Received: 10 February 2023 | Revised: 2 August 2024 | Accepted: 18 November 2024

DOI: 10.1111/csp2.13276

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

CONTRIBUTED PAPER

Empirical test of the participation paradox in conservation and development

Nabin Baral[1] | **Joel T. Heinen**[2] | **Marc J. Stern**[3]

[1]United States Forest Service, Pacific Northwest Research Station, Goods, Services, and Values Program, Seattle, Washington, USA

[2]Department of Earth and Environment, Florida International University, Miami, Florida, USA

[3]Department of Forest Resources and Environmental Conservation, College of Natural Resources and Environment, Virginia Tech, Blacksburg, Virginia, USA

Correspondence
Nabin Baral, United States Forest Service, Pacific Northwest Research Station, Goods, Services, and Values Program, 400 N. 34th Street, Suite 201, Seattle, WA 98103, USA.
Email: nbaral@gmail.com

Funding information
The Rufford Small Grants, UK, Grant/Award Number: 14034-B

Abstract

Local participation has been greatly promoted to accomplish conservation and development goals globally, but the participation paradox, in which those empowered to participate fail to do so, has rarely been thoroughly scrutinized. Here we test the participation paradox with empirical data of 234 local decision-makers' participation in a decision-making forum, Conservation Area Management Committees, in the Annapurna Conservation Area, Nepal. Using an explanatory sequential mixed methods design, both quantitative and qualitative data were collected in 2013 and 2016, analyzed, interpreted, and integrated. Women, minorities, younger members, and non-elected members participated significantly less in decision-making than men, older members, and elected members and those with leadership roles and longer tenures on the committees. Qualitative analyses revealed five major themes for motivation to participate: influence in the community; personal incentives; conservation; improving access to natural resources; and feelings of accomplishment. Key constraints to participation included hardships and competing tasks; lack of incentives; perceptions of limited agency; disinterest; and emotional burdens. Participation motivations and constraints varied by gender, social group, and membership types. We discuss the theoretical and practical implications of these results for participatory approaches to conservation and sustainable development in general and the governance of protected areas in particular.

KEYWORDS
community-based conservation, empowerment, governance, inclusion, mixed methods, protected areas

1 | INTRODUCTION

Participatory approaches, which exist in various forms, have been actively promoted in the developing countries to conserve natural resources, promote sustainable development, and empower local communities (Adams & Thomas, 1993; Baker & Chapin, 2018; Berkes, 2004, 2007; Ellis, 2011; Engen et al., 2019). Representation of diverse stakeholders and responding to legitimate demands and changing values of local constituencies can lead to a decentralized and inclusive governance structure for decision-making. Participation in inclusive governance can help to ensure procedural fairness and distributional equity in decision-making procedures (Bennett &

Satterfield, 2018; Kothari et al., 2013; Nilsson et al., 2016; Selfa & Endter-Wada, 2008; Souto et al., 2014). With such processes in place, broader and more diverse participation is expected to lead to more accountable and responsive governance with legitimacy, which in turn, can promote the feeling of ownership of projects and programs, improving their sustainability and making them less subject to noncompliance (Brisbois et al., 2019). Participation has served as a mechanism to diversify institutions counteracting the homogenizing forces of regulations, norms, and mimicry (Hare et al., 2018; Howard, 2020; Po et al., 2019) and to incorporate local voices in conservation and development programs (Kellert et al., 2010; Wells et al., 2004).

Irrespective of the popularity and abundance of conservation and development programs that espouse participation, what is actually meant by "participation" is often contentious conceptually and theoretically (Cornwall, 2008; Fung, 2006; Ganuza et al., 2016). Participation became an umbrella concept to include a gamut of activities from mere consultation to decision-making authority, and everything in between (Arnstein, 1969; Harder et al., 2013; Pretty, 1995). These differences may be at least partially attributed to how spaces for participation are created in different contexts. For example, in some cases, local people are invited to share their opinions on a voluntary basis, while in other cases solicitation of voices of local people is mandated by law (Potts, 2020; Predmore et al., 2011). As such, the forms of participatory spaces determine not only the scope of contribution of local people but also the extent to which their contributions influence the outcomes (Pohjola & Tuomista, 2011). Issues of design, structure, and agency can each have powerful influences on the outcomes of participatory processes within conversation and development efforts (Agrawal & Ostrom, 2001; Forster et al., 2017; Ostrom, 1990).

Cleaver (1999) describes a "participatory paradox" in which decision-making or governance structures enable the empowerment and authority of local people, yet that empowerment is not fully realized by the intended participants. How often such situations occur and what leads to them are important questions from both theoretical and practical perspectives. Cleaver (1999) juxtaposes the role of institutions with concepts of individual agency, explaining that institutions, or governance structures, can help reduce the costs of individual actions by formalizing mutual expectations of cooperative behavior. These expectations should enable individuals to exercise their agency more easily in alignment with these norms. However, it is unclear the extent to which governance structures intended to promote collaboration actually counteract constraints felt by individuals. The ultimate goal, as dictated by the participatory theory, is to empower local people to gain authority in decision-making (Arnstein, 1969; Harder et al., 2013; Pretty, 1995). While structures have been developed around the world to enable empowerment, scholarship regarding whether equitable decision-making is taking place within those structures is scarce.

Many empirical studies have examined varying degrees of participation of local residents in conservation and sustainable development programs, identifying some common themes (Agarwal, 2009; Allendorf, 2020). For example, projects that solicit local influence up front and involve participation at all steps of development and generally lead to better overall attitudes and are arguably more successful and sustainable than those that do not (Braddock & Heinen, 2021; Guzman et al., 2020). This paper provides another context in which to examine those insights, examining issues of inequity in participation and highlighting contributing factors. Specifically, we examine who participates most in the Conservation Area Management Committees (CAMCs) of Annapurna Conservation Area (ACA), Nepal, a very early and prominent case of participatory community-based conservation (CBC) that has been a model for many others (Heinen & Shrestha, 2006). Despite ACA's arguable success, we point out both intrinsic and extrinsic constraints to participation in its CAMCs that affect motivation by examining the extent to which those legally empowered to participate in decision-making actually do so. By overcoming some limitations of cross-sectional research, our design also helps in understanding the dynamics of constraints over time.

The purpose of this explanatory sequential mixed methods study (Creswell, 2015; Teddlie & Tashakkori, 2009) was to determine the factors that influence decision-makers' participation in a forum designed to empower local people, especially women and minorities, and to document their stated motivations for and constraints to participation. Quantitative data collected through content analysis of meeting minutes from local CAMCs in ACA were used to predict what sociodemographic and organizational variables determine observed levels of participation of legally empowered local decision makers in the forum. Qualitative data collected through semi-structured in-depth interviews with the decision makers explored their stated motivations and constraints associated with participation. The mixed methods design enabled an exploration of variables explaining differential participation. Mixing of both strands occurred when results of quantitative findings of the first strand affected the collection of qualitative data in the second strand (Creswell & Plano Clark, 2011; Yin, 2006) and during analysis by comparing typologies of motivations and

constraints for participation with member characteristics. This approach combines the strengths of both quantitative and qualitative research methods to evaluate the assumptions of participatory approaches to conservation and sustainable development to provide a better understanding of the phenomenon.

1.1 | Participation and equity

From a practical standpoint, involving local communities can serve conservation and development programs in multiple ways: instrumentally, substantively, and normatively (Stern, 2018). Instrumental involvement involves removing barriers to getting work done that might arise from public objections. From a purely instrumental perspective, involving local people can help to identify and assuage potential conflicts that might otherwise emerge. Substantively, local people commonly have useful knowledge about social-ecological systems that is often not evident to external managers. Incorporating this knowledge into decision-making can substantively improve conservation area management. Normatively, managing in the absence of meaningful input of those most affected by management decisions raises ethical concerns, including issues of placing livelihoods in jeopardy, disrupting social traditions and norms, dispossession, and otherwise inequitable or unfair outcomes within local communities. To address instrumental, substantive, and normative concerns, many scholars and practitioners have argued for the meaningful empowerment of local people in managing their own natural resources (Holmes, 2013; Lund & Saito-Jensen, 2013; May, 2012; Nelson & Agrawal, 2008; Oldekop et al., 2016; West et al., 2006).

