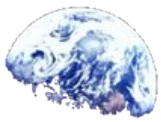
Understanding What Drives Environmental Volunteers

the climate centre



Understanding What Drives Environmental Volunteers: Psychological Motivations and Communication Patterns in Participatory Programs

Introduction

- Volunteer rates in Australia are on the decline, made worse by economic and cost of living issues, and compounded by the fact that considerable numbers of new entrant volunteers either withdraw or are let go in the first year of volunteering (Volunteering Australia, 2024; Volunteering Australia 2025).
- These trends mirror global patterns, with economic factors making volunteering less viable, and drop out rates varying amongst countries and programs, with some organisations reporting drop out rates of approximately one third for new entrants (Volunteering Hub 2022; OECD, 2024).
- People who remain engaged in volunteering report high levels of satisfaction, with primary motivators including to help others, to be active, and to use and develop skills and experience (Burns et al 2025).
- In addition to economic factors, limited time, health reasons, and burnout are reported as primary barriers to volunteering, with training and development, relationship building and flexibility in their role as some main strategies for retention (The Centre for Volunteering, 2023).
- In the era of climate change with people being strongly influenced by misinformation and disinformation, it is important to consider how such factors impact those who volunteer in environmental organisations.
- This study investigated the motivations of participation in environmentally-focused volunteering to look at what factors drive environmental volunteer participation, how environmental concern relate to motivating factors, and how a volunteers response profile corresponds to their written communication.

Methods

- Self-selecting environmental volunteers completed several psychological instruments including: the Climate Change Hope Scale (CCHS; Li & Munroe 2018), Climate Change Anxiety Scale (CCAS; Clayton & Karazsia 2000), New Ecological Paradigm (NEP) Scale (Dunlap & Van Liere 1978; Dunlap et al. 2000), the Climate Change Scepticism (CCS) questionnaire (Graaf et al 2023), and the Volunteer Functions Inventory (VFI; Clary et al 1998).
- They were also asked basic demographic information including their gender identity, their age bracket, whether they were born in or outside of Australia, and whether they identified as an Australian. Their survey responses were also categorised by whether or not they completed their written task.
- Differences between groups were compared at a test significance of $\alpha = .05$.
- Volunteers were then requested to write a 3–6-page opinion or advocacy piece on an environmental topic of their choosing. They were free to choose the style of writing with minimal feedback given during the drafting process. Written submissions were analysed with respect to the Flesch-Kincaid readability tests (grade level and reading ease; Flesch 1948; Kincaid et al. 1975),

as well as type-token ratio, and sentiment analysis using VADER (Valence Aware Dictionary and sEntiment Reasoner; Hutto & Gilbert 2014), with results expressed as negative, neutral or positive. Analysis of thematic clustering across texts was also performed.

- Whilst all participants completed the survey, not all volunteers who participated completed the written task. All survey respondents were compared to their retention in the project and with their respective organisation, as well as basic demographic factors such as age and gender identity.
- The CCHS contained 8 hopeful questions (e.g., I believe people will be able to solve problems caused by climate change) and 3 hopeless questions (e.g., climate change is so complex we will not be able to solve problems that it causes), scored on a 7-point scale from strongly disagree to strongly agree.
- The CCAS contained 8 cognitive-emotional impairment questions (e.g. I have nightmares about climate change), 5 functional impairment questions (e.g., my friends say I think about climate change too much), 3 personal experience of climate change questions (e.g., I have been directly affected by climate change), and 6 behavioural engagement questions (I recycle), scored on a 5-point scale from never to almost always.
- The NEP contained 8 questions relating to a "pro-ecological" world view and 7 questions relating to a "traditional" world view, scored on a 5-point scale from strongly disagree to strongly agree.
- The CCS contained 3 questions each relating to trend specticism (e.g. I am not sure that climate change is actually occurring), attribution scepticism (e.g. I doubt that human activities cause global warming), impact specticism (e.g. I believe that most of the concerns about climate change have been exaggerated), and response scepticism (e.g. Human behaviour has little effect on global warming), scored on a 7 point scale from strongly disagree to strongly agree.
- The VFI contained 5 questions each relating to protective factors (e.g. volunteering is a good escape from my own troubles), value factors (e.g. I can do something for a cause that is important to me), career factors (e.g. volunteering experience will look good on my resume), social factors (e.g. volunteering is an important activity to the people I know best), understanding factors (e.g. volunteering lets me learn things through direct, hands on experience), enhancement factors (e.g. volunteering makes me feel needed).

