



FOCAL ARTICLE

Environmental sustainability at work: It's time to unleash the full potential of industrial and organizational psychology

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Abstract

Humanity faces an unprecedented challenge in the necessity to rapidly change behaviors across various life domains to address multiple environmental crises, such as climate change, pollution, and biodiversity loss. This includes the behavior of individuals at work and within organizations. Industrial and organizational (I-O) psychology is uniquely positioned to provide evidence-based recommendations for changing organizational decision-making and behavior toward greater environmental sustainability. Although a substantial body of research on this topic has emerged over the past decade, the discipline has yet to realize its full potential because the topic is currently not prioritized and the practical and societal impact of previous research is limited. This article aims to propel research on environmental sustainability at work forward. To do so, it (a) outlines the interconnections between organizations and environmental sustainability; (b) portrays previous research efforts on environmental sustainability at work, resulting in an integrative conceptual framework across micro, meso, macro, and magno levels; and (c) provides actionable recommendations for high-impact future I-O psychology research and practice related to environmental sustainability. Following an “impact-first” rationale, we identified 10 areas for future research across the four levels of the conceptual framework. For each area, we present relevant theoretical perspectives, methodological approaches, and connections to related disciplines. Finally, we provide suggestions for effective science–practice transfer. Overall, the article seeks to spark discussion on this crucial topic within the community and to inspire I-O psychology researchers and practitioners to contribute to environmental sustainability.

Keywords: Environmental sustainability; Industrial and organizational psychology

Introduction

Planet Earth is in an alarming state. Escalating environmental crises such as climate change, depletion of natural resources, pollution, and biodiversity loss seriously threaten the planetary boundaries for a safe and healthy life (Richardson et al., 2023; Rockström et al., 2023). This comes with incalculable economic (e.g., economic losses in the trillions, disruption of industries), political (e.g., conflict over resources, large numbers of environmental refugees), and societal risks (e.g., millions of deaths caused by environmental crises and extreme weather, heat-related illness, malnutrition, psychological trauma, depression, and anxiety; Clement et al., 2021; Doherty & Clayton, 2011; IPCC, 2023; Pearson et al., 2023; Richardson et al., 2023; World Economic Forum, 2024a, 2024b; World Health Organization, 2024). Recognizing these trends, it is one of the most

Table 1. Definitions of Environmental Sustainability and Related Constructs

Construct	Definition
Environmental sustainability	The practice of enhancing human well-being while keeping resource use within the regenerative limits of ecosystems to meet the resource and service needs of present and future generations (IUCN, UNEP, WWF, 1991; Morelli, 2011; Wackernagel et al., 2002).
Social sustainability	“Social sustainability refers to equality, well-being, and balance across quality of life indicators between sociocultural groups over time and from one generation to the next” (Ross, 2013, p. 2245).
Economic sustainability	“Economic sustainability is understood as economic development without any loss of ecological or social sustainability” (Jeronen, 2023, p. 1258)
Triple bottom line	Organizations’ responsibility to account for environmental, social, and economic sustainability (Elkington, 1998).
Corporate social responsibility	“Context-specific organizational actions and policies that take into account stakeholders’ expectations and the triple bottom line of economic, social, and environmental performance” (Aguinis & Glavas, 2012, p. 933).
Organizational environmental performance	“Organizational performance in managing natural resources and the natural environment in the process of conducting business. It includes both pro-environmental initiatives that organizations undertake and environmental outcomes” (Ones & Dilchert, 2012a, p. 450).
Green human resource management	Practices throughout the human resources management cycle, such as recruiting and selecting, training and development, performance management, and compensation systems, adopted to achieve organizational environmental sustainability goals (Dumont et al., 2017; Ren et al., 2018; Renwick et al., 2013).
Green organizational culture	“Shared values, beliefs, and assumptions of organizational members regarding the correct way to think and feel about environmental sustainability” (Zacher et al., 2023, p. 479).
Green organizational climate	Employees’ shared perceptions of organizational policies, procedures, and practices related to environmental sustainability (Magill et al., 2020; Norton et al., 2017).
Employee green behavior	“Scalable actions and behaviors that employees engage in that are linked with and contribute to [...] environmental sustainability” (Ones & Dilchert, 2012b, p. 87).
Leader green behavior	Employee green behavior conducted by organizational members with leadership responsibility (Zacher et al., 2024).