As noted in early work by Arnstein (1969), levels of empowerment of public participation in collective decision-making can range from none at all, through levels of tokenism, toward actual decision-making. The empowerment of diverse participants can enhance natural resource governance processes and outcomes through broadening the representation of groups influenced by decision-making, increasing the governing bodies' capacity, expanding the range of consideration of local knowledge and ideas, and improving the equity of conservation outcomes (Agarwal, 2009; Büscher & Fletcher, 2022; Ghasemi et al., 2021; James et al., 2021). The mere presence or membership within a governing structure, however, does not necessary equate with empowerment in decision-making (Ghafran & Yasmin, 2024; Kothari, 2001), and barriers exist for both gaining access and then exercising power within these institutions. Women's' access to participation on decision-making committees related to conservation can often be controlled by influential gatekeepers within a community, especially men in patriarchal societies (James et al., 2021). Access for other minorities or less powerful entities can also be hindered by dominant social norms and strongly influenced by politicians, religious leaders, landlords, elders, or other gatekeeping elites (Ghafran & Yasmin, 2024). If membership is attained in a decision-making context, these processes can also be heavily influenced by existing social structures that diminish the voices of some participants (Kothari, 2001; Mosse, 2018). Social structures (e.g., family or work responsibilities, expectations) may also influence members' abilities to attend decision-making fora (James et al., 2021). Moreover, some members may have less motivation or belief in their own ability to contribute due to personal, social, or other circumstances (French & Raven, 1959).

Purdy (2012) described three bases of power to assess how feelings of empowerment might emerge (or not) among diverse members of a CAMC (Purdy, 2012). *Authority* comes from the belief that a person has the right, commonly based on their title or position, to make decisions on others' behalf. Authority can also be informal, based on social acceptance of one's legitimacy, social norms, respect, or other perceptions of worthiness (French & Raven, 1959; Raven, 1965). *Resource-based power* is based in one's ability to access tangible (e.g., wealth, materials) or intangible resources (e.g., information, relationships) to affect change. *Discursive legitimacy* is based on public perceptions that one is pursuing socially desirable values and norms. This type of power enables one to mobilize people around culturally powerful or popular messages (Dietsch et al., 2021). While we did not set out to measure these concepts in the research design, they are relevant to the interpretation of our findings.

1.2 | Participation and equity in ACA

Common challenges to equitable participation in conservation decision-making involve pressures to launch projects quickly and urgently as well as short-term funding cycles. These stresses often force conservation agents to work with community elites to gain access and establish their programs, rather than take the time needed to ensure the participation of those with less power in local communities (Ghafran & Yasmin, 2024). ACA's long-term focus on CBC carries with it the potential to dampen these particular pressures and has guaranteed the membership of women and ethnic minorities in decision-making bodies.

In ACA, citizens are empowered to make decisions through their participation in CAMCs to manage a

community-based protected area. The Conservation Area Management Regulations 1996 (Heinen & Mehta, 1999) were largely framed on Nepal's community forest regulations (e.g., Timilsina & Heinen, 2008). They legally established CAMCs at the lowest administrative unit and define roles and responsibilities for them. A 15-member CAMC representing local people (9 elected by popular votes, 5 nominated by a park manager and 1 reserved for a village chief) exercising their decision-making power in an institutionalized space is considered as the highest form of participation described in the literature. Though CAMCs consist of 15 members, a simple majority (8 members) can make decisions. The regulations stipulate a requirement of the presence of women and ethnic minorities on the CAMC, but not a specific number for either group (Heinen et al., 2019). In our sample, there were between two and four women and between one and five ethnic minorities on each committee. Average attendance at meetings is 10 members (Baral & Heinen, 2020). Thus, in a typical circumstance, it only takes three members (who could be all minority and female) to successfully oppose a decision.

While there are many nuances to power and influence (e.g., Bandura, 1997; Purdy, 2012), this study considers one measure as a reasonable proxy for empowerment: active participation in CAMC meetings, the forum in which all public ACA-related decisions are made by community representatives. Legally designated attendees, the subjects of this study, vote on all actions taken by the committee. Thus, attendance provides a guaranteed opportunity to exercise decision-making power within the conservation area. While voting does not equate to the automatic achievement of members' goals, it is a clear manifestation of participation in relevant decisions, as intended by the design of the community-based governance system (Baral et al., 2007). If members feel sufficiently empowered, one would expect them to actively participate in decision-making to represent the interests of themselves and their constituencies.

Through formal decision-making, CAMC members have the potential to make meaningful change for the people they represent, but only if they feel they can actually influence decision-making. Feelings associated with authority may differ for CAMC members who are elected by other villagers versus those who are nominated by a government officer. Being elected by one's peers likely strengthens these feelings and might produce higher levels of empowerment, and thus more confident participation, in CAMC decision-making. While some degree of authority may be conferred merely by earning a spot on a CAMC, in the prevailing local cultural context, age, gender, and ethnicity can also influence these feelings, with older males from the dominant ethnic majorities traditionally commanding more legitimacy. Resource-based power also varies along these same cultural lines, in addition to material wealth. As males and majority members typically hold control over resources, they may also feel more empowered within CAMC decision-making settings. Discursive legitimacy is related to feelings of *doing the right thing*, both internally and as perceived by others. In addition to members' own personal motivations and narratives they associate with their participation, this form of power is largely contingent on interactions with others on the CAMC, as well as with members' constituencies. Each of these forms of perceived power may influence levels of participation.

We examine patterns of participation within the CAMCs in relation to members' self-reported motivations and constraints. This investigation sheds light on the extent of and reasons behind any gaps between the legal empowerment of community members and their exercising of that power and thus sheds light on the degree to which local people's empowerment appears to be shared equitably within communities in ACA.

2 | METHODS

2.1 | Sampling and data collection

We combine the strengths of both quantitative and qualitative research using an explanatory sequential mixed-methods design (Creswell, 2015; Teddlie & Tashakkori, 2009). The design allowed us to test what variables predict differences in participation and the context for such differences. The results of quantitative findings of the former (the first strand) informed the collection of qualitative data of the latter (the second strand; Creswell & Plano Clark, 2011; Yin, 2006). We also compared typologies developed through qualitative coding of motivations and constraints for participation with member characteristics, which were measured quantitatively.

During the first phase of fieldwork (August 25 to October 31, 2013; 67 days), we collected quantitative data reflecting active participation of each member from 13 of 57 CAMCs of ACA (Table 1), covering 5 years of meetings. These CAMCs were selected because: (i) ACA began in this region, so those CAMCs had the most experience; (ii) they were formed at different times (1986–1997), so temporal variability could be explored; (iii) they had complete sets of minutes; and (iv) they were more resilient to a political disturbance than others, and functioned throughout and past the time of the Maoist insurgency (Baral et al., 2010; Baral & Stern, 2011). All chosen CAMCs had completed at least two full cycles (10 years)

TABLE 1 Name of the CAMCs sampled, their first date of formation, the total number of members in their third tenure term (2009–2013), the number of meetings held, and the average level of participation of CAMC members.

CAMCs	Date of formation	Number of members	Number of meetings held	Number of decisions made	Average level of participation
Ghandruk	1989	22	61	176	51.2 ± 20.1
Lumle	1993	19	67	429	69.9 ± 19.6
Dangsing	1994	18	35	177	53.9 ± 28.1
Sikha	1994	23	29	116	54.2 ± 28.8
Ghara	2008	17	37	116	48.7 ± 32.1
Narchayang	1997	15	30	159	77.3 ± 28.2
Dhampus	1992	16	39	68	52.4 ± 26.3
Lwang	1991	20	46	225	50.5 ± 24.8
Rivan	1991	16	40	197	71.8 ± 13.8
Lahachowk	1995	15	39	124	58.4 ± 24.4
Ghachowk	1994	15	24	74	66.4 ± 18.9
Macchapurche	1994	15	40	121	63.5 ± 19.0
Sardikhola	1995	23	68	218	54.2 ± 28.8
Total (overall average ± 1 SD)		234 (18 ± 3)	555 (43 ± 14)	2200 (169 ± 93)	(58.9 ± 25.5)

of their five-year tenure. We did manual quantitative content analysis of minutes by carefully tracking each individual (234 total) member's activities and attendance in 555 CAMC meetings over the five-year period, converting relevant texts and narratives into quantitative variables (see "Quantitative measurement and data analysis" section) for analysis. We also collected some missing information on individual attributes (gender, age, educational attainment, and ethnicity or caste) of a few members by contacting them through telephone. Individuals formed units of coding and analysis.

