

Distinguishing Team Green Behaviour and Team Pro-Environmental Behaviour: Implications for Project Sustainability

Abstract:

Sustainability in project management has become a critical area of inquiry as organisations strive to integrate environmental and social considerations into their operations. This study compares Team Green Behaviour (TGB) and Team Pro-Environmental Behaviour (TPEB), two closely related but distinct constructs in sustainable workplace practices. While both behaviours contribute to environmental sustainability, they differ in terms of organisational influence, motivation, and scope of impact. By analysing these distinctions through a comparative framework, this study aims to clarify their theoretical underpinnings and implications for sustainable project management. The study further examines how different project management methodologies create distinct environments for these behaviours to emerge. This comparative approach provides practical insights for project managers seeking to optimise sustainability strategies within project-based organisations.

Keywords: Team Green Behaviour (TGB), Team Pro-Environmental Behaviour (TPEB), Sustainable Project Management, Organisational Sustainability

Introduction:

As organisations navigate the complexities of sustainability, project management has become a critical vehicle for implementing environmental and social responsibility initiatives. Sustainable project management requires a nuanced understanding of team dynamics and environmental behaviours within organisations. Team Green Behaviour (TGB) and Team Pro-Environmental Behaviour (TPEB) are two key constructs that shape how teams interact with sustainability initiatives. Despite their similarities, these behaviours differ in their motivation, organisational alignment, and long-term impact, which has implications for how they should be encouraged and managed within project settings.

TGB refers to environmentally conscious actions that are directly aligned with organisational sustainability policies and objectives, such as energy conservation and waste reduction in the workplace (Mo et al., 2025). TPEB, on the other hand, includes voluntary, self-initiated pro-environmental behaviours that are often driven by intrinsic motivation rather than external directives (Farrukh et al., 2024).

Understanding the distinctions between TGB and TPEB is essential for project managers who seek to leverage team behaviour in achieving sustainability objectives.

Given the heightened emphasis on sustainability in project-based organizations, this study aims to (1) delineate the distinctions between TGB and TPEB within the project management domain and (2) investigate the influence of different project management methodologies on their formation and evolution.

Literature Review:

(1) Conceptual Foundations of Team Green Behaviour (TGB)

Team Green Behaviour (TGB) represents structured, policy-driven environmental actions undertaken collectively by teams, often as part of a broader organisational sustainability agenda (Graves et al., 2019; Mo et al., 2025). It reflects the extent to which team members comply with and operationalise formal environmental management practices, such as resource conservation, waste minimisation, and adherence to corporate environmental standards.

In addition to Social Cognitive Theory (Bandura, 1986) and Norm Activation Theory (Schwartz, 1977), more recent studies link TGB with Environmental-Specific Transformational Leadership (ESTL), where leaders influence team sustainability behaviour through vision-setting, intellectual stimulation, and role modelling (Peng et al., 2021). Moreover, Green Human Resource Management (GHRM) practices—such as green training and eco-focused performance appraisals—have been identified as critical antecedents that institutionalise TGB within project teams (Mo et al., 2025).

Contextual enablers, including project governance structures and environmental reporting mechanisms, also reinforce TGB by embedding sustainability performance into project key performance indicators (KPIs) (Silvius & Schipper, 2019). Furthermore, empirical evidence suggests that teams operating under traditional, process-driven project methodologies (e.g., Waterfall) are more likely to exhibit higher levels of TGB due to clear top-down policy structures (Benn et al., 2018).

(2) Conceptual Foundations of Team Pro-Environmental Behaviour (TPEB)

By contrast, Team Pro-Environmental Behaviour (TPEB) is rooted in voluntarism and intrinsic motivation, characterised by discretionary efforts that go beyond formal job requirements (Norton et al., 2015; Steg & Vlek, 2009). TPEB encompasses a broader range of activities, such as championing new green initiatives, voluntarily reducing carbon emissions, and initiating resource-saving behaviours without managerial prompts.

In addition to the Theory of Planned Behaviour (Ajzen, 1991) and Altruism Theory (Batson, 1991), recent work incorporates Self-Determination Theory (Deci & Ryan, 2000) to explain how psychological needs for autonomy, competence, and relatedness foster TPEB at the team level (Blok et al., 2015). Moreover, team psychological safety—the belief that the work environment is safe for interpersonal risk-taking—has been identified as a significant moderator enhancing TPEB (Edmondson & Lei, 2014).