pressing societal challenges to prioritize and expedite efforts toward environmental sustainability. *Environmental sustainability* refers to the practice of enhancing human well-being while keeping resource use within the regenerative limits of ecosystems to meet the resource and service needs of present and future generations (IUCN, UNEP, WWF, 1991; Morelli, 2011; Wackernagel et al., 2002; see Table 1 for definitions of environmental sustainability and related constructs).

Mitigating environmental crises deeply depends on swift behavior changes across various life domains (IPCC, 2023; Lynas et al., 2021; Richardson et al., 2023). To this end, attention turned to the social and behavioral sciences, particularly psychology, as pivotal scientific disciplines that can inform strategies for achieving behavior changes toward greater environmental sustainability (Nielsen et al., 2021; Stern, 2011). Over the last decade, there has been a notable increase in research addressing mitigation behaviors related to environmental crises, especially regarding climate change (APA Task Force on Climate Change, 2022). However, this research predominantly focused on individuals’ roles as consumers (Clayton et al., 2015; Nielsen et al., 2021; 2024), considering private consumption and conserving behaviors (e.g., dietary choices, private energy use). Industrial and organizational (I-O) psychology research comprehensively

addressing environmentally sustainable or “green” decision-making and behavior of individuals working in and controlling business organizations, nonprofit organizations, and government agencies received comparatively less attention (Nielsen et al., 2021; Unsworth et al., 2021). This is unfortunate, given that economic activities contribute significantly to the aggravation of environmental crises (Jayachandran, 2022), making work a highly important context for green behaviors (Nielsen et al., 2021).

The limited attention afforded to environmental sustainability topics in I-O psychology may originate from a prevailing notion that individual behavior exhibits only minimal influence on organizational environmental performance due to external constraints such as institutional context and legislation, giving I-O psychologists little agency to contribute relevant research. This is, in fact, a misconception. In line with perspectives from broader strategy and organization theory (Felin et al., 2015), organizational environmental performance can be understood as a function of the collective decisions and behaviors of individual organizational members, from production employees over organizational leaders to shareholders. Without individuals advocating for and deciding in favor of environmental sustainability, organizations are unlikely to achieve their environmental sustainability goals. Individual green behavior is the “micro-foundation” and the “core” of organizational environmental performance (Unsworth et al., 2021; Zacher et al., 2023). Thus, exploring environmental sustainability at work falls squarely into the domain of I-O psychology (Robertson & Barling, 2015).

In 2012, Ones and Dilchert issued a compelling focal article calling I-O psychology researchers to action to broaden the understanding of environmental sustainability at work. The call received significant attention (i.e., 740 citations in Google Scholar, 304 citations in Web of Science as of June 13, 2025) and sparked research on the topic within the community. However, despite increased research efforts, environmental sustainability at work is still not a priority topic within I-O psychology. Additionally, most research (and practice based on this research) falls short in terms of producing results with high environmental impact potential (i.e., the clear potential to increase environmental sustainability). Consequently, the full capacity of I-O psychology to effectively address environmental sustainability at work remains untapped.

More than 12 years after the call to action by Ones and Dilchert (2012a), this focal article pursues two overarching goals: (a) to provide a timely review of the state of research on environmental sustainability at work and (b) to advance I-O psychology research on environmental sustainability with substantial environmental impact potential. To achieve these goals, we (a) outline the interconnections between organizations and environmental sustainability; (b) portray previous research efforts on environmental sustainability at work, resulting in an integrative conceptual framework; and (c) provide actionable recommendations for high-impact future I-O psychology research and practice related to environmental sustainability. We hope this article contributes to renewing the focus on, and sparking the discussion of, this highly important topic within our discipline.

