processes and if not properly addressed, participation processes can exacerbate these inequalities. Whether conservation initiatives are state-led protected areas, small community-based management arrangements, or collaborative management arrangements, decision-making processes must be just. This is true with respect to the range of decisions being made, from those related to management plans (e.g., levels of natural resource extraction, benefit and cost distribution, or sustainable livelihood programs), as well as more fundamental deliberations on the premise of conservation and the appropriateness (if at all) of different conservation policy tools in that context.

Fostering procedural justice in conservation decision-making using this framework requires first considering underlying value systems and power inequalities that shape recognition issues. For example, to properly recognize and integrate traditional knowledge in decision-making processes, it is essential to critically reflect on the underpinning value systems that render some forms of knowledge more valuable than others in conservation (Guibrunet et al., 2021). Doing so may require the creation of spaces and the development of skills to reflect on knowledge hierarchies and broader scale power dynamics. In addition, approaches that challenge cultural and social norms may be critical to recognizing marginalized social subgroups, such as women in many contexts (Mangubhai & Lawless, 2021). Recognition of diversity can be exercised through a number of criteria and levels, including for example, treating people with respect and politeness during social encounters (i.e., interpersonal treatment) irrespectively of their own identity and without being influenced by harmful stereotypes and prejudices (i.e., neutrality).

Attention should be paid to process properties before, during, and after the decision-making process. Capacity building of those involved in the decision-making process can support the implementation of these process properties. For instance, capacity building may be essential to ensure that local actors can hold authorities to account and develop and use equitable information sharing mechanisms that promote transparency. Local or external skilled and unbiased facilitators can promote neutral mediation and correction mechanisms should be available to appeal decisions.

Redistributing power among participants by fostering the agency of marginalized stakeholders (i.e., empowerment) and challenging power dynamics is critical to level the playing field. Depending on the situation, procedural justice may be achieved by promoting voice and/or decision control, which may require building capacities. Building the agency of local communities (e.g., self-esteem, confidence, knowledge, collective action) to shape decisions that influence their lives is essential, especially for marginalized groups. Managing inequitable power relations is also essential to redistributing power. The "critical companion" posture is an example of how facilitators can deal with power inequalities during participative processes. It consists of making the underlying assumptions and objectives of the project and its designers explicit to all participants and promotes critical reflection

and the coconstruction of its legitimacy (Barnaud & van Paassen, 2013).

To ensure high-quality interpersonal treatment, communication among stakeholders that fosters the development of feelings of respect and dignity should be encouraged. However, appropriate manners for showing respect and dignity may change depending on the sociocultural context.

Additionally, our framework can be used to inform conservation monitoring and evaluation. Attention to justice is increasing in monitoring and evaluation (e.g., Schreckenberg et al., 2016; Zafra-Calvo et al., 2017; Gurney et al., 2019); notably, Zafra-Calvo et al.'s (2017) set of indicators for evaluating the three dimensions of justice with regards to protected areas has been used to assess stakeholders' justice perceptions of 225 protected areas in 88 counties (Zafra-Calvo et al., 2019). Our framework could be used to inform the expansion of the procedural justice dimension of these efforts to include some key overlooked procedural justice criteria identified here (e.g., neutrality, correctability, ethicality).

Lastly, a key consideration in applying this framework is that it is not intended to provide a "checklist" for achieving procedural justice. Rather we aim to elucidate the suite of procedural justice criteria, the importance of which will depend on the relevant sociocultural context. Identifying those criteria most relevant in a particular context is an important direction for future research, as described below.