To explain the patterns (e.g., variations in participation across gender roles, age groups, leadership positions, and tenure lengths) found in the first phase of quantitative analysis, the second phase of qualitative research took place from October 13 to November 16, 2016 (34 days). The lead author conducted semi-structured in-depth interviews with 33 members representing 12 CAMCs, sufficient for saturation—enough data to draw conclusions and represent the diversity of emerging themes (Guest et al., 2006). A sample of the interview guide is given in Appendix 1. Purposive sampling with variance maximization was implemented to select participants (Patton, 2003). In this way, men (22) and women (11); majority (27) and minority (6) groups; elected (24) and nominated (9) members; and formal leaders (11) and regular members (22) were selected to distill the common themes that emerged across diverse participants (Appendix 2). We interviewed CAMC members from the lowest to the highest level of participation (12.0% to 100%). The average age of interview participants was 46 ± 10 years (range: 22–66), and they had various levels of educational attainment: literate with no school (4), some school (12), high school graduate (10), some college (5), and college graduate (2). The average household size of participants consisted of 4.2 ± 2.1 members (range: 1–8). The interviews lasted 17 ± 7 min on average (range: 7–36), resulting in 180 transcript pages (average 5.5 ± 1.8 pages per interview). In terms of ethical safeguards, we took respondents' informed consent to participate in the research, ensured that their participation was voluntary, that there were no consequences for noncooperation, and maintained anonymity of information collected.

2.2 | Quantitative measurement and data analysis

Table 2 provides measurement details for each variable within the regression equation, which aimed to determine the best predictors of participation. The level of participation followed a normal distribution, so we built an ordinary least square regression using level of participation as a response variable and nine sociodemographic and institutional variables and three one-way interaction terms as predictors. The following equation was estimated, and the coefficients were reported:

TABLE 2 Measurement of variables in the regression equation.

Variable	Measurement
Gender	Identity based on biological and sociocultural norms. Male = 1; Female = 0.
Age	Self-reported age in calendar years.
Education	The highest level of education recorded in five categories: 1 = literate with no school, 2 = some school, 3 = high school graduate, 4 = some college, and 5 = college graduate.
Group	Members were categorized into two social groups: majority (coded as 1) and minority (coded as 0). Minority refers to those marginalized by race, ethnicity, religion, or wealth. In this case, minority members were Dalits.
Membership	Nine members of each CAMC were elected by villages. Five were nominated by an officer, and the final member was the village chair. Elected members were assigned 1 and other members (including the village chair, who was not elected to this specific council, but automatically appointed) were assigned a 0 to examine the influence on participation of authority bestowed by different sources.
Leader	Chairs and secretaries are considered formal CAMC leaders. Leaders were coded 1; other members 0 to reflect power asymmetries.
Prior service	Members who served on previous CAMCs (or reelected) were coded 1, otherwise 0.
Replacement	A 1 indicates the member was a replacement for another who resigned or left the committee for any other reason. A 0 indicates otherwise.
Length of tenure	CAMC tenure is 5 years, but not all members serve full terms. The length of tenure was operationalized as the total number of months a member had served.
Level of participation	The percentage of meetings attended by a member during their tenure. The scale ranges from 0 to 100 with higher values indicating more participation. Level of participation $= \frac{\text{Total number of meetings attended by a member}}{\text{Total number of meetings held during a member's tenure}} \times 100$

$$\begin{aligned}\text{Level of participation} = {} & \text{alpha} + \beta_1\,\text{gender} + \beta_2\,\text{age} \\ & + \beta_3\,\text{education} + \beta_4\,\text{group} \\ & + \beta_5\,\text{membership} \\ & + \beta_6\,\text{leader} \\ & + \beta_7\,\text{prior service} \\ & + \beta_8\,\text{replacement} \\ & + \beta_9\,\text{length of tenure} \\ & + \beta_{10}\,\text{age} \times \text{gender} \\ & + \beta_{11}\,\text{membership} \times \text{gender} \\ & + \beta_{12}\,\text{membership} \times \text{group} \\ & + \text{error}.\end{aligned}$$

When the model is correctly specified and captures the systematic components in the data, the errors are both independent and identically distributed if they meet the following: (1) normality, (2) independence, and (3) constant (homogenous) variance. Upon examining post-estimation diagnostics, these assumptions were all met for the best-fitting model.

Interactions occur when the effect of one variable depends on the value of another. Bivariate graphical exploration of the four variables (gender, age, membership, and group) showed some patterns, so we also tested three one-way interaction terms in the regression. A significant interaction indicates that the effect of one predictor variable on the response variable is different at different values of the other predictor variables (Jaccard & Turrisi, 2003).

2.3 | Qualitative data analysis

All interviews were conducted and transcribed verbatim in Nepali by the lead author. After listening to and reading the transcripts, we had some ideas about the diversity of responses. We then organized the responses into two broader categories of motivations and constraints for participation. The reasons given by participants were summarized in one sentence in Nepali first and then translated to English to represent one idea, resulting in 154 sentences for motivations and 279 sentences for constraints, organized by participant (on average 4.6 sentences for motivations and 8.5 sentences for constraints per participant) to analyze at the individual level. Rather than transliteration, our focus was on the comprehension, clarity, and meaning of the translated texts. This document served as a corpus for coding manually.

The fine-grained coding began only after separating the transcripts into the above mentioned two categories of motivations and constraints. We started with an open coding process, re-reading the text piles line by line to determine whether a particular fragment was meaningful

and relevant to answer the research question (Saldaña, 2012). Words, phrases, or sentences that conveyed one central idea were given appropriate labels (or they were coded) to arrive at a preliminary list of codes, and as the analysis progressed, the different text fragments were compared and contrasted. As a result, one or more codes were merged, revised, excluded, or deleted to better reflect the interpretation of text fragments, resulting in the final list of 38 codes for motivations and 47 codes for constraints (Appendix 3–6). Next, axial coding was used to describe and delineate categories and increase the level of conceptual abstraction (Boeije, 2010). All codes were then grouped into categories. Finally, meta-coding of categories was done to generate major themes. Based on the apparent interrelationship between the codes, some codes were organized into higher levels of abstraction to determine the properties of the proposed categories, which were finally organized into the broader emerging themes. After the thematic analysis, data were summarized using frequencies, looking particularly at the number of participants mentioning the themes. Trustworthiness was established in the following ways: regular visits to and frequent interactions with the participants; briefing and debriefing sessions (the participants were provided an opportunity to ask questions, provide feedback, or share their opinions after the interview); iterative analysis and recoding; and confirmability audit—major findings were shared with select participants and staff to verify the participants' narratives (Guba, 1981).

When major themes were generated, they were compared across gender, social group, and membership type to explore patterns that help to explain the quantitative findings in the mixed methods analysis.

3 | RESULTS

3.1 | Members' characteristics

Of 234 members, men (82.9%) were about four times more represented than women (17.1%). The average age of all members was 48 years (range 19–78 years), while women were on average 10 years younger ($t = -4.82$, $p < 0.01$). Regarding members' education, 36.3% were literate with no school which meant that they can read and write, 29.5% had attended grade school, 17.9% graduated from high school, 12.4% had some college, and 3.9% graduated from college. There was no statistically significant association between education and gender ($\chi^2_4 = 5.1$, $p = .282$). About 12% of members were formal leaders (chair or secretary), but none of those were women. More than three-fifths (62.4%) of members were elected. Significantly more women (11.1%) were from minority than majority groups (6.0%; $\chi^2_1 = 18.6$, $p < .01$).