Organizations and environmental sustainability

How economic activities influence the environment

Economic growth comes with clear societal benefits such as greater comfort of living, improved health, and increased life expectancy (He & Li, 2020; Weil, 2014). Yet, over time, these gains are at risk of reversing into the opposite due to the environmental damage that accompanies economic growth—a reality that has been known for decades. Already in 1972, researchers from the Massachusetts Institute of Technology, commissioned by the Club of Rome, published *The Limits to Growth* (Meadows et al., 1972). They predicted that continued population growth, industrialization, environmental pollution, food production, and the exploitation of natural resources would lead to environmental degradation and, consequently, the collapse of the global

economy and population. Since then, the detrimental impacts of economic activities on the environment have been widely documented (IPCC, 2023; Jayachandran, 2022). Manufacturing, construction, and transport of goods and materials generate significant greenhouse gas emissions (United States Environmental Protection Agency, 2024a), deplete natural resources (Umweltbundesamt, 2019), lead to habitat destruction and biodiversity loss (Haddad et al., 2024), and cause water and air pollution (Abdeljaoued et al., 2024; Cohen et al., 2017; Liu et al., 2021). Thus, changes to economic processes are urgently needed to preserve the natural environment for future generations.¹

The relevance of environmental sustainability for organizations

Organizations not only impact environmental sustainability but are also affected by environmental issues. First, environmental changes directly affect organizations via rising costs or scarcity of natural resources, damage to production sites, company buildings, and agricultural areas from extreme weather events, and poor employee health due to heat or malnutrition (e.g., Botzen et al., 2019; De Winne & Peersman, 2021).

Second, there is growing legislative pressure on organizations to increase organizational environmental reporting and performance. For example, in December 2019, the European Union launched the “Green Deal,” aiming for net-zero emissions by 2050 (European Commission, 2019). This package also incorporates the Corporate Sustainability Reporting Directive, a standardized reporting obligation on sustainability in companies (European Union, 2022). In the United States, the Clean Air Act and the Clean Water Act implement and control industry standards for air pollution and wastewater (United States Environmental Protection Agency, 2023, 2024b).

Third, the workforce is changing in response to environmental crises. Employees are increasingly considering the environmental performance of potential employers when looking for jobs. According to the European Investment Bank’s Climate Survey (2023), 56% of people in Germany pay attention to a future employer’s stance on climate issues. For those aged 20–29, it was even 81%. Additionally, organizational environmental performance is positively related to organizational attractiveness ratings (Belinda et al., 2018; Bohlmann et al., 2018), suggesting that promoting and visibly enhancing environmental sustainability can attract job applicants. Furthermore, transforming the economy toward environmental sustainability creates new occupations (e.g., sustainability managers, energy auditors) that require specific skills (O*NET, 2024). Correspondingly, job postings requiring at least one green skill increased by 22.4% between 2022 and 2023 (LinkedIn, 2023).

Fourth, investing in environmental sustainability can be positively received by key stakeholders, including customers, employees, and shareholders, thereby strengthening organizational competitive advantage. The paradigm that the responsibility of business organizations is solely to increase profits (Friedman, 1970) is not timely anymore, and the opinion that organizations have an ethical obligation to improve organizational environmental performance is widespread (Mio et al., 2020; Unsworth et al., 2021). For example, consumers consider environmental sustainability in their purchasing decisions (e.g., Simon-Kucher, 2024), and studies show that organizational environmental sustainability initiatives contribute to employee well-being and job satisfaction (e.g., Kühner et al., 2024; Pinzone et al., 2019; Shafaei et al., 2020). Furthermore, stock markets react positively to positive corporate environmental performance (Endrikat, 2016).

¹Different approaches to transforming the economic and financial system toward greater environmental sustainability have been discussed (e.g., doughnut economy (Raworth, 2017); economy for the common good, Felber, 2019). We believe that I-O psychology is not well equipped, and it is beyond the scope of this article, to explore alternative economic systems. However, we include economic systems as a boundary condition in our integrative conceptual framework and consider them in our future research section.

