

CONTRIBUTED PAPER

Balancing making a difference with making a living in the conservation sector

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Abstract

Goals play important roles in people's lives because they focus attention, mobilize effort, and sustain motivation. Understanding conservationists' satisfaction with goal progress may provide insights into real-world environmental trends and flag risks to their well-being and motivation. We asked 2694 conservationists working globally how satisfied they were with progress toward goals important to them. We then explored how this satisfaction varied among groups, including demographic and occupational. Finally, we looked at respondents' experiences associated with goal-progress satisfaction. Many (94.0%) indicated that making a meaningful contribution to conservation was an important goal for them, and over half were satisfied or very satisfied in this area (52.5%). However, respondents were generally dissatisfied with progress on collective conservation goals (e.g., stopping species loss). Some groups were more likely to report dissatisfaction than others. For instance, those in conservation for longer tended to be less satisfied with collective goal progress (log odds −0.21, 95% credibility interval [CI] −0.32 to −0.10), but practitioners reported greater satisfaction (log odds 0.38, 95% CI 0.15–0.60). Likewise, those who were more optimistic in life (log odds 0.24, 95% CI 0.17–0.32), male (log odds 0.25, 95% CI 0.10–0.41), and working in conservation practice (log odds 0.25, 95% CI 0.08–0.43) reported greater satisfaction with individual goal progress. Free-text responses suggested widespread dissatisfaction with livelihood goals, particularly related to job security and adequate compensation. Although contributing to conservation appeared to be a source of satisfaction, slow goal progress in other areas—particularly around making a living—looked to be a source of distress and demotivation. Employers, funders, professional societies, and others should consider ways to help those in the sector make a difference while making a satisfactory living by, for example, prioritizing conservationists' well-being when allocating funding. This support could include avoiding exploitative practices, fostering supportive work environments, and celebrating positive outcomes.

KEYWORDS

conservation goals, conservation psychology, conservationists' well-being, goal progress satisfaction, motivation, occupational health, reflexivity

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Resumen: Los objetivos juegan un papel importante en la vida de las personas porque enfocan la atención, movilizan esfuerzos y mantienen la motivación. El entendimiento de la satisfacción de los conservacionistas con el progreso de sus objetivos podría proporcionar información sobre las tendencias ambientales del mundo real y marcar los riesgos para su bienestar y motivaciones. Les preguntamos a 2694 conservacionistas trabajando alrededor del mundo cuán satisfechos están con el progreso hacia los objetivos que consideran más importantes. Después exploramos cómo esta satisfacción varió entre grupos, incluyendo grupos demográficos y laborales. Finalmente, observamos las experiencias de los respondientes asociadas con la satisfacción con el progreso de los objetivos. Muchos (94%) indicaron que contribuir significativamente a la conservación es un objetivo importante para ellos, y más de la mitad estuvieron satisfechos o muy satisfechos en este campo (52.5%). Sin embargo, los respondientes también mostraron una inconformidad generalizada con el progreso de los objetivos colectivos de conservación (p. ej.: detener la pérdida de especies). Algunos grupos tuvieron una mayor probabilidad de reportar inconformidades que otros grupos. Por ejemplo, aquellos con mayor tiempo en la conservación tendieron a estar menos satisfechos con el progreso de los objetivos colectivos (probabilidad log -0.21, 95% intervalo de credibilidad [IC] -0.32 a -0.10), pero los practicantes reportaron una mayor satisfacción (probabilidad log 0.38, 95% IC 0.15-0.60). De igual manera, quienes cuentan con mayor optimismo cotidiano (probabilidad log 0.24, 95% IC 0.17-0.32), son de sexo masculino (probabilidad log 0.25, 95% IC 0.10-0.41) y trabajan en la práctica de la conservación (probabilidad log 0.25, 95% IC 0.08-0.43) reportaron una mayor satisfacción con el progreso de los objetivos individuales. Las respuestas de texto libre sugirieron una inconformidad generalizada con los objetivos de sustento, particularmente los relacionados con la seguridad laboral y las compensaciones adecuadas. Aunque contribuir a la conservación parece ser una fuente de satisfacción, el progreso lento de los objetivos en otras áreas – particularmente las relacionadas con ganarse la vida – indicaba ser una fuente de angustia y desmotivación. Los empleadores, financiadores, las sociedades profesionales y demás deberían considerar maneras para ayudar a aquellos en el sector de la conservación a lograr una diferencia a la vez que se ganan la vida satisfactoriamente, por ejemplo, mediante la priorización del bienestar de los conservacionistas al momento de asignar financiamientos. Este apoyo podría incluir evitar prácticas explotadoras, fomentar ambientes de trabajo solidarios y celebrar los resultados positivos.

PALABRAS CLAVE

bienestar de los conservacionistas, motivación, objetivos de conservación, psicología de la conservación, reflexividad, salud laboral, satisfacción con el progreso de los objetivos

保护工作中有所作为与谋取营生的平衡

【摘要】目标在人们的生活中起着重要的作用,因为它能帮助人们集中注意力,调动工作积极性和维持动力。了解保护工作者对目标进展的满意度,可能有助于深入理解现实世界的环境变化趋势,并明确保护工作者的福祉和动机面临的风险。我们调查了全球2694名保护工作者关于他们关注的重要目标进展情况的满意度,并探讨了这种满意度在不同群体(不同人口结构和职业)之间的差异。最后,我们研究了与目标进展满意度相关的受访者经历。许多受访者(94.0%)表示,为保护作出有意义的贡献是他们的重要目标,且超过半数的受访者(52.5%)在这方面感到满意或非常满意。然而,受访者普遍对共同保护目标(如遏止物种丧失)的进展表示不满意。一些群体比其他群体更有可能报告不满意的结果,例如,从事保护工作时间较长的受访者往往对共同目标的进展不太满意(比率比对数为-0.21, 95%置信区间[CI]为-0.32至-0.10),但工作时间较短的保护工作者的满意度则较高(比率比对数0.38, 95% CI 0.15-0.60)。同样地,那些在生活更乐观的人(比率比对数0.24, 95%置信区间0.17-0.32)、男性(比率比对数0.25, 95% CI 0.10-0.41),以及从事保护工作的受访者(比率比对数0.25, 95% CI 0.08-0.43)对个人目标的进展的满意度普遍更高。自由文本的回答表明,受访者普遍对生计目标不满意,尤其是在工作保障和适当补偿方面。虽然对保护工作的贡献似乎可以提供满足感,但其