Results

Climate Change Hope Scale (CCHS)

- There were no significant differences in scoring on the CCHS between those who did and did not complete the written task.
- Volunteers reported higher hopefulness ($m = 5.89$, $SD = 1.19$) than hopelessness ($m = 2.49$, $SD = 1.42$), $t = 24.019$, $p < .001$, $d = 2.710$.

- Volunteers ≥30 years reported higher hopefulness (m = 6.16, SD = 1.08) than those <30 years (m = 5.67, SD = 1.22), t = 3.591, p < .001, d = 0.426. Younger volunteers showed higher hopelessness (m = 2.78, SD = 1.44) versus older volunteers (m = 2.13, SD = 1.31), t = -2.454, p = .016, d = -0.475.
- Volunteers with an Australian identity showed higher hopefulness (m = 6.02, SD = 1.06) than those with a non-Australian identity (m = 5.60, SD = 1.40), t = 2.749, p = .006, d = 0.352.
- Australian-born volunteers reported higher hopelessness (m = 3.15, SD = 1.39) than overseas-born (m = 2.12, SD = 1.30), t = 3.889, p < .001, d = 0.779.

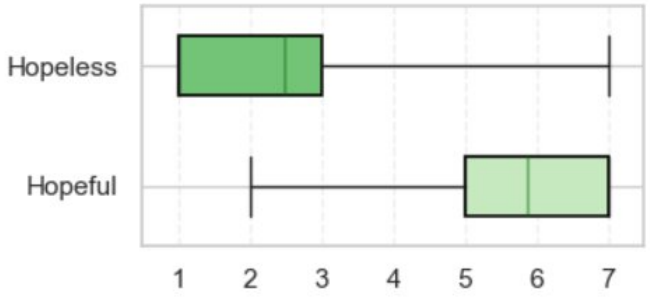


Fig. 1 Boxplot of responses to hopeless and hopeful questions in the Climate Change Hope Scale

Climate Change Anxiety Scale (CCAS)

- There were no significant differences in scoring on the CCAS between those who did and did not complete the written task.
- Volunteers responded highest on behavioural engagement questions, with cognitive-emotional and functional questions both scoring lowest. Despite these average scores, responses across the full spectrum of values were recorded.
- Female volunteers scored significantly higher on functional impairment questions (m = 2.04, SD = 1.12) compared to male volunteers (m = 1.69, SD = 0.81), t = 2.074, p = .040, d = 0.336.
- Younger volunteers reported significantly higher personal experiences (m = 3.65, SD = 1.23) compared to older volunteers (m = 3.13, SD = 1.36), t = -2.099, p = .038, d = -0.406.
- Volunteers who were born overseas reported higher behavioural engagement (m = 4.53, SD = 0.72) compared to Australian born volunteers (m = 4.21, SD = 0.92), t = -2.877, p = .004, d = -0.408.
- Volunteers who were identified as Australian reported lower behavioural engagement (m = 4.34, SD = 0.83) compared to those who did not identify as Australian (m = 4.58, SD = 0.75), t = -1.989, p = .048, d = -0.294.