Overall, enhancing environmental sustainability is a strategic and ethical imperative for organizations to maintain relevance, develop a competitive advantage, improve performance, and meet their societal responsibility. Company leaders widely acknowledge this reality. In a survey by the Capgemini Research Institute (2022), 64% of executives in corporate functions indicated that sustainability is on the agenda of each C-suite executive. According to a global CEO survey, 69% of respondents indicated that climate change has at least moderate impacts on their business (United Nations and Accenture, 2023). Against this backdrop, I-O psychology research that comprehensively informs on the motivators and barriers of environmentally sustainable behavior and decision-making in organizations is highly relevant.

The current state of research on environmental sustainability at work

Environmental sustainability—a high-priority topic in I-O psychology research?

Since the influential call to action by Ones and Dilchert (2012a), research on environmental sustainability at work has somewhat increased. Several special issues (e.g., *Journal of Organizational Behavior*; Cooper et al., 2017), reviews and meta-analyses (e.g., Francoeur et al., 2021; Katz et al., 2022; Ren et al., 2018; Zacher et al., 2023, 2024), books (e.g., Jackson et al., 2012; Robertson & Barling, 2015; Wells et al., 2018), and symposia (e.g., Dilchert & Hessen, 2023) were dedicated to the topic. However, in comparison, research on environmental sustainability remains underrepresented in I-O psychology research and is still not a high-priority topic. To illustrate this assertion, we conducted a Web of Science topic search across 10 “top-tier,” high-impact I-O psychology journals for studies focusing on environmental sustainability issues. This search revealed only 55 relevant hits, including 10 commentaries responding to the call to action by Ones and Dilchert (2012a).² To provide context, we conducted two comparable searches in the same journals on other topics of societal importance. A search on workplace diversity produced 673 relevant results (including 54 commentaries),³ and a search on COVID-19 in the context of work yielded 114 relevant hits.⁴ This illustrates that environmental sustainability has yet to be established in terms of being featured as a relevant and continuous topic of interest in the most prestigious journals of our discipline.

Integrative conceptual framework of environmental sustainability at work

Although research on environmental sustainability is relatively scarce in the “top-tier” I-O psychology journals analyzed above, substantial contributions to the topic have been published in other journals related to I-O psychology (e.g., *Human Relations*) and in journals of related disciplines such as strategic human resource management (e.g., *Human Resource Management*), business and management (e.g., *Business Strategy and the Environment*), environmental psychology (e.g., *Journal of Environmental Psychology*), and broader sustainability-focused journals (e.g., *Journal of Cleaner Production*, *Sustainability*). To review the state of research on environmental sustainability at work, we conducted a comprehensive literature review spanning I-O psychology and related disciplines,⁵ resulting in an integrative conceptual framework of

²Journals for this analysis were selected based on journal rankings by the Open Science Framework, Clarivate, and Scopus: *Annual Review of Organizational Psychology and Organizational Behavior*, *Industrial and Organizational Psychology*, *Journal of Applied Psychology*, *Journal of Business and Psychology*, *Journal of Organizational Behavior*, *Journal of Management*, *Journal of Vocational Behavior*, *Organizational Behavior and Human Decision Processes*, *Personnel Psychology*, and *The Leadership Quarterly*; Search terms: “environmental sustainab*” OR “environment*” OR ecolog* OR green* OR “climate change” OR pollution; no time or language restrictions.

³Search terms: diversity OR diverse OR heterogen* OR homogen* OR inclusion

⁴Search terms: covid* OR corona*

⁵We conducted a keyword search in PsycINFO for reviews and meta-analyses on environmental sustainability (regardless of discipline), hand-searched reference lists of key papers, conducted Google Scholar searches, reviewed special issues on the topic, and scanned publication lists of leading researchers across relevant disciplines.