5 | CHALLENGES AND FUTURE DIRECTIONS

Applying this procedural justice framework to stakeholder participation in conservation decision-making is not without its challenges. First, perceptions of procedural justice are plural and situated, with different criteria employed to judge the fairness of a decision-making process in different contexts (Lecuyer et al., 2018). For instance, in some cultures, a lack of voice may be seen as unfair, while in others, a lack of voice may align with the cultural norms and be legitimate (Brockner et al., 2001). Thus, understanding what constitutes procedural justice in a particular context (i.e., which of the criteria are most salient and how they manifest) is key. To this end, future research could use this framework to help identify local norms of procedural justice using qualitative, quantitative, or mixed methods (Sikor et al., 2014; Dawson et al., 2018b). For instance, qualitative methods (e.g., interviews, focus groups) could be used to elucidate what procedural justice criteria are most important for stakeholders in a given context and how they shift over time. Quantitative methods (e.g., surveys, economic experiments) could be used to assess the generalizability of identified relationships, assess the trade-offs and synergies among criteria, or elucidate the social, economic, and cultural characteristics that shape conceptions of justice (e.g., see Gurney et al., 2021b in regards to distributional justice). In addition, coproduction research approaches, such as transdisciplinary and participatory action research, can be employed to understand and address stakeholders' procedural justice concerns. For instance, participatory action research is a collective and self-reflective process linked to action that allows participants from diverse backgrounds and identities to identify real-life problems and empowers them to become agents of change to improve their own lives (Baum et al., 2006).

The second key challenge to promoting procedural justice using this framework is the underlying power relationships and structures in conservation decision-making that produce and reproduce injustices. Our framework is intended to focus in particular on the criteria that influence perceptions of procedural justice, and thus, is by no means intended to be an endpoint in the pursuit for procedural justice in conservation. Depending on the context, it may be necessary to challenge broader structural inequalities (e.g., power asymmetries arising from past colonization processes or traditional customs), which can shape people's perceptions of what is fair (Lau et al., 2021a,b). Doing so may involve a number of different pathways. First, fostering structural change in conservation decision-making processes through employing "transformative approaches" that encourage stakeholders to critically address existing social norms and power structures (Mangubhai & Lawless, 2021). Second, challenging the value system that underpins mainstream conservation actions and creating legal frameworks that legitimize alternative knowledges and plural values in conservation (Guibrunet et al., 2021). Third, addressing power inequalities embedded in the conservation community, such as those existing among researchers and local communities. For instance, participatory action research can promote fair research practices by promoting all dimensions of procedural justice (Figure 1) and challenging broader power relations and structures (Apgar & Douthwaite, 2013). Fourth, the conservation community (including importantly, donors who often shape the agenda of conservation practice; Guibrunet et al., 2021) should exercise self-reflexivity. Each of these steps is critical to fostering procedural justice in conservation, including via decolonization science and practice.

The third key challenge to implementing this framework is that doing so requires time and financial resources. Costs can be associated with, for example, ensuring just representation of stakeholders (e.g., travel costs), the time required to develop trusting relationships, understanding,

self-reflection, and facilitation skills. While many conservation budgets are already stretched (Gill et al., 2017), there are significant payoffs of investing resources in promoting a procedurally just decision-making process regarding both social and ecological outcomes of conservation, but more importantly, the ethicality of the initiative.

The fourth key challenge and direction for future research relates to more explicitly exploring the different schools of thought and approaches to research (e.g., empirical vs. normative) that characterize the literatures from which our procedural equity criteria were drawn. As described by Martin et al. (2016) with regards to the justice dimension of recognition, justice scholarship is plural, with the different disciplines and schools of thought (spanning the positivist-interpretivist epistemological divide) varying in terms of underlying assumptions, foci, and approaches to knowledge.

6 | CONCLUSION

Despite increasing attention to justice in conservation, understanding of what constitutes procedural justice and how it can inform stakeholder participation in conservation decision-making remains limited. Drawing from the literatures on psychology of justice, environmental justice, and participatory conservation, we help address this gap by developing a framework that elucidates the multiple domains of procedural justice and how they can be promoted in conservation decision-making processes. To successfully apply this framework, it is critical to embrace the plurality and complexity of procedural justice conceptions, consider the broader scale structural power inequalities that shape conservation, and ensure timely and long-term funding that supports the policy levers for procedural justice identified here. These challenges are not insurmountable, and overcoming them to ensure conservation decision-making is just is crucial, not only from an ethical standpoint, but also to achieving successful conservation that sustains the well-being of people and nature.

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DATA ACCESSIBILITY STATEMENT

We did not collect any primary data to develop this manuscript. All references that aided in refining our positions are provided.

CONFLICT OF INTEREST

We declare no conflict of interest with this work.

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SUPPORTING INFORMATION

Additional supporting information may be found in the online version of the article at the publisher's website.

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