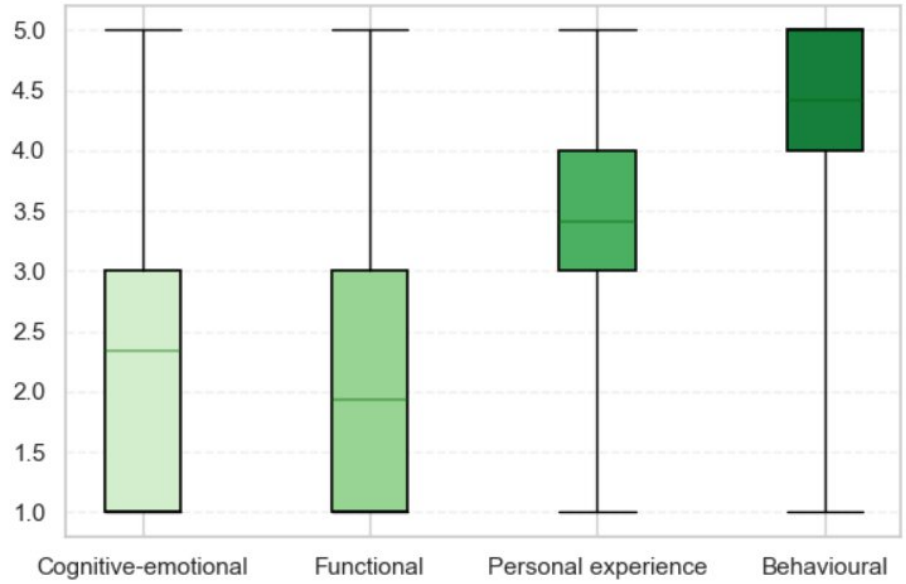


Fig.2 Boxplot of responses to cognitive-emotional, functional, personal experience and behavioural questions in the Climate Change Anxiety Scale

New Ecological Paradigm (NEP) scale

- While there were no significant differences in scoring on NEP questions between those who did and did not complete the written task, there were significant differences in scoring on DSP questions between those who did and did not complete the written task. Those who finished the written task scored higher on DSP questions (m = 2.38, SD = 1.24) compared to those who did not finish (m = 2.01, SD = 1.27), t = 2.156, p = 0.032, d = 0.292.
- Volunteers were significantly more aligned with a “pro-ecological” world view (m = 4.25, SD = 1.05) compared to a "traditional" world view (m = 2.24, SD = 1.24), t = 20.405, p = <.001, d = 1.760.
- While there were no significant differences in volunteer responses to "pro-ecological" world view questions between genders, there were significant differences by gender in response to "traditional" world view questions. Male volunteers scored significantly higher on "traditional" world view questions (m = 2.60, SD = 1.36) compared to female volunteers (m = 2.09, SD = 1.15), t = -3.075, p = .002, d = -0.421.
- Volunteers who identified as Australian reported lower “pro-ecological” world views (m = 4.08, SD = 1.10) compared to those who did not identify as Australian (m = 4.63, SD = 0.79), t = -4.193, p = <.001, d = -0.536.
- Volunteers who identified as Australian reported higher “traditional” world views (m = 2.46, SD = 1.21) compared to those who did not identify as Australian (m = 1.75, SD = 1.17), t = 4.303, p = <.001, d = 0.588.

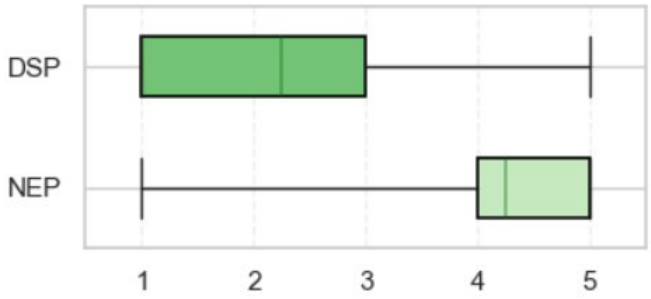


Fig.3 Boxplot of responses to questions belonging to "pro-ecological" (NEP) and "traditional" (DSP) world views, as part of the New Ecological Paradigm scale

Climate Change Scepticism (CCS) questionnaire

- There were no significant differences in scoring on the CCS between those who did and did not complete the written task.
- Response to Trend, Attribution, and Response questions were similar, and responses to Impact questions were the lowest of all categories.
- Notably, there were no significant differences between responses when split by different demographic groups.