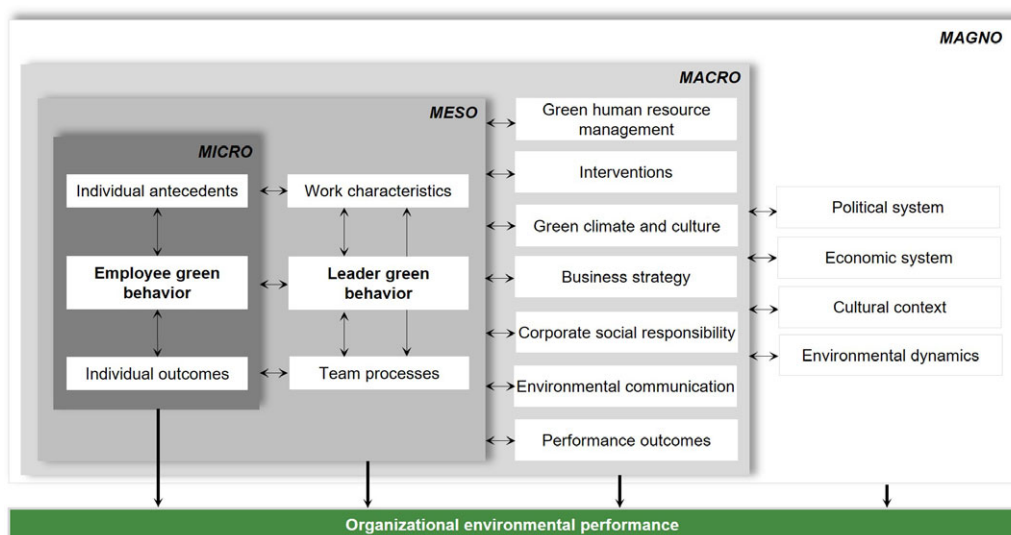


Figure 1. Integrative Conceptual Framework of Environmental Sustainability at Work.

environmental sustainability at work (see Figure 1). Although we do not intend to, and cannot exhaustively present, a systematic literature review in this focal article, we synthesize current research to provide a foundational basis for our framework and future research recommendations. The conceptual framework is not meant for holistic testing but organizes and maps the array of factors relevant to researching environmental sustainability at work (Rehfuess et al., 2018).

The basic assumption of the framework is that four interconnected levels (i.e., micro, meso, macro, and magno) jointly build the foundation of organizational environmental performance. The microlevel concerns individual antecedents and outcomes of green behavior, including both intra- and interindividual differences. The mesolevel considers the work environment and includes leader, work context, and team characteristics. The macrolevel concerns organization-level factors such as green human resource management (GHRM) and corporate social responsibility (CSR). The magno level extends beyond the organization itself to encompass economic, political, cultural, and environmental influences.

At the center of the framework are employee and leader green behavior. Employee green behavior (EGB) has been defined as “scalable actions and behaviors that employees engage in that are linked with and contribute to or detract from environmental sustainability” (Ones & Dilchert, 2012b, p. 87). The “Green Five” taxonomy (Ones & Dilchert, 2012b) comprises EGBs in five categories: conserving resources, transforming work products and processes toward greater environmental sustainability, avoiding negative environmental impact, spreading pro-environmental behavior to others, and proactively initiating environmental sustainability projects. Leader green behavior is conceptualized as EGB conducted by organizational members with leadership responsibility (Zacher et al., 2024). Table 2 summarizes previous research on antecedents and outcomes of employee and leader green behavior across micro-, meso-, and macrolevels, including example variables and empirical studies. The table does not consider magnolevel factors because they have rarely been examined in relation to employee and leader green behaviors before.

Table 2. Summary of Previous Research on Antecedents and Outcomes of Employee and Leader Green Behavior Across Conceptual Levels