它领域的目标进展缓慢(特别是围绕生计的目标),则可能引发了忧虑和积极性不足。雇主、资助者及专业团体等应考虑如何帮助保护工作者在过上满意的生活的同时有所成就,例如,在资金分配中优先考虑保护工作者的福利。这种支持还可以包括避免剥削性工作,建立支持性的工作环境,以及庆祝积极的保护成果。

【翻译:胡怡思;审校:聂永刚】

关键词:保护目标、保护心理学、保护工作者的福祉、目标进展满意度、动机、职业健康、反思性

INTRODUCTION

Goals play essential roles in many aspects of people's lives, including among conservationists (Kruglanski, 1996). We define goals as desired outcomes, states, or processes that reflect perceived discrepancies between the current and desired state of the world (Austin & Vancouver, 1996; Locke & Latham, 2006). Setting goals can increase performance on tasks by directing attention, mobilizing action, and helping sustain effort (Latham & Locke, 2007; Locke & Latham, 2002; Lunenburg, 2011). Goals can be important for groups and organizations; collectively held goals are likely to increase group performance, but conflicting goals can undermine it (Latham & Locke, 2007). Conservation is mission driven (Soulé, 1985), so goals are expected to direct conservationists' attention and effort. We consider conservationists actors intending to "establish, improve or maintain good relations with nature" (Sandbrook, 2015). But how satisfied are conservationists with progress toward goals important to them?

Exploring conservationists' satisfaction with goal progress is valuable in multiple ways. Goals often play central roles in conservation planning at multiple scales, ranging from global goals, such as reflected in the Aichi Biodiversity Targets, to local ones, such as found in project logical frameworks (CBD, 2010). Conservationists witness threats to nature across diverse contexts and places and accumulate experience useful for conservation planning (Dicks et al., 2014). So, conservationists' experience-based appraisals may provide insights into real-world progress toward goals. Indeed, subjective evaluations can be an informative source of evidence in the adaptive management of ecosystems (Berkes et al., 2000). Moreover, these subjective appraisals—perhaps communicated as stories and other formats (Sundin et al., 2018)—may strengthen the case for society investing in areas of conservation, where limited progress is being made. Alternatively, these perspectives may challenge conventional assessments, prompting further research to investigate why formal and experiential assessments differ.

Goal progress leads to feelings of control, competence, and autonomy and alleviates the stress associated with undesirable situations and unmet needs (Deci & Ryan, 2000). So, goal progress may contribute to conservationists' psychological well-being, whereas inadequate progress may be a source of distress (Ryan & Deci, 2001; Strauman, 2002; Wrosch et al., 2013). For example, a meta-analysis of 85 studies showed that perceived goal progress was consistently, and perhaps bidirectionally, associated with subjective well-being (Klug & Maier, 2014). Relatedly, environmentalists exposed to biodiversity loss

and tasked with preventing it might face particularly acute "ecological grief" (Gordon et al., 2019). In turn, distress and grief can reduce workplace performance, harming concentration, workplace relationships, and judgment (Hazen, 2008; Hilton & Whiteford, 2010). The distress associated with goal progress dissatisfaction might be offset by support in other areas of conservationists' professional lives. This could involve addressing imbalances between workplace effort and reward, better management of the demands of the job, ensuring organizational equity and justice, and fostering workplace social support—factors known to influence mental well-being (van der Molen et al., 2020).

Relatedly, satisfaction with current goal progress may support motivation. According to expectancy-value theory, motivation is a function of the expectation of success and the value of doing a task (Eccles et al., 1983; Wigfield & Cambria, 2010; Wigfield & Eccles, 2000). For instance, a conservationist's motivation is influenced by the perceived likelihood and value of attaining a goal. Expectations of future success can be influenced by multiple factors, including perceptions of one's ability, control over the outcome, and experiences of previous success. Consequently, progress toward goals in the present elevates expectations of future success and, therefore, motivation (Eccles et al., 1983; Wigfield & Eccles, 2000). Finding high levels of dissatisfaction suggests the need for further research investigating impacts on motivation and, perhaps, conservation outcomes.

Satisfaction with goal progress is expected to vary within the conservation community and by context (Table 1). This variation may depend on whether goals are considered at an individual level (individual goals) or at a collective level (collective goals). Understanding variation in satisfaction might suggest groups and regions where resources should be invested to enable individual or collective goals to be met or support offered to offset dissatisfaction with inadequate goal progress. We examined quantitatively satisfaction of conservationists with progress toward goals they consider important and how this satisfaction varies with respect to key covariates (Table 1) and qualitatively how conservationists describe experiences associated with goal progress.