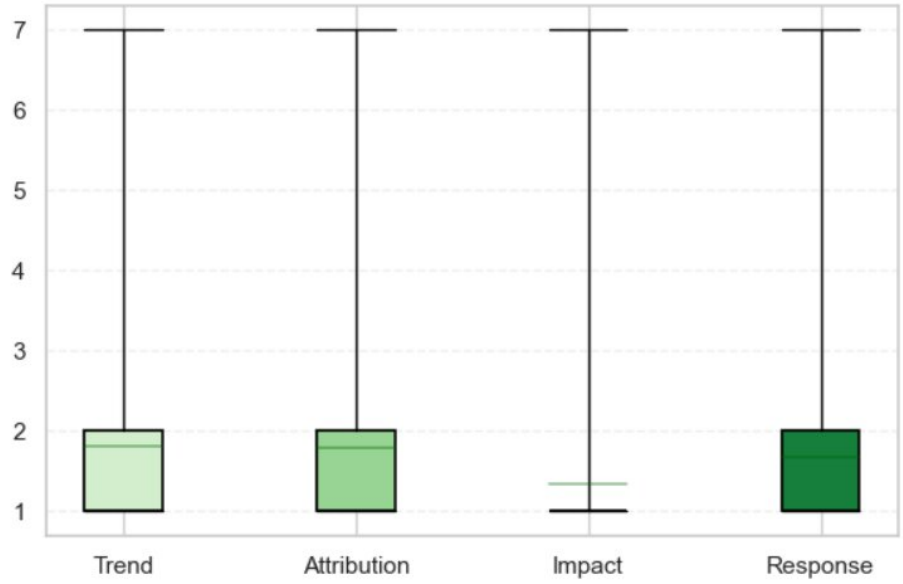


Fig.4 Boxplot of responses to trend, attribution, impact and response questions in the Climate Change Scepticism questionnaire

Volunteer Functions Inventory (VFI)

- There were no significant differences in scoring on the VFI for questions classified as protective, understanding or enhancement between those who did and did not complete the written task. Those who finished scored higher on career questions ($m = 5.85$, $SD = 1.50$) compared to those who did not finish ($m = 4.9$, $SD = 1.73$), $t = 3.709$, $p < .001$, $d = 0.595$; those who finished scored lower on values questions ($m = 6.20$, $SD = 1.05$) compared to those who did not finish ($m = 6.55$, $SD = 0.65$), $t = -2.329$, $p = 0.021$, $d = -0.374$; and those who finished

scored lower on social questions (m = 3.48, SD = 2.14) compared to those who did not finish (m = 4.55, SD = 2.13), t = -3.108, p = 0.002, d = -0.499.

- The highest scoring factors for volunteers were values, followed by understanding, and then career. Enhancement, protective and social factors were more moderately scored.
- Male volunteers scored significantly higher on social factors (m = 4.55, SD = 2.04) compared to female volunteers (m = 3.41, SD = 2.18), t = -3.292, p = .001, d = -0.533; and enhancement factors (m = 4.98, SD = 1.95) compared to female volunteers (m = 4.31, SD = 2.13), t = -1.993, p = .048, d = -0.323.
- Younger volunteers scored significantly higher on protective factors (m = 4.06, SD = 2.19) compared to older volunteers (m = 3.38, SD = 1.87), t = -2.221, p = .003, d = -0.333; and career factors (m = 6.11, SD = 1.12) compared to older volunteers (m = 4.35, SD = 1.99), t = -7.497, p = <.001, d = -1.125; and understanding factors (m = 6.17, SD = 1.16) compared to older volunteers (m = 5.53, SD = 1.57), t = -3.167, p = .002, d = -0.475.
- Overseas-born volunteers scored significantly higher on values factors (m = 6.43, SD = 0.93) compared to Australian-born volunteers (m = 6.05, SD = 0.94), t = -2.656, p = .009, d = -0.413; and understanding factors (m = 6.09, SD = 1.44) compared to Australian-born volunteers (m = 5.52, SD = 1.23), t = -2.655, p = .009, d = -0.412; and enhancement factors (m = 4.86, SD = 2.15) compared to Australian-born volunteers (m = 3.91, SD = 1.85), t = -2.998, p = .003, d = -0.465.
- Those with an Australian identity also scored lower on values factors (m = 6.17, SD = 1.01) compared to those with a non-Australian identity (m = 6.56, SD = 0.74), t = -2.582, p = .011, d = -0.419.