Category	Example variables
Antecedents of <u>employee</u> green behavior	
Microlevel	
Demographics	Age ¹ , tenure ² , educational level ²
Attitudes, beliefs, norms, and intentions	Pro-environmental attitudes ² , norms ² , values ³ , perceived behavioral control ² , behavioral intentions ⁴ , job satisfaction ² , organizational commitment ²
Knowledge, skills, and abilities	Environmental knowledge ³ , green competencies ⁵
Personality characteristics	Conscientiousness ⁶ , openness ² , moral reflectiveness ⁶ , integrity ⁷ , honesty-humility ⁸
Affect and motivation	Positive and negative affect ⁹ , autonomous and external motivation ¹⁰
Nonwork behavior	Nonwork recycling behavior ¹¹ , nonwork energy use behavior ¹²
Mesolevel	
Leader green behavior	Environment-specific transformational leadership ¹³ , leader support ¹⁴ , leader green behavior ⁶
Physical work environment	Physical facilitation ¹⁵ , telecommuting ¹⁶
Job characteristics	Job autonomy ² , job demands ² , meaningful work ¹⁷
Team support	Peer education ¹⁸ , coworker green advocacy ⁶ , coworker support ¹⁹
Team climate	Green work climate ²⁰ , social norms ²¹
Team efficacy	Team pro-environmental goal clarity ²² , team green efficacy ²³
Macrolevel	
Green human resource management	Green human resource management ²⁴ , environmental sustainability training ²⁵
Interventions	Feedback ¹⁸ , goal setting ²⁶ , nudges ²⁷ , boosts ²⁷ , prompts ²⁸ , emotion-based interventions ²⁹
Climate and culture	Pro-environmental climate ³⁰ , organizational ethic of care ³¹
Corporate social responsibility	Corporate social responsibility ³²
Business strategy	Organizational environmental sustainability policy ³³
Outcomes of <u>employee</u> green behavior	
Microlevel	
Individual outcomes	Work performance ³⁴ , job satisfaction ³⁵ , well-being ³⁶

(Continued)

Table 2. (Continued)

Category	Example variables
Macrolevel	
Environmental performance	Environmental competitive advantage ³⁷ , firm environmental performance ³⁸
Antecedents of <u>leader</u> green behavior	
Microlevel	
Individual antecedents	Conscientiousness ⁶ , moral reflectiveness ⁶ , values ³⁹ , openness to change ³⁹ , knowledge ³
Employee behavior	Follower active engagement ⁴⁰
Macrolevel	
Sustainability measures	Green human resource management ⁴¹ , green work climate ⁴¹
Management and strategy	Corporate social responsibility ⁴² , corporate environmental strategy ⁴³
Outcomes of <u>leader</u> green behavior	
Microlevel	
Employee green behavior	Employee green behavior ⁶ , organizational citizenship behavior for the environment ⁴⁴
Employee individual characteristics	Employee environmental passion ⁴⁵ , employee environmental commitment ¹⁴
Employee individual outcomes	Employee well-being ⁴⁶ , employee turnover intentions ⁴⁷
Mesolevel	
Team support	Workgroup green advocacy ⁶ , team green efficacy ²³ , team green innovation ²³
Macrolevel	
Sustainability measures	Green human resource management ⁴⁸ , green organizational climate ⁴⁹
Management and strategy	Organizational environmental support ⁵⁰ , environmental management practices ⁵¹ , corporate social responsibility ⁵⁰
Environmental performance	Organizational environmental performance ⁵²
Other performance outcomes	Financial performance ⁵³

Note. For the sake of space, we provide references for the example variables in the online supplemental materials (OSM; <https://osf.io/8yzn6/>). Superscript numbers correspond with the reference numbering in the OSM.

Microlevel

As can be seen in Table 2, a large proportion of research on environmental sustainability at work focused on individual-level antecedents of EGB. Numerous reviews and meta-analyses summarized the current state of research in this area (e.g., Inoue & Alfaro-Barrantes, 2015; Katz et al., 2022; Norton et al., 2015; Wiernik et al., 2016, 2018; Yuriev et al., 2018; Zacher et al., 2023). EGB is conceptualized as a compound performance domain with several proximal individual characteristics mediating relationships between more distal antecedents and EGB (Wiernik et al., 2018; Zacher et al., 2023). These proximal individual characteristics are knowledge about environmental issues (Cabral & Dhar, 2019; Fryxell & Lo, 2003; Wiernik et al., 2018; Zacher et al., 2023), environmental skills for translating this knowledge into action (Cabral & Dhar, 2019; Dzhengiz & Niesten, 2020; Lo et al., 2012; Wiernik et al., 2018; Zacher et al., 2023), and motivation to engage in EGB (Graves et al., 2013; Wiernik et al., 2018; Zacher et al., 2023). More distal individual predictors of EGB are demographics (e.g., age; Wiernik et al., 2016), personality characteristics (e.g., moral reflectiveness; Kim et al., 2017), attitudes (e.g., pro-environmental attitudes; Katz et al., 2022), and affective states (Bissing-Olson et al., 2013).