METHODS

Study population and sample

The target population of our survey included people who self-identified as conservationists. The boundaries of this population

TABLE 1 A priori hypothesized associations between conservationist satisfaction with progress toward individual and collective goals and demographic, occupational, and other characteristics^a

Goal type	Expected association	Factor	Possible links between the factor and goal progress satisfaction
Individual	+	Dispositional optimism	Dispositional optimism is the general expectation of good outcomes in life (Tusaie & Patterson, 2006). Optimists tend to sustain greater effort and be more likely to attain goals (Forgeard & Seligman, 2012). They may also have more positive outlooks on life in general. As a result of these factors, they are expected to provide more positive assessments of individual and collective goal progress.
Collective	+		
Individual	+	Years in conservation	Those in the sector for longer may be more established in their careers and are thus expected to assess their individual goal progress more positively. However, they may have a longer-term view of progress toward collective goals, which might be negative because of historic failure to meet conservation targets (CBD Secretariat, 2020).
Collective	—		
Individual	?	Work hours	Those working longer hours might make greater progress to individual goals. Alternatively, some may work long hours—a sign of overcommitment—because of dissatisfaction with perceived individual and collective goal progress (de Jonge et al., 2000).
Collective	?		
Individual	+	Gender (male)	Men, women, and those who do not identify themselves as either may face differing constraints in conservation work (Jones & Solomon, 2019). In general, we expect men to face fewer barriers in pursuing some individual goals and thus to provide more positive assessments of individual goals but not necessarily collective goals.
Collective	?		
Individual	+	Education	More education can improve career prospects and enable people to take roles in which they have more influence over their individual goal progress, so we expect those with higher education to provide more positive assessments (Crawford et al., 2016). Environmental awareness may be positively associated with educational level (e.g., Kollmuss & Agyeman, 2010). So, we expect those with university-level education to be more aware of threats to nature and thus be less satisfied with collective goal progress.
Collective	—		
Individual	?	Practice or academia	Individuals with more positive outlooks might be attracted to one type of job role. Or, opportunities to pursue individual goals may vary between practitioner or academic settings. However, the expected direction of the relationship is unclear. Those in practice may be more directly exposed to biodiversity loss, leading to negative assessments, or more exposed to conservation action, resulting in positive assessments. Equally, academics trained to reflect on downsides and more exposed to global-level studies but distanced from real-world action might be less satisfied with collective goal progress. As a result, the expected direction of the relationship is unclear.
Collective	?		
Individual	?	Focal biome	Opportunities and constraints to pursuing individual and collective goals may vary among terrestrial, marine, or cross-cutting biomes (encompassing terrestrial and marine biomes), although the expected direction of the relationship is unclear.
Collective	?		
Individual	?	Region (where most familiar with the conservation context)	Opportunities and constraints to pursuing individual and collective goals may vary among regions, although the expected direction of the relationship is unclear.
Collective	?		

^aKey: +, expected positive association; —, negative association; ?, expected direction of association unclear.

are fuzzy, but our sampling strategy targeted those most likely to identify with the global conservation movement (Appendix S1). This population was convenience sampled (including snowball sampling) through an online survey conducted in Spanish, English, French, Kiswahili, Portuguese, and Khmer, seeking to maximize the number of respondents. We recruited

respondents in July 2019 and May 2020 through conservation listservs and newsletters, direct contact of conservation organizations, an in-person international conference, and social media networks, with the aim of getting the widest global reach possible. Our recruitment and survey protocols were approved by an Ethical Review Board at the University of Oxford (reference

TABLE 2 Predefined individual and collective conservation goals (related to outcomes for people and nature) based on the value-belief-norm theory and its subdimensions and other literature (de Groot & Steg, 2007; Papworth et al., 2018)^a; Stern, 2000; Stern et al., 1999

Individual goals	Collective goals
Making a meaningful contribution to conservation	Stopping human-driven species loss
Being a leader	Ensuring people benefit from nature in a sustainable way
Influencing other people's behavior	Making sure people are treated equally and fairly
Earning money	Avoiding conflict between people and conservation
	Stopping damage to the natural world
	Creating a more sustainable world

^aIndividual goals correspond to egoistic values, and collective goals relate to biospheric and altruistic values (Appendix S3).

number: R62487/RE001) (Appendix S2). The survey included closed and open-ended questions that yielded quantitative and qualitative data, respectively.

Quantitative data description

A wide range of goals are expected to be important to conservationists. We predefined goals to aid comparison between respondents and keep the survey short. We based our goal-selection process on the value-belief-norm theory (e.g., Heberlein, 1972; Stern et al., 1993). This theory suggests that proenvironmental behavioral intentions arise from caring about nature and its role in society (Stern, 2000), but that proenvironmental behavior can have personal costs and benefits and so behavioral intentions are also influenced by their consequences for individuals (de Groot & Steg, 2009). Consequently, the value-belief-norm theory suggests that proenvironmental behavioral intentions are motivated by egoistic, altruistic, and biospheric values (Stern, 2000; Stern et al., 1999). Other research suggests that the aim of making a difference is also important to conservationists (Papworth et al., 2018). We, therefore, developed a set of statements spanning this range of values during a series of workshops attended by six of us. These statements span subdimensions of the egoistic, altruistic, and biospheric values described by de Groot and Steg (2007), and one statement reflects the individual goal of making a difference (Appendix S3). However, many conservation goals—such as those reflected in our statements—entail positive outcomes for both people and nature. For instance, the goal of stopping damage to the natural world may be closely associated with values around protecting nature, but also concern for the human well-being impacts of nature loss. Consequently, egoistic values corresponded to statements regarding individual goals, and statements relating to altruistic and biospheric values were clustered as collective conservation goals (Table 2).

Not all conservationists are likely to prioritize the same goals, so we first asked respondents if each goal was important to them. For those goals considered important, we then

asked respondents to indicate their satisfaction or dissatisfaction according to five response levels ranging from very dissatisfied to very satisfied. Respondents were asked to think about their personal work context when responding to the questions about individual goals and the conservation area or context they were most familiar with when responding to questions about collective goals.