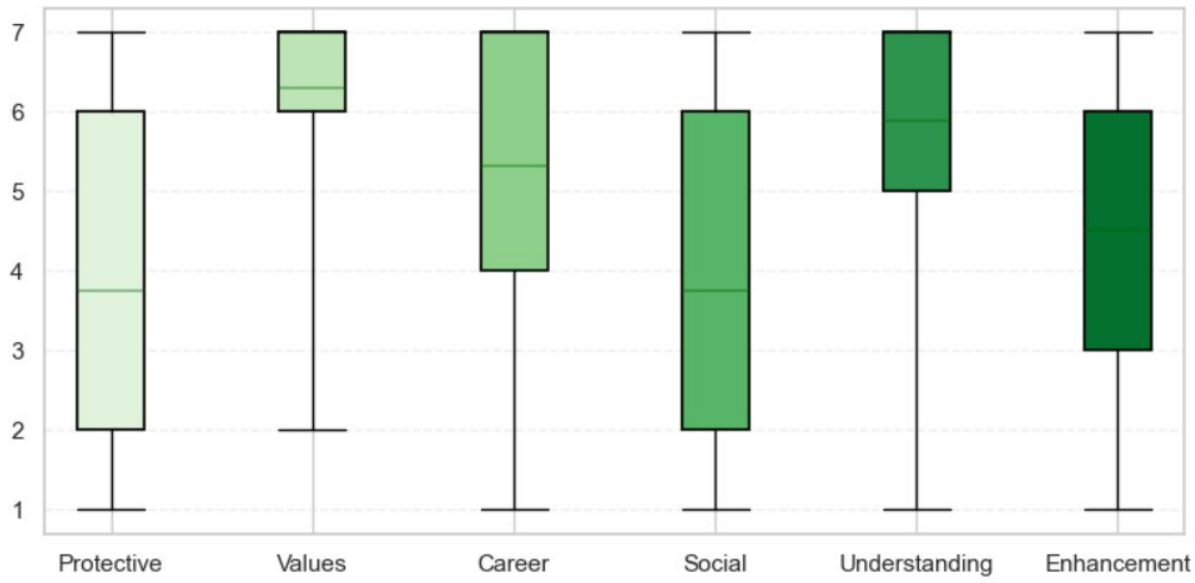


Fig.5 Boxplot of responses to protective, values, career, social, understanding and enhancement questions in the Volunteer Functions Inventory

Textual Analysis

- There were almost no significant differences between demographic groups in terms of their written communication.
- Women scored higher on VADER for negative expression compared to men (0.08 compared to 0.04, p = 0.003736).
- There was moderate postive correlation between responses to functional questions in the Climate Change Anxiety Scale and VADER scores for positive expression (r = 0.563, p = 0.0064), and moderate negative correlation between responses to values questions in the Volunteer Function Inventory and type token ratio (r = -0.546, p = 0.0086).

Discussion

- Our study examined what drives people to volunteer for environmental causes in Australia and how their climate attitudes relate to their motivations and written advocacy.
- Responses show that some groups of volunteers can simultaneously hold both strong hopefulness and hopelessness about climate change. Older participants (≥30 years) were more hopeful, while younger volunteers (<30 years) felt more hopeless, suggesting a generational tension between optimism and urgency.
- Behavioral engagement items scored highest on the Climate-Change Anxiety Scale, indicating that concern translates into concrete actions (e.g., recycling). Females reported slightly higher functional impairment compared to males, while younger volunteers reported more personal climate experiences than older volunteers.
- Participants strongly endorsed a pro-ecological perspective and displayed low climate-change scepticism. Men tended to endorse a more “traditional” worldview compared to women.
- The top reasons for volunteering were values, understanding, and career benefits. Younger volunteers emphasised protective, career, and understanding factors; while males scored higher on social and enhancement factors.
- Overseas-born volunteers and those without an Australian identity placed greater weight on values, understanding, and enhancement motives, highlighting the importance of cultural background in shaping volunteer drivers.
- Those who completed tasks indicated stronger alignment with "traditional" worldviews, and scored higher on questions relating to career motivations, while scoring lower on questions relating to values and social motivations, compared to those who did not complete tasks.
- Implications for practice might include: recruitment messages could emphasise hope-building and tangible impact, especially for younger volunteers; organisations could offer skill-building and career-development opportunities, as these are key motivators across ages; mental-health support and peer networks could be provided to balance the coexistence of hope and

hopelessness; and, recognition of the diverse cultural motivations of migrant volunteers could be leveraged to broaden engagement.