3.2 | Participation at the organizational level

Of 234 members, 23.5% had served previously. The CAMC's tenure is officially supposed to be 60 months, but members' average tenure was 50 months. Sixteen percent had resigned prior to completion of their terms. In four CAMCs, no members resigned, but in others, one to eight members had. Higher turnover was associated with lower levels of participation in the meetings ($r = -0.51$, $p < .05$, $n = 13$). The average rate of participation was approximately 59% across all the CAMCs. Only one statistically significant difference in participation level was detected between the highest- and lowest-level CAMCs, Narchayang, and Ghara ($F_{12,221} = 2.40$, $p = .006$).

3.3 | Predictors of participation

The specified regression model improved the fit compared to the null model ($F_{12,221} = 13.1$, $p < .01$). After fitting the regression, the link test uses the linear predicted value, and its second-order polynomial as predictors to rebuild a model to detect specification error. The linear predicted value should be a significant predictor ($t = 2.69$, $p = .008$), and its second-order polynomial should be insignificant ($t = -0.49$, $p = .627$), if the linear model is correctly specified. The Shapiro–Wilk test results indicated that the standardized residuals were normal (w = 0.99, z = 0.36, $p = .361$), and the first-order autocorrelation of residuals was insignificant ($r = 0.07$, $p = .285$, $n = 233$), suggesting that the error terms are independent. The test statistic of White's general test that incorporates nonlinear heteroskedasticity was insignificant ($\chi^2_{74} = 66.7$, $p = .713$), indicating the homogeneity of variance. The model accounted for 42% variation in the levels of participation. The above results indicate that the model was reasonable, and the interpretation of coefficients was meaningful.

Of the nine variables included in the model, seven were statistically significant in explaining variation in participation: gender, age, prior service, leader, replacement, and months of tenure (Table 3). Men had higher participation than women (b = 36.0), older members had higher participation than younger members (b = 0.8), and members who served previously had higher participation than first timers (b = 7.1). Replacement members had higher participation than non-replacements (b = 9.8), and formal leaders had higher participation

TABLE 3 Ordinary least square regression of level of participation on sociodemographic and organizational variables.

Variable	Beta	SE	*t*	$p > t$	95% CI	
Gender (men = 1)	36.0	14.7	2.45	**0.015**	7.1	64.9
Age (in years)	0.8	0.3	2.50	**0.013**	0.2	1.4
Education (5-point ordinal scale)	−1.1	1.5	−0.73	0.465	−4.1	1.9
Group (majority = 1)	−6.6	6.4	−1.03	0.303	−19.3	6.1
Membership (elected = 1)	0.3	8.8	0.03	0.975	−17.0	17.6
Leader (yes = 1)	34.0	4.4	7.72	**0.000**	25.3	42.7
Prior service in CAMCs (yes =1)	7.1	3.3	2.12	**0.035**	0.5	13.7
Replacement (yes = 1)	9.8	4.4	2.23	**0.027**	1.2	18.5
Length of tenure (months)	0.5	0.1	4.75	**0.000**	0.3	0.7
Age × Gender	−0.7	0.3	−2.32	**0.021**	−1.4	−0.1
Membership × Gender	−16.8	7.8	−2.16	**0.032**	−32.2	−1.5
Membership × Group	21.3	8.3	2.57	**0.011**	4.9	37.6
Intercept	−2.8	14.2	−0.20	0.842	−30.8	25.2
Overall model-fit metrics	$F_{12,221} = 13.1$, $p < 0.01$, $R^2 = 0.42$, RMSE = 19.9					

Note: Bold values highlight statistically significant parameters. They were used for visual impact.

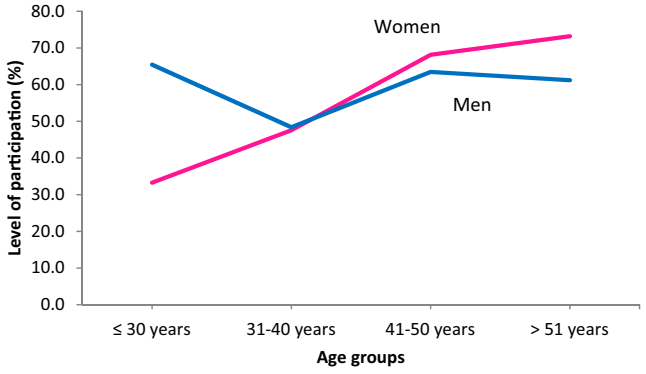

FIGURE 1 The disordinal interaction plot depicts that the relationship between participation and gender changes based on the value of age.

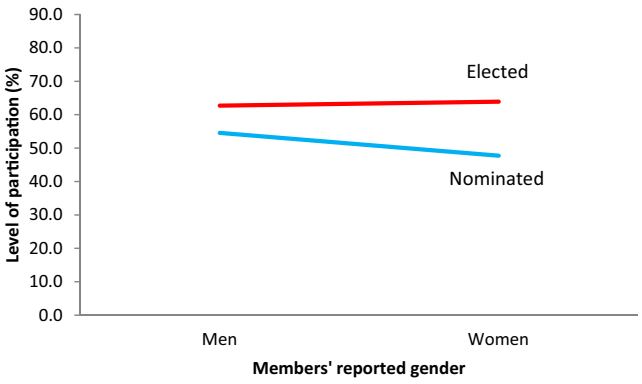

FIGURE 2 The ordinal interaction plot depicts that modes of becoming a member and gender determines the level of members' participation.

than other members (b = 34.0). For an increase of 1 year of tenure, there was an increase in participation by 6 percentage points on average (b = 0.5), all else held equal.

Three one-way interaction terms were also significant. Female participation was related to their age and mode of selection. Below the age of 31 years, the participation of women was substantially lower than men (Figure 1), but the level of participation started to converge for the age group 31–40 years. After bifurcating at the 41–50 age group, the level of participation of women was higher than men for the age group of above 51 years. The participation of elected members was higher than nonelected (nominated) members, with a larger difference observed for women than men (Figure 2).

Elected members from majority groups had higher participation rates than those members who belonged to minority groups and were nominated. For nominated members, the level of participation was low and did not vary significantly between minorities (49.9%) and majorities (53.0%; Figure 3). Of elected members, minorities participated less (42.9%) than majorities (65.3%), and participation of elected minorities (42.9%) was lower than that of nominated minorities (49.9%).

3.4 | Motivations for participation

Five major themes emerged from the 16 categories and 38 codes used to synthesize motivations for participation (Appendix 3 and 4). Tests of statistical significance between groups revealed that elected members reported

feelings of accomplishment more frequently than nominated members (Table 4).

3.4.1 | To increase one's influence

The participants reported that they could serve villagers and contribute to the development of their community by bringing in budgets and programs. They could also get an opportunity to allocate resources, solve problems, and organize events. The participants mentioned that they can determine agendas and oversee ongoing conservation and development activities. The members have an opportunity to build networks with various entities and demonstrate leadership. These opportunities link clearly to the concept of resource-based power, as CAMC members desired to mobilize tangible and intangible resources for the benefits of their constituents and themselves.

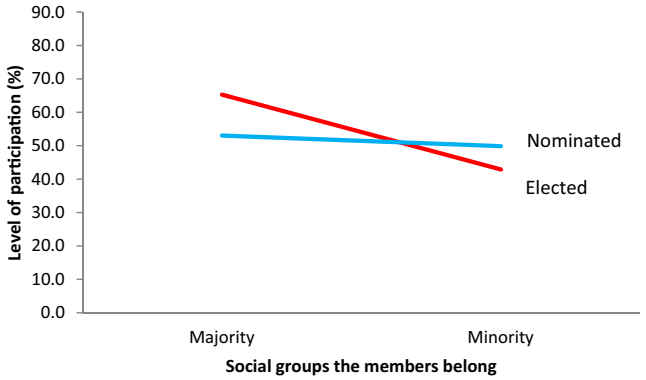

FIGURE 3 The disordinal interaction plot between social groups and ways to become a member influences members' level of participation.