Quantitative data analyses

All quantitative data handling and analyses were performed in the statistics software R (R Core Team, 2020). Study code is available at <https://github.com/Pienkowski/LiC-goal-progress>. Not all participants answered all questions. Those who completed the goal endorsement and satisfaction questions were included in the descriptive results (sample $n = 2694$). In this sample, those who completed questions related to goal endorsement, progress, and dispositional optimism were included in the statistical analysis (subsample $N = 2336$). Some respondents in the subsample did not complete all questions (Appendix S4). This mostly occurred when individuals chose not to complete the survey. Missing data in this subsample were substituted through multivariate imputation by chained equations in which 10 data sets were created containing imputed values with the package mice (van Buuren, 2011) (Appendix S4).

Multivariate mixed-effects ordinal logistic regression models were implemented using these imputed data. We fitted two models. The response variable in the first model was reported satisfaction with progress to endorsed individual goals. The response variable in the second was satisfaction with endorsed collective goals. Each model was fitted with each of the 10 imputed data sets. Not all respondents endorsed all goals. So, the endorsed goals were stacked row-wise and respondent ID was included as a random effect, allowing goal-progress satisfaction to be treated as a single variable while accounting for dependencies within responses from the same individual. The explanatory variables included goal name (for each goal in the set of the individual or collective goals) (Table 1). The proportional odds assumption was graphically assessed and considered to have been adequately met, following Harrell (2015).

Dispositional optimism was estimated using the Revised Life-Orientation Test (Scheier et al., 1994). Ten sets of plausible values were extracted for use in the statistical analyses (Appendix S5). A dummy variable corresponding to the period before and after the start of the COVID-19 pandemic was included in additional analyses, the results of which were consistent with those presented below (Appendix S6). The analyses were performed in the Stan computational framework and accessed using the brms package (Bürkner, 2017; Carpenter et al., 2017). Weakly informative priors, compared with the sample size and scale of explanatory variables (with all continuous variables being scaled and centered), were chosen. The same normal prior distribution was used for all coefficient and intercept parameters, following:

$$prior = N(0, 10), \quad (1)$$

where N is the normal distribution with a mean of 0 and an SD of 10. A normal distribution was chosen because extreme parameter estimates were deemed less likely than those near 0 (Lemoine, 2019). Additionally, the software's default weakly informative priors (a half Student's t distribution with $df = 3$ and a scale parameter of 2.5) were used for the SD of random effects. The models were fitted with a logit link function, with 4000 burn-in iterations. We used 4000 post burn-in iterations to estimate the posterior distribution (8000 total) with the Markov chain Monte Carlo sampler and a seed value of 123 across four Markov chains, following McElreath (2016). The models were evaluated according to steps 1–7 and 10 of the WAMBS-Checklist (Depaoli & Van de Schoot, 2017) (Appendix S7). The model results from each set of 10 imputed data sets were pooled by combining the posterior distributions.

Qualitative data description and analyses

Respondents were invited to provide open-ended free-text responses to the question, “Do you have any thoughts or comments on the challenges and rewards experienced by those in conservation?” A total of 965 people provided a free-text response. Around 426 provided responses that appeared to describe desired states (a predefined theme), from which goals could be inferred. These desired states related to the external world, such as biological or social conditions, and those experienced by individuals, such as a respondent's perceived job prospects. For instance, when respondents stated they intended to continue working to conserve nature, we inferred that conserving nature was an important goal to them. This subset of responses provided insights into respondent's experiences associated with goal progress and so were included in the thematic analysis.

The thematic analysis was conducted by T.P. and was inductive, meaning the themes emerged from reviewing the text. The analysis followed Braun and Clarke (2006), and the following steps were conducted: familiarization with data by reading all responses; iteratively generating increasingly specific codes and systematically applying them across the text in three rounds of coding; searching and clustering codes and associated text into themes; selecting the most frequently mentioned key themes and ensuring they were internally consistent but discrete; and defining and naming key themes (Appendix S8).

RESULTS

Satisfaction with progress toward important goals

A total of 2694 respondents familiar with conservation in 145 countries told us which of our goals they endorsed or considered important and how satisfied they were with progress toward each goal (Appendix S9). This sample included 969 men and 1208 women, of which 1094 worked in academic

settings and 729 were practitioners. Respondents had a mean of 12.2 (SD 10.5) years working in conservation; 2069 received a university-level education. Additionally, 95.4% of respondents completed the survey in English, 2.8% in French, 1.0% in Portuguese, 0.6% in Spanish, <0.1% in Kiswahili, and none in Khmer. Of these, 9.2% were nationals of Central and Southern Asian countries, 4.3% of Eastern and Southeast Asia, 48.6% of Europe and Northern America, 5.8% of Latin America and the Caribbean, 1.2% of Northern Africa and Western Asia, 4.9% of Oceania, and 8.2% of Sub-Saharan Africa. Nationalities of 17.9% were unknown. Study data are available from https://figshare.com/articles/dataset/Conservationists_goal_progress_dataset/14501238 (<https://doi.org/10.6084/m9.figshare.14501238>).

Some goals were more frequently endorsed than others (Figure 1a). For instance, almost all respondents (94.0%) indicated that making a meaningful contribution to conservation was important, but just over one-third (39.6%) endorsed the goal of making money. In general, collective goals were more frequently endorsed than individual goals, except for making a meaningful contribution.

There was mixed satisfaction with progress toward goals that respondents considered important (Figure 1b). For instance, of those who thought making a meaningful contribution was an important goal (94.0%), around one-half were satisfied or very satisfied with progress toward it (52.5%). In contrast, for the next most frequently endorsed goal—stopping human-driven species loss (important to 72.2%)—only 15.6% said they were satisfied or very satisfied with progress toward it. A post hoc mixed-effects ordinal logistic regression suggested that there was greater satisfaction with progress toward individual compared with collective goals (log odds 1.76, 95% CI 1.69–1.83, $n = 2336$).