- Drawing conclusions from this preliminary analysis should be done with a degree of caution. The study sample size was relatively low, and volunteers were self-selecting. Collecting a larger sample, validating results, and using other statistical tests are areas for improvement and consideration.
- Overall, the findings suggest that environmental volunteers are motivated by a mix of altruistic values, personal growth, and career aspirations, while navigating mixed emotions about climate change. Designing programs that nurture hope, provide clear skill pathways, and respect cultural differences may help sustain and grow this vital component of society.

References

Burns S, Saltis H, Hendriks J, Tohotoa J, Pollard C. Volunteer Experiences of a School-Based Volunteer Program. Health Promot J Austr. 2025 Apr;36(2):e956. doi: 10.1002/hpja.956. PMID: 40065695; PMCID: PMC11894445.

Clary EG, Snyder M, Ridge RD, Copeland J, Stukas AA, Haugen J, Miene P. Understanding and assessing the motivations of volunteers: a functional approach. J Pers Soc Psychol. 1998 Jun;74(6):1516-30. doi: 10.1037//0022-3514.74.6.1516. PMID: 9654757.

Clayton, S., & Karazsia, B. T. (2020). Development and validation of a measure of climate change anxiety. Journal of Environmental Psychology, 69, 101434. https://doi.org/10.1016/j.jenvp.2020.101434

Dunlap, R. E., & Van Liere, K. D. (1978). The “new environmental paradigm”: A proposed measuring instrument and preliminary results. Journal of Environmental Education, 9(1), 10–19.

Dunlap, R. E., Van Liere, K. D., Mertig, A. G., & Jones, R. E. (2000). New Trends in Measuring Environmental Attitudes: Measuring endorsement of the New Ecological Paradigm: A revised NEP scale. Journal of Social Issues, 56(3), 425-442. doi: 10.1111/0022-4537.00176

Flesch R (1948). "A new readability yardstick". Journal of Applied Psychology. 32 (3): 221–233. doi:10.1037/h0057532. PMID 18867058.

Hutto, C.J. & Gilbert, E.E. (2014). VADER: A Parsimonious Rule-based Model for Sentiment Analysis of Social Media Text. Eighth International Conference on Weblogs and Social Media (ICWSM-14). Ann Arbor, MI, June 2014.

Janna A. de Graaf, F. Marijn Stok, John B.F. de Wit, Michèlle Bal, The climate change skepticism questionnaire: Validation of a measure to assess doubts regarding climate change, ournal of Environmental Psychology, Volume 89, 2023, 102068, ISSN 0272-4944, https://doi.org/10.1016/j.jenvp.2023.102068.

Kincaid, J.P.; Fishburne, R.P.; Rogers, R.L.; Chissom, B.S. (1975). Derivation of new readability formulas (automated readability index, fog count, and flesch reading ease formula) for Navy enlisted personnel (PDF) (Report). Naval Air Station Memphis: Chief of Naval Technical Training. Research Branch Report 8–75. Retrieved October 15, 2024.

Li, C., & Monroe, M. C. (2018). Development and Validation of the Climate Change Hope Scale for High School Students. *Environment and Behavior, 50*(4), 454–479. https://doi.org/10.1177/0013916517708325

OECD. (2024).Valorising volunteering for people and places: International trends and experiences. https://www.oecd.org/en/events/2024/12/valorising-volunteering-for-people-and-places-international-trends-and-experiences.html

The Centre for Volunteering. (2023). A Snapshot of Volunteering in Australia. https://www.volunteering.com.au/wp-content/uploads/2025/04/04058-TCfV-Snapshot-of-Volunteering-2023-FULL-Report-Final.pdf

Volunteering Australia. (2024). Key Volunteering Stastistics 2024. https://www.volunteeringaustralia.org/wp-content/uploads/Volunteering-Australia-Key-Volunteering-Statistics-2024-Update.pdf

Volunteering Australia. (2025). Budget election platform 2025. https://www.volunteeringaustralia.org/policy/budget-election-platform-2025/

Volunteer Hub. (2022). Why volunteers quit: how to retain them. https://volunteerhub.com/blog/why-volunteers-quit-how-to-retain-them

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