3.4.2 | Material and nonmaterial incentives

As reported, the members can get both material and nonmaterial benefits at the personal level by attending meetings and serving on the committee. Most often, members are compensated in cash for their time for attending meetings and get other in-kind benefits such as improved seeds for planting and machinery for agriculture. Similarly, some reported the threat of fines or reprimands for missing meetings. Members often go on excursions and field trips at the committee's expense to learn new things about conservation, development, and their communities. These incentives also align with the concept of resource-based power, as members use their positions for personal gain, knowledge, and capacity building.

3.4.3 | Conservation of natural resources

Many members said that they have a deep interest in nature conservation, and they were attracted to serve on the committee in the first place just because it is their duty to protect forests, grasslands, and other natural resources. The members also reported that local people including themselves are the direct beneficiaries of conservation activities. By serving on the committee, the members can raise awareness about nature conservation

TABLE 4 Frequencies of the major themes that emerged across respondents during interviews for motivations and constraints for participation vary across membership types. Bold fonts within a row indicate statistically significant differences (Chi-square tests).

	Gender		Social groups		Membership types	
Major themes emerging from qualitative analysis	**Women**	**Men**	**Minority**	**Majority**	**Nominated**	**Elected**
Motivations						
To increase one's influence	63.6%	86.4%	83.8%	77.8%	66.7%	83.3%
Material and nonmaterial incentives	90.9%	72.7%	83.8%	77.8%	88.9%	75.0%
Conservation of natural resources	18.2%	45.5%	16.7%	40.7%	22.2%	41.7%
Access to natural resources	9.1%	4.5%	16.7%	3.7%	11.1%	4.2%
Feelings of accomplishment	63.6%	77.3%	83.3%	70.4%	**44.4%**	**83.3%**
Constraints						
Economic hardships and competing tasks	90.9%	95.4%	100.0%	92.6%	88.9%	95.8%
Lack of incentives	45.4%	63.6%	50.0%	59.2%	**22.2%**	**70.8%**
Perceptions of limited agency	90.9%	90.9%	83.3%	92.6%	88.9%	91.7%
Disinterest	36.4%	54.5%	66.7%	44.4%	55.6%	45.8%
Emotional burdens	27.3%	31.8%	50.0%	25.9%	**55.6%**	**20.8%**

among the villagers to better protect the resources for themselves. The membership promotes a vision of conservation as social obligation and responsibility. These intrinsic motivations likely have meaningful influences on feelings of discursive legitimacy, or the sense of worthiness that comes from doing the right thing.

3.4.4 | Access to natural resources

Legally, all villagers have equal rights to natural resources, but in practice some minority groups may not have equal access. In a few committees, a feud over the control of natural resources had been passed down for several generations and was never resolved completely. Because of the alleged communal ownership of some forest parcels by some groups, other groups rarely ventured in collect natural resources. Many members, particularly Dalits, reported that their main motivation to serve on CAMCs is to solve the access issue, end the state of social exclusion, and ensure fair and equitable distribution of natural resources. These commitments to represent minority interests are associated with both resource-based power and discursive legitimacy, as effective participation can yield both tangible and reputational benefits to the CAMC member.

3.4.5 | Feelings of accomplishment

Many members felt pride in their membership and activities on the committee—particularly those who reported high degrees of organizational efficiency—indicated by satisfaction with holding meetings on time and on fixed dates and sending prior notice. These sentiments appear to be associated with the generation of feelings of discursive legitimacy. Members took pride in doing a good job with a degree of competence and efficiency. Some members also noted that getting elected by local residents to serve on the committee is a measure of their worthiness within the community, reflecting sentiments of authority as well.

3.5 | Constraints to participation

Constraints to participation as reported by the participants were summarized by 47 codes, 23 categories, and five major emergent themes (Appendix 5 and 6), which are summarized below. Statistical tests of differences between groups revealed that elected members more commonly reported a lack of incentives as a constraint, while nominated members more commonly shared emotional burdens as a constraint than elected members (Table 4).

3.5.1 | Economic hardships and competing tasks

Most members relied upon agriculture for their livelihood. Subsistence economic activities keep them busy throughout the year. Some members were involved in tourism as well, and they reported that they could not attend meetings during peak seasons, i.e., for about 4 months per year. At times, schedules of meetings would conflict with other more important social events. A few members had full-time day jobs and could not attend during office hours.

Female participants reported having to finish household chores and provide care to the family members. Household chores such as cooking, doing dishes, and washing clothes or preparing children for school take a lot of time and effort. Both male and female members reported that women need to finish them first to attend any social events. When women members become mothers, child care frequently forces them to break from many social activities. Given social expectations, women also need to look after ailing or elderly parents-in-law and female household responsibilities increase further if their husbands are away for employment. Both women and men concurred that women's work is never done, and managing time for CAMC meetings was thus a major challenge for women.

Majority respondents indicated economic hardships for minority members. The Dalit members belong to lower socioeconomic rungs in society and need to earn a living on a daily basis. Attending a meeting forces them to lose a day's wage, thus leading to financial hardship, and attendance may appear to be a luxury in that case. Members belonging to majority caste/ethnic groups frequently agreed with that statement, but Dalits reported it less frequently.

3.5.2 | Lack of incentives

Some members reported that there are no incentives for attending meetings. Because members in some CAMCs received no monetary compensation, there was no financial incentive for them. Because many villagers migrate to cities or leave for foreign employment, social pressure rises for others to serve. However, even with pressure to seek membership, little pressure was applied to actually attend meetings. Members who saw no financial or material benefits tended to participate less, as did those who had to travel greater distances.

3.5.3 | Perceptions of limited agency

Members reported that they felt discouraged when their voices had not been heard or their agendas were not

endorsed. Some noted personal rivalries or animosities among members. Other times, political interference or affiliations to opposing parties led to stalemates. At the personal level, some members aspired to hold leadership positions in committees, and when this had not materialized, they simply became inactive. In other cases, members felt they lacked sufficient knowledge about CAMC regulations and guidelines to contribute to discussions, rendering their participation impotent. In those cases, legal authority was countered by a perceived lack of discursive legitimacy.

Women—who were largely outnumbered in CAMCs—reported feeling discomfort speaking up in meetings in the presence of men. Many women members reported that at least five women on committees would make them more comfortable in participating. Low numbers also made it difficult to find companions to travel to the meetings and raised concerns about safety. Many women must ask permission to attend meetings, and they may feel indirect pressure against attendance because the family may have to forgo a day's work as a result. The social is not conducive to empowering and engaging women easily.

Two major factors contributed to perceptions of limited agency among Dalit members: their numbers and social skills. There were one or two Dalit members on each committee, and these were often nominated rather than elected. Thus, many felt insufficient authority to make their voices heard. Dalit members often lacked social skills to champion their agendas, leading to frustration. In general, Dalit members were also less educated than others; they struggled to understand their roles and responsibilities and social volunteering a foreign concept to many. All these factors hampered the development of skills critical for their successful tenure in CAMCs.

3.5.4 | Disinterest

Some members reported that they participated less simply because of boredom. When they perceived that much of their time is spent deliberating on unimportant or minor issues, enthusiasm, and interest wane. Meetings seemed useless for some members, especially those who felt less empowered to contribute to discussion, but felt obligated to serve. Some members cited that poor organization (e.g., lack of structure, minimal engagement, ineffective communication, etc.) and feelings that meetings were too frequent also reduced enthusiasm for participation.

3.5.5 | Emotional burden

Members reported that the meetings sometimes aroused negative emotions. For some who fear public speaking, long deliberations proved emotionally draining. Also, they had to deal with contentious and conflicting issues frequently and sometimes unpleasant decisions were made. When violations of conservation regulations are reported, members have to persecute offenders, who are often fellow villagers. Many found it emotionally taxing to punish those they represented and became targets for potential retaliation.