Variability in perceived satisfaction with goal progress was associated with various factors in the statistical analyses (Figure 2). Dispositional optimism was positively associated with satisfaction with progress toward individual but not collective goals. Those with 1 SD higher dispositional optimism than the mean had an estimated 30.3% higher probability of being satisfied or very satisfied with progress toward individual goals compared with those 1 SD below the mean. Years in conservation were positively associated with satisfaction with individual goal progress but negatively associated with satisfaction with collective goals. For instance, someone in conservation for 30 years was 52.6% more likely to be satisfied or very satisfied with progress toward individual goals and 36.5% less likely for collective goals, than someone in conservation for 5 years. Work hours were negatively associated with satisfaction with progress in collective goals; someone working 40 h was 18.2% less likely to be satisfied or very satisfied with progress toward collective goals than someone working 20 h. Work hours was not strongly associated with individual goal progress. Men reported 15.5% and 19.3% higher probability than women of being satisfied or very satisfied with progress toward individual and collective goals, respectively. Those with university-level

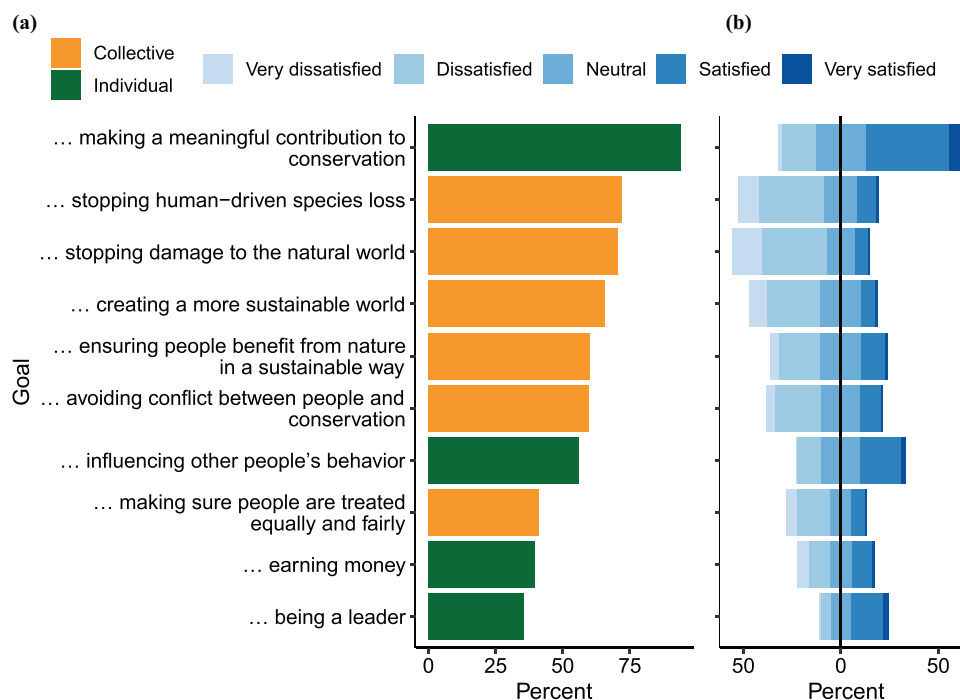


FIGURE 1 The percentage of respondents who (a) said that 10 individual and collective goals were important to them ($n = 2694$) and (b) reported satisfaction with progress toward each goal

educations were 50.4% less likely to be satisfied or very satisfied with progress toward collective goals than those without university-level educations, but this association was not seen for individual goals. Practitioners reported 16.3% and 36.9% higher probability of being satisfied or very satisfied with individual goals and collective goals, respectively, than those in academia. There was also some variability in goal progress satisfaction between regions. For instance, those familiar with conservation in Oceania reported 16.3% higher probability of being satisfied or very satisfied with progress toward individual goals than those in Europe and North America. There was no evidence of an effect associated with the other variables.

In our primary analysis, we assumed a linear relationship between work hours and goal progress satisfaction. To test this, the analysis was repeated after substituting numeric work hours with a binary variable indicating whether the respondent worked over 40 h per week (Appendix S10). Forty hours was chosen for the cutoff because this represents a commonly accepted standard for the working week of a full-time employee. Consistent with the main analysis, working over 40 h per week was negatively associated with collective (log odds -0.22 , 95% CI -0.42 to -0.03) but not individual (log odds -0.03 , 95% CI -0.18 to 0.12) goal-progress satisfaction.

Two further post hoc mixed-effects ordinal logistic regressions were implemented, following similar model specifications to the main analysis but disaggregating the collective goals (Appendix S11). The first model included the biospheric-related goals and the second model included the altruistic-related ones. The results of both of these models described similar patterns as found in the main analysis.

Goals, barriers, and consequences in respondents' own words

A total of 426 participants provided free-text responses that appeared to describe desired states or divergence from those states. The following paragraphs describe the themes that were most commonly mentioned across respondents, accompanied by the number of respondents who offered relevant text (in parentheses), followed by an illustrative quote.

Many respondents (110) described desired states related to collective conservation outcomes (including relating to people and nature) or divergence from those outcomes. Some of these responses (55) related to the state of nature and the environment; most were dissatisfied with progress in these areas. For example, one respondent said, it "always feels like we should do more and what we do isn't enough [...] it feels like a drop in the ocean when I read all of the headlines on widespread species endangerment across the world." Others (24) indicated desired states related to people's relationships with nature and conservation and expressed mixed sentiments of satisfaction and dissatisfaction. For instance, one respondent said, "We will lose everything and our children will have a very tough life" if we fail to address the biodiversity crisis. Many (67) suggested conservation faced insurmountable odds, such as the respondent who said, "Ultimately we act to protect life, all life, on Earth. This is an incredible, essential, and arguably insurmountable goal."