Meta-analytic findings by Katz et al. (2022) show small positive associations between age and education, respectively, and EGB, whereas personality traits (e.g., moral reflexiveness), pro-environmental attitudes, and self-efficacy exhibited stronger positive associations with EGB. Whereas most studies examined direct relationships between such individual-level factors and EGB, some explored underlying processes. For example, Tian et al. (2020) found that motivation mediated the association between pro-environmental attitudes and EGB in a sample of Chinese employees. In another study with European employees, biospheric values (i.e., concern for environmental well-being; Stern & Dietz, 1994) were positively related to EGB via environmental self-identity and personal environmental norms (Ruepert et al., 2016). However, most research on individual antecedents of EGB relies on cross-sectional, between-person designs (with some exceptions such as Bissing-Olson et al., 2013; Norton et al., 2017), limiting insights into causal or temporal relationships.

Furthermore, pro-environmental behavior has been shown to “spill over” between work and private contexts, meaning that engaging in pro-environmental behavior in one domain (e.g., at home) can either increase (positive spillover) or decrease (negative spillover) the likelihood of engaging in a similar behavior in another domain (e.g., at work; see Carrico, 2021; Maki et al., 2019; Verfuërth & Gregory-Smith, 2018, for reviews). For example, in cross-sectional studies by Andersson et al. (2012) and Whitmarsh et al. (2018), waste separation practices at work and at home were positively related.

As can be seen in Table 2, considerably fewer studies have focused on the implications of EGB for employees, but there is evidence suggesting that EGB is associated with favorable employee outcomes. For example, in a multilevel study with Dutch managers and employees, EGB was positively related to supervisor-rated job performance (Bohlmann et al., 2018). Furthermore, analyzing data from Chinese employees working in various industries, Zhang et al. (2021) found a positive association between EGB and employee well-being via increased self-esteem. In their meta-analysis, Katz et al. (2022) identified strong positive correlations between EGB and both organizational commitment and organizational identification, as well as a moderately positive relationship with job satisfaction.

Regarding macrolevel outcomes, research exploring how EGB contributes to organizational environmental performance in a bottom-up manner is very scarce, with few exceptions. For example, Chen et al. (2015) found that employees’ environmental involvement was positively related to organizational environmental performance as rated by chief executive officers, and Del Brío et al. (2007) showed that employee participation in natural environment protection activities was associated with environmental competitive advantage. Overall, regarding the microlevel, a substantive proportion of research on environmental sustainability at work explored individual-

level antecedents of EGB in cross-sectional studies. Thus, the understanding of temporal and causal relations between these variables and EGB as well as understanding of the actual environmental impact of EGB remains scarce.

Mesolevel

The mesolevel considers the leader, work context, and team characteristics. *Leader green behavior* plays a key role in enhancing organizational environmental performance and has received increasing research attention over the last years (see Aycan *et al.*, 2025; Paillé, 2018; Zacher *et al.*, 2024, for reviews). Leaders role model green behavior and set examples (Kim *et al.*, 2017; Russell *et al.*, 2016; Shao *et al.*, 2023; Yuriev *et al.*, 2018), provide employees with resources such as time and knowledge to act pro-environmentally (Paillé, 2018; 2022), and, depending on their hierarchical position, make strategic decisions regarding organizational environmental policies (Boiral *et al.*, 2015). The individual antecedents of leader green behavior are largely comparable to the individual antecedents of EGB, including, for example, personal values (Egri & Herman, 2000) and conscientiousness (Kim *et al.*, 2017).