3.6 | Female and minority empowerment

Despite the constraints and trends described above, interviewees described specific situations in which women and minority members wielded particular power within CAMC decision-making. In Lahachowk and Ghachowk, for example, Dalit CAMC members received complaints from Dalit residents about limited access to natural resources and fees levied on them and Dalit members then brought these issues to CAMC meetings. By soliciting the help of female CAMC members, they obstructed decisions about other issues until the problem was resolved. CAMCs were organizationally paralyzed for over a year each due to protests and boycotts organized by Dalit members, who were eventually successful. In other cases, female members were able to change construction sites of development projects and Dalit members were able to ensure the representation of Dalits in training and educational programs through their roles on CAMCs. For some Dalit and female members, CAMCs also served as stepping-stones to enter into local elected offices. Each of these instances was an exception to overall trends, however.

For marginalized and minority groups, additional motivating factors were present. Dalits and women on committees with higher numbers of members of matching identities perceived some solidarity in their attendance and generally attended meetings more regularly. Women also attended more frequently when meetings were held closer to their homes and when childcare services were available or children were in school. Such woman-friendly services not only increased satisfaction but also boosted feelings of empowerment.

4 | DISCUSSION

Even after three decades of institutional history and continuous many efforts to empower women and minority groups in Annapurna, our results show that many are still marginalized in that they participate in meetings less frequently than others. No participatory approaches are independent of social contexts, and many are

inadvertently biased toward those with more privilege and wealth a priori (Agrawal, 2001; Brisbois et al., 2019; Coleman & Mwangi, 2013; Parvin, 2021). Social stratification related to gender, education, and wealth shape both willingness to participate and outcomes of participatory processes, and this is likely compounded in the caste-oriented societies of largely Hindu Nepal (Levine, 2011; Mosse, 2018; Nightingale, 2011; Padgee et al., 2006). These assertions are supported by the empirical results that decision makers' participation in meetings is determined largely by gender, age, length of tenure and leadership roles, and moderated by their social group and membership type (e.g., Kimengsi et al., 2019; Persha et al., 2011).

The participatory paradox refers to situations in which participants are formally empowered to make decisions, yet do not exercise that power. The local communities in ACA are required by law to partake in the highest form of participation (i.e., decision-making) described in the literature. Even though members legally have power, many members—especially women and minorities—are not exercising it because of constraints (above) that underlie the paradox. While research on absenteeism in the context of community participatory groups is scant (e.g., Cikes et al., 2018), it can be viewed in this context as an indicator of a breach of the social contract between decision makers and the villagers they represent. Similar to other studies (Ghafran & Yasmin, 2024; James et al., 2021), our results imply that high rates of absenteeism among women and minorities within ACA are due to perceptions of lesser power, and they demonstrate that pre-existing social structures are formidable obstacles. These challenges appear to be both due to societal constraints felt by CAMC members, such as safety concerns and competing chores, as well as the design of the governance system, including a lack of incentives, inadequate capacity building, and imbalanced power relations (see Cleaver, 1999, for a more complete treatment of structural or institutional barriers vs. individual agency). The ACA is considered to be a successful model of CBC globally and the participatory paradox operating there may not bode well for other newer or less funded cases.

Women and minorities agreed that there is a need to increase their numbers in CAMCs to facilitate participation. ACA set a goal of having at least 33% female membership in 1995, but that was never achieved; female membership was at 18% at the time of this study. Nepal's constitution of September 2015 mandated that at least 33% of agency staff should be female, which may be achieved after the next reformation of CAMCs. Agarwal's research (Agarwal, 2009; Agarwal, 2023) provides evidence for the importance of a critical mass of women for them to feel comfortable enough to speak out, finding that women were more likely to attend meetings, speak up, and have leadership positions in community forestry executive committees when they comprised 25%–33% of the committees. Greater representation and empowerment of women in similar situations have only been linked to better conservation outcomes (Agarwal, 2009; Agarwal, 2001; Ghasemi et al., 2021; James et al., 2021). Because there are currently no constitutional stipulations for the number of ethnic or racial minorities in social organizations, more favorable policies and incentives could, presumably, remove some constraints for them as well.

Our results show that elected members felt a greater sense of accomplishment and lesser emotional burdens than nominated members. It is likely that elected members may wield greater (or at least feel a greater sense of) authority and thus have the capacity to pass their agendas, which in turn leads to more satisfaction (Adams & Thomas, 1993; May, 2012). Elected women had higher levels of participation than either men or nominated women, but for men, being elected or nominated made no difference in participation. Despite reporting high degrees of competing tasks and a lack of incentives, elected members' higher satisfaction could be due to feelings of legitimacy and ownership resulting from authority bestowed on them by their neighbors. For women, a stronger sense of obligation may have resulted from being elected, particularly for older women, leading to more consistent participation than others.

Multiple bases of power may be at play within CAMCs and may be instructive for further efforts to make decision-making more equitable. Each basis of power can relate to how members were selected to serve, their interactions on the committee, the constituents they represent, their personal sense of self-worth, and the influences they feel they can have on outcomes. We examined power from two perspectives: (1) active participation in decision-making and (2) personal perceptions of empowerment based on interviewees' responses to questions about motivations and constraints to participation. The social license granted to elected members supplied them with a greater sense of authority than those who were nominated, leading to greater feelings of accomplishment. Interviewees' explanations of their motivations also revealed important roles for resource-based power and discursive legitimacy. Many members were motivated by the possibility to make decisions about resource use and to enhance access to resources for themselves and constituents. Discursive legitimacy enabled minority and female members to act against the majority in some cases to ensure more equitable access to resources.

Careful consideration of these forms of power might benefit other CBC initiatives as well, both for those developing or managing them externally and for those within local decision-making structures. Enhancing the authority of members through representative elections could empower members that might otherwise feel unempowered. Ensuring equitable representation within decision-making entities can distribute resource-based power and enable more equitable conservation solutions. This might require addressing resource imbalances such as economic hardships that can limit the active participation of some members. Highlighting discursive legitimacy, particularly in times of disagreement, can enable groups to stand their ground and elevate traditionally marginalized voices. In ACA, this involve building coalitions among marginalized groups, including women and Dalits. Ensuring equitable representation of such groups can open the space for discursive legitimacy to flourish, breaking traditional power imbalances. Formal frameworks that center social justice, like those in ACA, enable these possibilities.

Other direct implications for policy and management suggest potential actions for promoting broader participation. Women and minority members may be unable to overcome cultural, economic, and political barriers fully, so policy instruments and management actions may be needed to remove barriers. Policies could aim to remove systemic gender biases due to customs, attitudes, and economic dependency that confine many women to the domestic sphere (Nenko et al., 2019; Selfa & Endter-Wada, 2008). Managers could focus on reducing conflicts in women's schedules to boost participation. Ensuring women-friendly services (such as childcare) and building confidence through education and training can increase participation. Providing financial incentives for the members facing the greatest economic hardships (e.g., Dalits) can remove constraints to participation. Policies could also be established to facilitate more women and minorities to be elected by popular vote and within meetings, and procedures could be developed to ensure their voices are heard (e.g., Daniels & Walker, 2001; Fisher et al., 2011; Gregory et al., 2012; Stern, 2018). Diversifying member age groups by recruiting more younger and older members could also increase participation, as they tend to have more spare time.

There were several benefits of using the mixed methods design in this study despite greater investment in time and resources. Quantitative results provided statistical significance, confidence intervals, effect sizes, and determinants of participation levels. Qualitative results offered individual perspectives (e.g., motivations and constraints) to explain how the findings occurred and why participation varied among decision-makers. Purely quantitative studies can miss participants' perspectives, and purely qualitative studies can miss contextual phenomena. Integrating the two provides for more comprehensive results. The mixed methods design was helpful in better understanding the participatory paradox from multiple perspectives.

There are also some limitations; quantitative participation measurement lends it to statistical analysis, but several important subjective aspects of participation are not captured in the measurement. For example, the type of agenda proposed, the quality of deliberations, giving and receiving feedback, and thinking about consequences of decisions are equally important to analyzing the quality of participation. The list of motivations and constraints for participation is thus not exhaustive and does not provide information on the relative importance of each factor. Direct observations of meetings themselves could help to uncover these qualities (e.g., Coleman et al., 2018; Thaler, 2021). We urge additional research to further uncover pathways for more equitable CBC projects.