Leadership factors also influence TPEB, with environmentally empowering leadership styles proving effective in fostering voluntary green behaviours (Graves et al., 2019). TPEB is typically more visible in teams operating under Agile or Hybrid project methodologies, where decision-making autonomy and adaptive processes are encouraged (Zientara & Zamojska, 2018).

(3) Comparative Synthesis and Theoretical Tensions

Although both TGB and TPEB contribute to organisational sustainability, their antecedents, motivational pathways, and behavioural manifestations differ significantly (Boiral et al., 2015). One ongoing debate in the literature concerns the continuum versus distinct construct question—whether TGB and TPEB represent two ends of a behavioural spectrum or qualitatively distinct phenomena (Peng et al., 2021).

TGB is often measured through objective compliance metrics (e.g., recycling rates, energy consumption tracking), while TPEB is more subjective and harder to quantify, often assessed via self-reported behavioural surveys (Norton et al., 2015). Furthermore, the influence of organisational climate and leadership style appears

more pronounced for TGB, whereas individual-level variables such as environmental identity and moral obligation better predict TPEB (Blok et al., 2015; Steg & Vlek, 2009).

(4) Integration with Project Management Context

In project-based environments, both behaviours face unique contextual influences. Project temporality (short-term vs. long-term projects), task interdependence, and project complexity can moderate the emergence and sustainability of TGB and TPEB (Silvius & Schipper, 2019).

For instance, short-term, compliance-driven projects may rely heavily on TGB, where team behaviours are driven by deliverables and checklists linked to environmental standards. In contrast, long-term, exploratory projects, especially those using Agile methodologies, often provide the flexibility and empowerment necessary for TPEB to flourish (Serrador & Pinto, 2015).

Moreover, project governance mechanisms such as sustainability-focused stakeholder engagement plans or environmental risk assessments may act as structural antecedents facilitating TGB, while team autonomy and cross-functional collaboration may nurture TPEB (Graves et al., 2019).

Finally, recent calls for integrating behavioural sustainability frameworks into project management highlight the need for dual-pathway models that simultaneously address both TGB and TPEB (Peng et al., 2021; Silvius & Schipper, 2019).

Dimension	Team Green Behaviour (TGB)	Team Pro-Environmental Behaviour (TPEB)
Goal Orientation	Aligned with organisational sustainability objectives	Driven by social and environmental responsibility
Motivation	Organisational policies, performance evaluations, economic incentives	Personal values, team autonomy
Influence of External Environment	Strongly influenced by organisational policies	Influenced by individual and societal values

Typical Actions	Energy conservation, waste reduction, resource optimisation	Green initiatives, advocacy for sustainability policies
-----------------	---	---

Table 1: Comparison between TGB and TPEB

Conceptual Framework:

Hypotheses (1): TGB is more effectively promoted through structured, policy-driven mechanisms, whereas TPEB is more influenced by informal, cultural, and ethical factors.

Hypotheses (2): In hierarchical, traditional project management frameworks, TGB has a greater impact, while in more flexible and adaptive environments, TPEB is more prevalent.

Hypotheses (3): TGB is more easily implemented in short-term projects with clear sustainability policies, whereas TPEB becomes more pronounced in long-term projects with an evolving sustainability culture.

Research Methodology:

Research Design

To comprehensively investigate the conceptual distinctions and practical implications of Team Green Behaviour (TGB) and Team Pro-Environmental Behaviour (TPEB) within project management contexts, this study adopts a convergent mixed-methods research design (Creswell & Plano Clark, 2017). This approach enables the integration of both quantitative survey data and qualitative interview insights, thereby enhancing the robustness and triangulation of findings.

The research unfolds in two sequential phases. The first phase employs a cross-sectional survey to test the hypothesised relationships between project management methodologies (e.g., Agile vs. Waterfall), TGB, and TPEB. The second phase uses semi-structured interviews with project managers to gain deeper contextual understanding of how organisational structures and project environments shape team environmental behaviours.