Some (125) respondents indicated broad-scale factors that appeared to impede progress toward collective conservation aims. These responses centered on conflicts between the aims and interests of conservation versus those of governments,

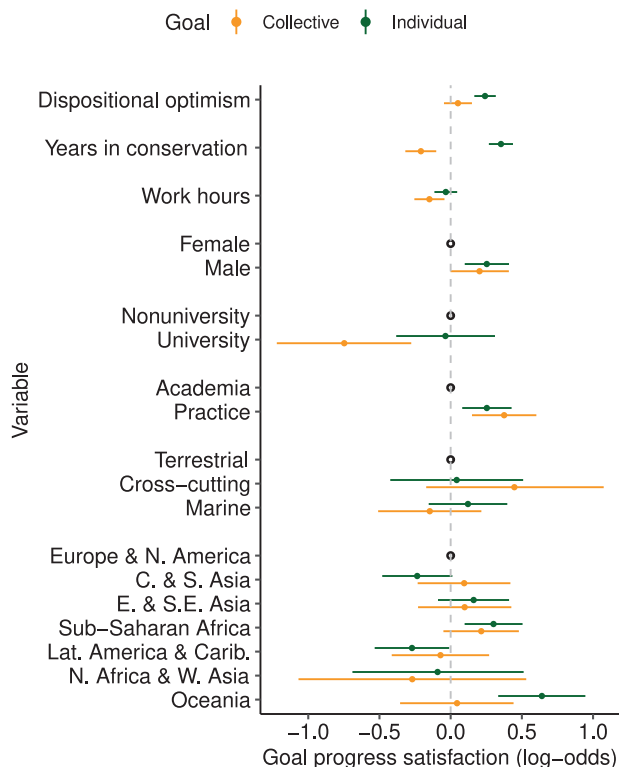


FIGURE 2 Estimated associations between conservationist satisfaction with goal progress and explanatory variables among 2336 survey respondents (points, mean of the posterior distribution on the log-odds scale; bars, 95% credibility intervals; cross-cutting, encompassing terrestrial and marine biomes). Dispositional optimism, years in conservation, and work hours are scaled and centered. Thresholds, goal name, and response categories corresponding to missing data are not shown

businesses, the public, and other actors (87) and were often discussed in relation to inadequate funding (45). For instance, one respondent said, “It feels like most of the human race is rowing in a different direction from those of us in conservation.” Another stated, “the public does not always see the value in conserving landscapes/species and funding can change rapidly due to political shifts.” Others (33) mentioned conflicts between aims and interests within conservation. These included apparent tensions between individuals and organizations; funders and practitioners; science, policy, and practice; and organizations. These often surrounded differences in approaches to conservation. For instance, one respondent said, “I am also increasingly becoming aware of tensions in the conservation fraternity [...] which can sometimes become rather aggressive (e.g. between those for and those against resource use in protected areas).”

Many respondents (252) described desired individual states or divergence from those states. A large number (147) of free-text responses indicated that “making a difference” was important to them; most were satisfied in this area. For instance, one said, “the best reward is the personal satisfaction of working for nature in particular the wildlife I work on!” But, some (20) highlighted how people’s “passion” or desire to make a difference created a culture of exploitation in the sector. For instance,

one respondent said, “We are expected to love our jobs - and we do - but are therefore not paid enough, because we do it ‘for the love of it.’ My landlord, alas, does not accept passion as a payment method.”

Several (19) stated their desire to contribute to conservation came at the expense of perusing livelihood goals, such as one who said, “The biggest dilemma I have is how do I work in a field that I believe in [...] while at the same time be able to provide for my family.” Another said, “I realize that there is a trade-off for doing work that is interesting and rewarding and inspiring and financial remuneration.” Many respondents (143) discussed desired states relating to their livelihoods, such as adequate and commensurate incomes; job security; career progression; and maintaining a work–life balance. Most of these respondents were dissatisfied in these areas, such as one respondent who said “It’s hard to find a meaningful job that pays a liveable wage.” Some (20) highlighted that support and positive interactions with colleagues were important to them; most were satisfied in this area. However, some (5) of these respondents indicated dissatisfaction associated with discrimination, particularly around gender and race.

Respondents (85) also indicated factors impeding progress to desired states at an individual level, mainly related to respondents’ livelihoods. These primarily related to resource and funding constraints (60), challenges gaining appropriate experience (14), and lack of time in a working week (8). Several highlighted that these constraints affected the least wealthy the most. For instance, one said, “I worry about conservation work being a rich man’s game. It certainly preferences those who are financially able to work with little to no pay to gain experience and can afford a degree.” Some suggested this reduced diversity and meritocracy in conservation, such as one who said, because “we cannot hope to attract the brightest and best, we normally end up with people who have a passion and an ability to subsidise their career.”

Some (81) highlighted negative consequences associated with inadequate progress to desired states, including impacts on motivation (30), mental well-being (31), and the feeling of being overwhelmed (18). For instance, one respondent said, “Where I work in Cambodia, the feeling of being hopeless at achieving goals and making the impact you crave for your profession and your personal passion can drive one into a depressed state of mind.” Several (26) indicated strategies or mind-sets that helped them deal with dissatisfaction, including focusing on personal contributions, trying to remain optimistic, reminding oneself of their “love of nature,” considering how the work aligns with their values, and in some cases, seeking professional support. For instance, one said, “Focus on your core values and goals in conservation and making decisive manageable efforts in the direction of your goals on a daily basis.”