5 | CONCLUSIONS

We show that participatory parity has not been realized in ACA in spite of legislation in its favor and a long implementation time. Both women and minority groups have lower levels of participation in decision-making, and these are the very groups of people that participatory approaches have aimed to include and empower. Even when women and minority groups are vested with the power to make decisions, their greater absenteeism in decision-making indicates that personal and social factors serve as constraints. Given the status quo, women and minorities' influence in decision-making continues to be limited in ACA.

Investing time and resources in the capacity building of both women and minorities could better facilitate equitable participation, as could enhancing their legitimacy through further formalizing their decision-making roles. A priori assumptions of CBC models that the presence of women and minorities on committees will be enough for their full participation and representation are thus insufficiently considered.

ACKNOWLEDGMENTS

The Rufford Small Grants, UK (Grant # 14034-B) provided financial support to the lead author for conducting the fieldwork. Rishi Ram Subedi and Bishnu Paudel helped in the field.

ORCID

Nabin Baral https://orcid.org/0000-0001-6947-0412
Joel T. Heinen https://orcid.org/0000-0002-2007-8767
Marc J. Stern https://orcid.org/0000-0002-0294-8941

REFERENCES

Adams, W. M., & Thomas, D. H. L. (1993). Mainstream sustainable development: The challenge of putting theory into practice. *Journal of International Development*, *5*, 591–604.

Agarwal, B. (2009). Gender and forest conservation: The impact of women's participation in community forest governance. *Ecological Economics*, *68*(11), 2785–2789.

Agarwal, B. (2023). Gender, presence and representation: Can presence alone make for effective representation? *Social Change*, *53*(1), 34–50.

Agrawal, A. (2001). Common property institutions and the sustainable governance of resources. *World Development*, *29*(10), 1649–1672.

Agrawal, A., & Ostrom, E. (2001). Collective action, property rights and decentralization in resource use in India and Nepal. *Politics and Society*, *29*(4), 485–514.

Allendorf, T. D. (2020). A global summary of local resident's attitudes toward protected areas. *Human Ecology*, *48*, 111–118.

Arnstein, S. R. (1969). A ladder of citizen participation. *Journal of the American Institute of Planners*, *35*, 216–224.

Baker, S., & Chapin, F. (2018). Going beyond "it depends:" the role of context in shaping participation in natural resource management. *Ecology and Society*, *23*(1), 224.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. W. H. Freeman.

Baral, N., & Heinen, J. T. (2020). Regulatory compliance and community-based conservation organizations: Empirical evidence from Annapurna Conservation Area, Nepal. *Sustainability*, *12*(22), 9420.

Baral, N., & Stern, M. J. (2011). Capital stocks and organizational resilience in the Annapurna Conservation Area, Nepal. *Society and Natural Resources*, *24*, 1011–1026.

Baral, N., Stern, M. J., & Heinen, J. T. (2007). Integrated conservation and development project life cycles in the Annapurna Conservation Area, Nepal: Is development overpowering conservation? *Biodiversity and Conservation*, *16*(10), 2903–2917.

Baral, N., Stern, M. J., & Heinen, J. T. (2010). Growth, collapse and reorganization of the Annapurna Conservation Area, Nepal: An analysis of institutional resilience. *Ecology and Society*, *15*, 10. www.ecologyandsociety.org/vol15/iss3/art10/

Bennett, N. J., & Satterfield, T. (2018). Environmental governance: A practical framework to guide design, evaluation, and analysis. *Conservation Letters*, *11*(6), e12600.

Berkes, F. (2004). Rethinking community-based conservation. *Conservation Biology*, *18*(3), 621–630.

Berkes, F. (2007). Community-based conservation in a globalized world. *Proceedings of the National Academy of Sciences*, *104*(39), 15188–15193.

Boeije, H. (2010). *Analysis in qualitative research*. SAGE Publications Inc.

Braddock, K. N., & Heinen, J. T. (2021). Perceptions of, and motivations for, land trust conservation in northern Michigan: An analysis of key informant interviews. *Sustainability*, *13*, 1609.

Brisbois, M. C., Morris, M., & de Loë, R. (2019). Augmenting the IAD framework to reveal power in collaborative governance - an illustrative application to resource industry dominated processes. *World Development*, *120*, 159–168.

Büscher, B., & Fletcher, R. (2022). Radical conservation: misdirection, new directions. Opening essay for GTI Forum "Conservation at the Crossroad," Great Transition Initiative (May 2022). https://greattransition.org/gti-forum/conservation-buscher-fletcher.

Cikes, V., Ribaris, H. M., & Crnjar, K. (2018). The determinants and outcomes of absence behavior: A systematic literature review. *Social Science*, *7*(8), 120.

Cleaver, F. (1999). Paradoxes of participation: Questioning participatory approaches to development. *Journal of International Development*, *11*(4), 597–612.

Coleman, E. A., & Mwangi, E. (2013). Women's participation in forest management: A cross-country analysis. *Global Environmental Change*, *23*(1), 193–205.

Coleman, K., Stern, M. J., & Widmer, J. (2018). Facilitation, coordination, and trust in landscape-level forest restoration. *Journal of Forestry*, *116*(1), 41–46.

Cornwall, A. (2008). Unpacking "participation": Models, meanings and practices. *Community Development Journal*, *43*(3), 269–283.

Creswell, J. W. (2015). *A concise introduction to mixed methods research*. SAGE Publications Inc.

Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research* (2nd ed.). SAGE Publications Inc.

Daniels, S. E., & Walker, G. B. (2001). *Working through environmental conflict: The collaborative learning approach*. Praeger.

Dietsch, A., Wald, D., Stern, M. J., & Tully, B. (2021). An understanding of trust, identity, and power can enhance equitable and resilient conservation partnerships and processes. *Conservation Science and Practice*, *3*(6), e421.

Ellis, R. (2011). Who's participation? Who's sustainability? A critical analysis of initiatives for urban sustainability in India. *Scottish Geographical Journal*, *127*(3), 193–208.

Engen, S., Fauchakd, P., & Hauser, V. (2019). Stakeholder's perceptions of protected area management following a national wide community-based conservation reform. *PLoS One*, *14*(4), e021537.

Fisher, R., Ury, W. L., & Patton, B. (2011). *Getting to yes: Negotiating agreement without giving in*. Penguin.

Forster, J. J., Downsborough, L., & Chomba, M. J. (2017). When policy hits practice: Structure, agency, and power in south African water governance. *Society & Natural Resources*, *30*(4), 521–536.

French, J., & Raven, B. (1959). The bases of social power. In D. Cartwright (Ed.), *Studies in social power* (pp. 150–167). Institute for Social Research.

Fung, A. (2006). Varieties of participation in complex governance. *Public Administration Review*, *66*, 66–75.

Ganuza, E., Baicchi, G., & Summers, N. (2016). Conflicts and paradoxes in the rhetoric of participation. *Journal of Civil Society*, *12*(3), 328–343.

Ghafran, C., & Yasmin, S. (2024). Participation strategies and ethical considerations in NGO led community-based conservation initiatives. *Journal of Business Ethics*, 1–17. https://doi.org/10.1007/s10551-024-05665-4

Ghasemi, M., Badsar, M., Falahati, L., & Karamidehkordi, E. (2021). The mediation effect of rural women empowerment

between social factors and environment conservation (combination of empowerment and ecofeminist theories). *Environment, Development and Sustainability*, *23*, 13755–13777.

Gregory, R., Failing, L., Harstone, M., Long, G., McDaniels, T., & Ohlson, D. (2012). *Structured decision making: A practical guide to environmental management choices*. John Wiley & Sons.

Guba, E. G. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Communication and Technology*, *29*(2), 75–91.

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough?: An experiment with data saturation and variability. *Field Methods*, *18*(1), 59–82.

Guzman, A., Heinen, J. T., & Sah, J. P. (2020). Evaluating the conservation attitudes, awareness and knowledge of residents towards Vieques National Wildlife Refuge, Puerto Rico. *Conservation & Society*, *18*(1), 13–24.

Harder, M. K., Burford, G., & Hoover, E. (2013). What is participation? Design leads the way to a cross-disciplinary framework. *Design Issues*, *29*(4), 41–57.