Quantitative Phase

Sampling and Data Collection

The quantitative data collection will target employees working in project-based organisations across diverse industries, including IT, construction, engineering, and consultancy. A stratified random sampling method will be used to ensure balanced

representation across different project management methodologies (Agile, Waterfall, and Hybrid models). The survey will be distributed electronically via organisational networks, LinkedIn professional groups, and project management forums.

Given the use of Structural Equation Modelling (SEM) for data analysis, a minimum sample size of 300 respondents will be targeted to meet statistical power requirements (Hair et al., 2019).

Measures

- Team Green Behaviour (TGB): TGB will be measured using an adapted version of the scale developed by Robertson and Barling (2017), which assesses the extent to which teams engage in environmentally responsible behaviours mandated by organisational policy.
- Team Pro-Environmental Behaviour (TPEB): TPEB will be measured using items from Norton et al.'s (2015) scale, focusing on voluntary, discretionary green behaviours performed at the team level.
- Project Management Methodology: Respondents will classify their primary project management framework as Agile, Waterfall, or Hybrid, following classification guidelines from Serrador and Pinto (2015).
- Control Variables: Demographic factors (e.g., team size, project duration, industry sector) will be collected and statistically controlled to isolate the effects of the independent variables.

Data Analysis

The quantitative data will be analysed using Structural Equation Modelling (SEM) with AMOS software. The analysis will proceed in two stages:

1. Confirmatory Factor Analysis (CFA): To assess construct validity and reliability of TGB and TPEB measurement models.
2. Structural Path Analysis: To test the hypothesised relationships between project methodology, TGB, TPEB, and project sustainability outcomes.

Model fit will be evaluated using standard indices such as CFI, TLI, RMSEA, and SRMR, following the criteria suggested by Hu and Bentler (1999).

Qualitative Phase

Sampling and Data Collection

For the qualitative phase, 20 project managers with at least three years of experience in leading sustainability-related projects will be purposively sampled. Participants will be drawn from various industries to ensure contextual diversity. Semi-structured

interviews will be conducted via video conferencing platforms and will last approximately 45–60 minutes each.

Interview Protocol

The interview questions will explore:

- Managers' perceptions of TGB and TPEB.
- Organisational strategies used to promote each behaviour type.
- Challenges in implementing sustainability initiatives within different project methodologies.
- Examples of successful and unsuccessful attempts to foster green behaviours in project teams.

Data Analysis

Interview transcripts will be analysed using thematic analysis, following Braun and Clarke's (2006) six-step procedure. Initial coding will be conducted inductively to allow themes to emerge from the data, while later stages will use deductive mapping against the conceptual framework developed in this study.

To enhance the trustworthiness and rigour of the qualitative findings, techniques such as member checking, peer debriefing, and audit trails will be employed (Lincoln & Guba, 1985).

Integration of Quantitative and Qualitative Findings

Finally, findings from both phases will be integrated during the interpretation stage to provide a holistic understanding of the antecedents, mechanisms, and contextual moderators of TGB and TPEB in project environments. This integration will follow a side-by-side comparison approach (Creswell & Plano Clark, 2017), identifying points of convergence and divergence between quantitative and qualitative data.

Expected Contributions

(1) Theoretical Contributions

This study offers several key theoretical contributions to the fields of organisational behaviour, project management, and sustainability studies.

First, it provides a clear conceptual demarcation between Team Green Behaviour (TGB) and Team Pro-Environmental Behaviour (TPEB) at the team level. While previous literature has often treated pro-environmental behaviours as a homogenous

construct (Boiral et al., 2015), this research highlights the motivational, contextual, and behavioural distinctions between TGB and TPEB, thus addressing calls for construct clarity in environmental behaviour research (Peng et al., 2021).

Second, the study introduces a dual-pathway behavioural framework that integrates both policy-driven (TGB) and voluntary (TPEB) behavioural mechanisms within project teams. By doing so, it contributes to advancing behavioural sustainability theory in project-based work contexts, an area previously underexplored in sustainability research (Silvius & Schipper, 2019).

Third, the research enriches the project management literature by demonstrating how project management methodologies (e.g., Agile vs. Waterfall) act as moderating conditions influencing the emergence and effectiveness of team environmental behaviours. This addresses a significant gap in understanding how project-specific structural and procedural factors shape sustainability-related team dynamics (Serrador & Pinto, 2015).