Several (40) mentioned the positive impacts of goal progress, including feeling fulfilled (13) and motivated (3). For example, one said, “balanced against this is the knowledge that those of us working in conservation are doing something worthwhile with our lives, which gives great satisfaction.” Another said, “successful conservation spurs one to work better and harder.”

DISCUSSION

Respondent satisfaction with, and experiences of, progress toward important goals

The high proportion of respondents who said the goal of making a meaningful contribution was important suggests working in conservation is more than just a job for many in our sample. Across the predefined and free-text responses, most appeared to be satisfied in this area. However, there was an apparent tension between many respondents' desire to contribute to conservation and their ability to pursue livelihood goals. The free-text responses suggested that many aspirations around livelihoods were not reflected in our set of predefined goals. For instance, while earning money might not have been a priority, many desired adequate incomes and job security. Nevertheless, many respondents indicated having to invest significant time, effort, and emotional commitment in pursuing livelihood goals, as has been noted in other research (e.g., Ramos et al., 2017). As a result, for many respondents, working in conservation appeared to be a trade-off between contributing to a cause they cared about and their need to earn a living.

Many conservation organizations aim to provide stable and appropriately compensated jobs but are often constrained by inadequate funding (Malcom et al., 2019). However, we encourage employers to consider ways to better support their staff in these areas. For instance, employers might examine their use of volunteer labor and prioritize paying for salaries rather than short-term contracts and consultancies (Vercammen et al., 2020). They may seek ways to pay staff living wages and contribute to health insurance, pensions, and other benefits, factors known to increase staff retention in other sectors (Lehmann et al., 2008). Funders might consider ways to support the livelihoods of conservationists with the budgets they have. This support could include providing funding over longer periods and allowing a greater share of budgets to be used for staff overheads. Similarly, funders might reject projects with unrealistic aspirations that risk staff becoming overworked or from organizations that do not pay living wages. As well as supporting their well-being, improving conservationists' livelihood security might enable them to better deliver conservation outcomes.

Other research likewise suggests that making a difference motivates those in the conservation sector (Papworth et al., 2018). This desire to make a difference is also found in other sectors, such as public health and humanitarian aid (e.g., Greenberg et al., 2019; Roth, 2015). Yet, some respondents expressed concern that conservationists' passion for nature put them at risk of exploitation by employers. This risk also appears in other sectors, where job fulfillment is used to legitimize the poor treatment of employees, such as requiring staff to do unpaid overtime, work excessive hours, or do tasks irrelevant to their job description (Kim et al., 2020). Sandbrook (2019) expressed concern that the professionalization of conservation might displace passion toward protecting nature. Yet, many of our respondents felt that contributing to conservation

was important to them, suggesting they remain passionate about safeguarding nature. Rather than displacing passion, the professionalization of conservation could help ensure that those working in the sector are highly valued, fairly compensated, and otherwise at less risk of exploitation than currently.

Respondents' dissatisfaction with progress toward collective conservation goals is perhaps unsurprising, given the scale of threats to biodiversity and their implications for human well-being (CBD Secretariat, 2020; IPBES, 2020). There appeared to be greatest dissatisfaction with progress toward goals most directly related to the state of nature, such as the goal of stopping human-driven species loss. These subjective appraisals appear to corroborate formal assessments, affirming the need for greater action to protect nature (e.g., CBD Secretariat, 2020). Many free-text responses suggested that there was limited progress because biodiversity conservation was not prioritized and funded by governments, the public, businesses, and other sectors of society. Recognizing this, conservationists have been calling for greater investment in reducing biodiversity loss (e.g., Malcom et al., 2019). Sundin et al. (2018) argue that stories can help mobilize societal support for conservation. In this respect, conservationists' accounts of why they are dissatisfied with progress toward collective goals, drawing on their direct experiences, might be seen as particularly legitimate and motivating.

The free-text responses corroborated results of other research that suggests inadequate goal progress is a source of distress and demotivation, but progress contributes to well-being (e.g., Ryan & Deci, 2001; Wigfield & Eccles, 2000; Wrosch et al., 2013). Distressed and demotivated conservationists might be offered support in other aspects of their work lives. This support could involve encouraging workplace sociability, tackling organizational injustice (such as through discrimination), and helping staff maintain a work-life balance (van der Molen et al., 2020). Some individuals distressed by the "gloom-and-doom" conservation discourse might find it useful to engage with optimism movements, such as conservation optimism, earth optimism, and ocean optimism (Swaigood & Sheppard, 2010). Others might choose to focus on their own contributions, celebrating the positive outcomes from their work.

Our sampling approach meant those signed up to conservation listservs and mailing lists or active on social media were most likely to be recruited. This approach is reflected in the characteristics of our sample, with most respondents having received university-level education and responding in English. So, our results cannot speak to the experiences of satisfaction with goal progress among some groups, such as community-based conservationists, non-English speakers, and others. These groups may face greater constraints to goal progress, perhaps working in more threatened ecosystems and with less funding (Powers & Jetz, 2019; Waldron et al., 2013). Therefore, we caution against generalizing our results across the conservation community. A growing number of studies examine the perspectives and experiences of conservationists, but many are not globally representative (e.g., Montana et al., 2019; Papworth et al., 2018; Sandbrook et al., 2019). Such research (including

this study) risks overlooking the experiences of those working in some of the most important but challenging conservation contexts. Further research is needed to understand the heterogeneity of experiences and avoid worsening potential inequalities in the conservation sector.