Hare, D., Forstchen, A. B., Smith, C. A., & Decker, D. J. (2018). Developing governance principles for public natural resources. *Society & Natural Resources*, *31*(3), 382–388.

Heinen, J. T., Baral, N., Paudel, P. K., & Sah, J. P. (2019). On the road to sustainability? A review of a half century of biodiversity conservation successes in Nepal and some thoughts on future needs. In A. N. Bakar & M. N. Suratman (Eds.), *Protected areas and sustainability* (pp. 71–88). IntechOpen, UK; 122 pp.

Heinen, J. T., & Mehta, J. N. (1999). Conceptual and legal issues in the designation and management of conservation areas in Nepal. *Environmental Conservation*, *26*(1), 21–29.

Heinen, J. T., & Shrestha, S. K. (2006). Evolving policies for conservation: An historical profile of the protected area system of Nepal. *Journal of Environmental Planning and Management*, *49*(1), 41–58.

Holmes, G. (2013). Exploring the relationship between local support and the success of protected areas. *Conservation and Society*, *11*, 72–82.

Howard, T. M. (2020). Regulatory resistance to environmental law in rural Australia: Land clearing, murder and the media. *Local Environment*, *25*(2), 130–146.

Jaccard, J., & Turrisi, R. (2003). *Interaction effects in multiple regression* (2nd ed.). SAGE Publications, Inc.

James, R., Gibbs, B., Whitford, L., Leisher, C., Konia, R., & Butt, N. (2021). Conservation and natural resource management: Where are all the women? *Oryx*, *55*(6), 860–867.

Kellert, S. R., Mehta, J. N., Ebbin, S. A., & Lichtenfeld, L. L. (2010). Community natural resource management: Promise, rhetoric, and reality. *Society & Natural Resources*, *13*(8), 705–715.

Kimengsi, J. N., Bhusal, P., Aryal, A., Fernandez, M. V. B. C., Owusu, R., Chaudhary, A., & Nielsen, W. (2019). What (de) motivates forest users' participation in co-management? Evidence from Nepal. *Forests*, *10*(6), 512.

Kothari, A., Camill, P., & Brown, J. (2013). Conservation as if people mattered: Policy and practice of community-based conservation. *Conservation and Society*, *11*(1), 1–15.

Kothari, U. (2001). Power, knowledge and social control in participatory development. In B. Cooke & U. Kothari (Eds.), *Participation: The new tyranny?* (pp. 138–152). Palgrave Macmillan.

Levine, N. E. (2011). Caste, state, and ethnic boundaries in Nepal. *Journal of Asian Studies*, *46*(1), 71–88.

Lund, J. F., & Saito-Jensen, M. (2013). Revisiting the issue of elite capture of participatory initiatives. *World Development*, *46*, 104–112.

May, C. K. (2012). Active non-participation among local natural resource-dependent communities: The case of North Carolina fisheries governance. *Journal of Environmental Management*, *113*, 407–416.

Mosse, D. (2018). Caste and development: Contemporary perspectives on a structure of discrimination and advantage. *World Development*, *110*, 422–436.

Nelson, F., & Agrawal, A. (2008). Patronage or participation? Community-based natural resource management reform in sub-Saharan Africa. *Development Change*, *39*, 557–585.

Nenko, A., Parkins, J. R., Reed, M. G., & Sinclair, A. J. (2019). Rethinking effective public engagement in sustainable forest governance. *Society & Natural Resources*, *32*(12), 1383–1398.

Nightingale, A. J. (2011). Bounding difference: Intersectionality and the material production of gender, caste, class and environment in Nepal. *Geoforum*, *42*(2), 153–162.

Nilsson, D., Baxter, G., Butler, J. R. A., & McAlpine, C. A. (2016). How do community-based conservation programs in developing countries change human behaviour? A realist synthesis. *Biological Conservation*, *200*, 93–103.

Oldekop, J. A., Holmes, G., Harris, W. E., & Evans, K. L. (2016). A global assessment of the social and conservation outcomes of protected areas. *Conservation Biology*, *30*, 133–141.

Ostrom, E. (1990). *Governing the commons*. Cambridge University Press.

Padgee, A., Kim, Y., & Daugherty, P. J. (2006). What makes community forest management successful: A meta-analysis from community forests throughout the world. *Society & Natural Resources*, *19*(1), 33–52.

Parvin, P. (2021). The participatory paradox: An egalitarian critique of participatory democracy. *Representation*, *57*(2), 263–285.

Patton, M. Q. (2003). *Qualitative research and evaluation methods* (3rd ed.). Sage Publications.

Persha, L., Agrawal, A., & Chhatre, A. (2011). Social and ecological synergy: Local rulemaking, forest livelihoods, and biodiversity conservation. *Science*, *331*(6024), 1606–1608.

Po, J. Y. T., Saint Ville, A. S., Rahman, H. M. T., & Hickey, G. M. (2019). On institutional diversity and interplay in natural resource governance. *Society & Natural Resources*, *32*(12), 1333–1343.

Pohjola, M. V., & Tuomista, J. T. (2011). Openness in participation, assessment and policy making upon issues of environment and environmental health: A review of literature and recent project results. *Environmental Health*, *10*, 58.

Potts, R. (2020). Disconnected dots: A systematic review of governance challenges for natural resource management. *Journal of Environmental Planning and Management*, *63*(8), 1356–1374.

Predmore, S. A., Stern, M. J., Mortimer, M. J., & Seesholtz, D. N. (2011). Perceptions of legally mandated public involvement processes in the U. S. Forest Service. *Society & Natural Resources*, *24*(12), 1286–1303.

Pretty, J. N. (1995). Participatory learning for sustainable agriculture. *World Development*, *23*(8), 1247–1263.

Purdy, J. M. (2012). A framework for assessing power in collaborative governance processes. *Public Administration Review*, *72*, 409–417.

Raven, B. H. (1965). Social influence and power. In I. D. Steiner & M. Fishbein (Eds.), *Current studies in social psychology* (pp. 371–382). Holt, Rinehart, Winston.

Saldaña, J. (2012). *The coding manual for qualitative researchers paperback* (2nd ed., p. 328). SAGE Publications Ltd.

Selfa, T., & Endter-Wada, J. (2008). The politics of community-based conservation in natural resource management: A focus for international comparative analysis. *Environment and Planning A: Economy and Space*, *40*(4), 948–965.

Souto, T., Deichmann, J. L., Nunez, C., & Alonso, A. (2014). Classifying conservation targets based on the origin of motivation: Implications over the success of community-based conservation projects. *Biodiversity and Conservation*, *23*, 1331–1337.

Stern, M. J. (2018). *Social science theory for environmental sustainability: A practical guide*. Oxford University Press.

Teddlie, C., & Tashakkori, A. (2009). *Foundations of mixed methods research: Integrating quantitative and qualitative approaches in the social and behavioral sciences*. Sage Publications Inc.

Thaler, G. M. (2021). Ethnography of environmental governance: Towards an organizational approach. *Geoforum*, *120*, 122–131.

Timilsina, N., & Heinen, J. T. (2008). Forest structure under different management regimes in the western lowlands of Nepal: A comparative analysis. *Journal of Sustainable Forestry*, *26*(2), 112–131.

Wells, M. P., McShane, T. O., Dublin, H. T., O'Connor, S., & Redford, K. H. (2004). The future of integrated conservation and development projects: Building on what works. In M. P. Wells & T. O. McShane (Eds.), *Getting biodiversity projects to work: Towards more effective conservation and development* (pp. 397–421). Columbia University Press.

West, P., Igoe, J., & Brockington, D. (2006). Parks and peoples: The social impact of protected areas. *Annual Review of Anthropology*, *35*, 251–277.

Yin, R. K. (2006). Mixed methods research: Are the methods genuinely integrated or merely parallel? *Research in the Schools*, *13*(1), 41–47.

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Baral, N., Heinen, J. T., & Stern, M. J. (2025). Empirical test of the participation paradox in conservation and development. *Conservation Science and Practice*, *7*(1), e13276. https://doi.org/10.1111/csp2.13276