Finally, the study contributes to theory by linking team-level green behaviours with project sustainability performance outcomes, offering an integrative perspective that bridges micro-level behavioural theory and macro-level project outcomes.

(2) Practical Contributions

From a practitioner perspective, this study delivers actionable insights for project managers, sustainability officers, and organisational leaders seeking to foster environmentally responsible team behaviours.

First, the study offers a diagnostic framework that enables organisations to assess which behavioural pathway—TGB or TPEB—dominates within their project teams. This assessment can inform targeted intervention strategies that balance top-down policy enforcement with bottom-up voluntary engagement.

Second, the findings provide guidance for designing context-sensitive sustainability interventions. For example, organisations operating under traditional, hierarchical project structures may focus on enhancing TGB through policy tools, performance management systems, and compliance audits, whereas organisations embracing Agile methodologies may emphasise fostering TPEB by enhancing team autonomy, psychological safety, and pro-environmental leadership (Graves et al., 2019).

Third, the study underscores the importance of project methodology selection in sustainability planning. Project managers can leverage this knowledge to align project governance structures with desired environmental behavioural outcomes.

Finally, the research offers practical recommendations for Human Resource Management (HRM) teams, suggesting that recruitment, training, and performance appraisal systems should be tailored to reinforce both TGB and TPEB, depending on the organisational and project context.

(3) Policy Contributions

The findings also hold relevance for policymakers and sustainability consultants involved in project governance frameworks.

By illustrating how organisational policies and project structures influence team-level environmental behaviour, the study offers evidence-based guidance for embedding green performance metrics into project management standards and professional certifications, such as those outlined by the Project Management Institute (PMI) or ISO 21500 on project management guidelines.

Furthermore, insights from this research can inform the development of green procurement policies, ensuring that environmental expectations are not only embedded at the organisational level but also translated into actionable behaviours at the team and project levels.

(4) Directions for Future Research

This study opens several avenues for future inquiry.

First, longitudinal studies could examine how TGB and TPEB evolve over different project lifecycle phases, providing a temporal dimension to team environmental behaviour research.

Second, cross-cultural comparative studies may explore how national cultural contexts shape the relative dominance of TGB versus TPEB in global project teams.

Third, future research could investigate the interactive effects of leadership styles, team composition, and organisational climate on the balance between TGB and TPEB.

Lastly, researchers may consider developing and validating multi-level models that link individual, team, and organisational predictors of sustainable project outcomes.

Reference:

- Boiral, O., 2009. Greening the corporation through organizational citizenship behaviors. *Journal of Business Ethics*, 87, pp.221-236.
- Farrukh, M., Raza, A., Rafiq, M. and Ansari, N., 2024. Team GHRM and Team Pro-environmental behavior. *Environment, Development and Sustainability*, pp.1-26.
- Fritsche, I., Barth, M., Jugert, P., Masson, T. and Reese, G., 2018. A social identity model of pro-environmental action (SIMPEA). *Psychological Review*, 125(2), p.245.
- Kim, A., Kim, Y., Han, K., Jackson, S.E. and Ployhart, R.E., 2017. Multilevel influences on voluntary workplace green behavior: Individual differences, leader behavior, and coworker advocacy. *Journal of Management*, 43(5), pp.1335-1358.
- Mo, Z., Liu, M.T. and Lai, I.K.W., 2025. The dynamic joint roles of green human resource management and environmentally specific transformational leadership on team green behavior. *Tourism Management*, 107, p.105046.
- Peng, J., Chen, X., Zou, Y. and Nie, Q., 2021. Environmentally specific transformational leadership and team pro-environmental behaviors: The roles of pro-environmental goal clarity, pro-environmental harmonious passion, and power distance. *Human Relations*, 74(11), pp.1864-1888.
- Robertson, J.L. and Barling, J., 2013. Greening organizations through leaders' influence on employees' pro-environmental behaviors. *Journal of Organizational Behavior*, 34(2), pp.176-194.
- Staats, H., Harland, P. and Wilke, H.A., 2004. Effecting durable change: A team approach to improve environmental behavior in the household. *Environment and Behavior*, 36(3), pp.341-367.