Variation in satisfaction with goal progress between groups

Dispositional optimists may be more likely to sustain their effort, and thus to progress toward goals, than pessimists (Forgeard & Seligman, 2012). This may explain why optimists reported greater satisfaction with progress toward individual goals that one can influence, but not collective goals outside an individual's control. Although dispositional optimism is a relatively stable trait, encouragement from others—such as colleagues and friends—might help pessimists sustain effort toward challenging goals (Fishbach et al., 2010).

Early career respondents appeared particularly dissatisfied with progress toward the predefined individual goals, echoed in the free-text responses. One reported a barrier was that employers often evaluated candidates based on their experience, which disproportionately favored those who could afford to work in poorly paid or voluntary positions. This barrier might be lowered by adopting competency-based recruitment methods, which evaluate candidates based on demonstrated ability rather than experience (Draganidis & Mentzas, 2006). Furthermore, organizations should consider whether their use of unpaid labor is unfair and counterproductive to the conservation sector's long-term sustainability (Vercammen et al., 2020).

Some respondents might work long hours because of heavy job demands or because they are overcommitted to their work. Overcommitment is a set of behaviors, emotions, and attitudes associated with excessive striving toward goals (de Jonge et al., 2000). In our study, overcommitment might emerge from dissatisfaction with progress toward collective goals, leading individuals to work longer hours in the hope of being able to make a difference. Other research suggests that many conservationists regularly work outside normal office hours, including on the weekends (Campos-Arceiz et al., 2013). These individuals might benefit most from efforts to reduce overcommitment, such as managing employee workloads, not rewarding overwork, and encouraging individuals to not work excessive hours.

Previous research suggests gender-differentiated challenges within conservation, which might explain why men were more satisfied with individual goal progress than women (Jones & Solomon, 2019). Free-text responses also suggested women faced greater challenges pursuing individual goals than men. Competency-based recruitment may play a role in reducing gender discrimination (Draganidis & Mentzas, 2006). Further research could usefully explore why female conservationists appear less satisfied with collective goal progress than males.

Aside from gender, we did not examine how goal progress satisfaction varied by other identities, such as race, ethnicity, or sexuality. These identities can have profound effects on con-

servationists' experiences, particularly given colonial legacies in conservation (Butler, 2021; Demery & Pipkin, 2021; Duff, 2020). But, we believed that an online survey would be an inappropriate platform for investigating these topics and did not have the disciplinary expertise to do this adequately. Further research could improve the understanding of how discrimination and other barriers influence progress toward goals, particularly those related to conservationists' livelihoods and careers.

Our results supported our expectation that those with university-level educations would be less satisfied with collective goal progress. This finding could be because those with higher education have greater environmental awareness (e.g., Kollmuss & Agyeman, 2010) because they are more exposed to “gloom-and-doom” discourses (Swaigood & Sheppard, 2010) or other factors. However, those with higher educations may not necessarily provide more accurate assessments of progress to collective conservation goals. Indeed, qualifications, track record, and experience can be poor predictors of the accuracy of expert judgments (Burgman et al., 2011).

Practitioners reported greater satisfaction with collective goal progress than academics. Practitioners may be more aware of examples of conservation success in the areas they are familiar with or less exposed to global-scale biodiversity threats. Alternatively, individuals with positive conservation outlooks may self-select into practitioner roles, where positivity might be encouraged more than in academia. Equally, practitioners also appeared more satisfied with progress toward individual goals, perhaps partly because it might be harder for academics to see how their work makes a difference. Academics might, therefore, be at higher risk of distress and demotivation associated with goal progress dissatisfaction. However, the full range of challenges faced in different roles should be considered when deciding where resources to support conservationists should be directed.

The lack of significant variability in goal-progress satisfaction between regions and biomes was unexpected, given the actual variability in progress to conservation targets among places (CBD Secretariat, 2020). This variability did not appear to follow easily explained patterns, so further research could usefully explore the causes of these differences and the appropriate scale of analysis.

The post hoc supplemental analysis (Appendix S11) suggests that many of the explanatory variables had similar associations with progress to goals related to both altruistic and biospheric values. This likely reflects how many conservation goals have positive implications for both people and nature. Thus, those groups more satisfied with progress toward goals related to nature are also likely to be more satisfied with progress toward goals concerning people.

Balancing making a difference with making a living

Understanding conservationists' satisfaction with goal progress can tell one about real-world trends and might highlight risks

to the well-being and motivation of those in the sector. To our knowledge, we are the first to ask how satisfied conservationists are with goals they consider important, how this satisfaction varies between groups, and how it is experienced. Our study includes voices from nearly 2700 conservationists familiar with conservation in 145 countries. Among this sample, the goal of contributing to conservation was important to most. However, many struggled to earn adequate incomes and maintain stable careers while pursuing this goal. Employers, funders, and other actors should consider ways to support those working in the sector to deliver conservation outcomes while having stable and rewarding livelihoods. This could involve conservation organizations giving greater priority to their staff's well-being and working conditions when considering how funding is allocated.

Moreover, respondents thought little progress was being made toward collective conservation goals, corroborating formal assessments, which appeared to be a source of distress and a threat to motivation. Employers and others in the sector might consider ways to offset this distress by offering support in other aspects of conservationist professional lives. This could include, for instance, fostering supportive work environments and celebrating positive outcomes in one's work. Such support might be directed to at-risk groups, such as those who are less optimistic, early career professionals, those who are overworked, women, and others who feel they would benefit from support.

Further research is needed to understand how many leave the sector because of these challenges. Nevertheless, our research demonstrates conservationists' fortitude and commitment to protecting nature despite the challenges they face. Conservation is mission-driven and aims to improve relations between people and nature and so is implicitly aspirational (Sandbrook, 2015; Soulé, 1985). Reflecting on conservationists' goals might shed light on new approaches for meeting these aspirations, such as creating more sustainable career pathways that allow those in the sector to focus on delivering conservation outcomes.


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