A substantial body of research suggests that leader green behavior is positively related to follower green behavior (Katz *et al.*, 2022; Zacher *et al.*, 2024). Katz *et al.* (2022) found meta-analytical evidence for strong positive associations between green transformational leadership, environmental servant leadership, and supervisor support, respectively, and EGB. Some studies focused on underlying mechanisms and found that employee characteristics (e.g., employees' harmonious environmental passion; Robertson & Barling, 2013) and organization-level factors (e.g., green organizational climate; Robertson & Carleton, 2018) mediate positive associations between leader and employee green behavior. Furthermore, leader green behavior has been found to function as a boundary condition facilitating the relationship between employee antecedents and EGB (e.g., Graves *et al.*, 2013).

There is initial evidence that leader green behavior unfolds potential at the macrolevel. For example, leader green behavior was related to higher organizational environmental performance (e.g., Boiral *et al.*, 2015; Riva *et al.*, 2021) and more GHRM practices (Ahmad *et al.*, 2021). However, research on green decision-making and behavior among high-impact leadership groups, such as executives and top management teams, is scarce. An exception is the conceptual paper by Boone *et al.* (2022), who, building on neuroscientific evidence, suggest that CEOs with other-regarding values invest in sustainability out of intrinsic motivation, whereas CEOs with self-regarding values do so when it is monetarily or socially incentivized. In a survey study, Ren *et al.* (2022) found that GHRM was positively related to organizational environmental performance via top management green commitment, and this relation was stronger when CEO ethical leadership was high.

Compared to leader green behavior, the role of *work context characteristics* has received limited research attention so far. However, initial evidence suggests that such characteristics may influence the extent to which employees and leaders engage in green behavior. Regarding job characteristics, job demands and job autonomy were both positively related to EGB in a study with Australian employees (Katz *et al.*, 2023) and "green" job autonomy (i.e., the autonomy granted by one's job to make decisions and take actions related to environmental sustainability) was positively associated with EGB in a longitudinal study with employees from Germany (Stein *et al.*, 2025). Similarly, a review by Yuriev *et al.* (2018) and an interview study by Ruepert *et al.* (2016) highlighted a lack of autonomy and time constraints as key barriers to EGB.

The role of technological work context characteristics for EGB has so far received little attention, although theoretical arguments on the "twin transition" suggest that digitalization and environmental sustainability can benefit each other (Christmann *et al.*, 2024; Veit *et al.*, 2024). For instance, technology-enabled work could support pro-environmental behavior by reducing travel through teleconferences and home office and by minimizing printing through digital storage

(Andrews et al., 2013). Additionally, environmental infrastructure and facilitation, such as recycling bins, bicycle facilities, and bus services, might lower barriers to green behaviors (Norton et al., 2018; Young et al., 2015). For example, studies showed that the availability and proximity of recycling stations in the workplace were positively related to recycling behavior (Ludwig et al., 1998; Wu et al., 2013).

Research has also explored the role of *team processes* in shaping EGB. For example, in a longitudinal study, coworker social support was positively related to EGB (Katz et al., 2023), and, in a multilevel study with Taiwanese employees, green organizational identity at the team level was positively related to employees' green creativity and green product development performance via green knowledge sharing (Chang & Hung, 2021). Team processes may also serve as enabling mechanisms in the relationship between leader and employee green behavior. For example, coworker green advocacy mediated the positive relationship between leader and employee green behavior (Kim et al., 2017), and team pro-environmental goal clarity and harmonious passion mediated the positive relationship between environmental transformational leadership and EGB (Peng et al., 2021).

Overall, regarding the mesolevel, previous studies mainly examined antecedents and employee-related outcomes of leader green behavior, whereas some studies also highlighted the important role of work context characteristics and team processes for EGB. These studies predominantly rely on cross-sectional designs with self-report measures, limiting causal insights (for an exception see the experimental study by Robertson & Barling, 2017). Additionally, significant gaps remain in understanding the effect of executive decision-making on environmental sustainability, quantifying the environmental impact of leader green behavior, understanding the role of work characteristics for EGB, and rigorously examining team processes in relation to EGB.

Macrolevel

There is a substantial body of research on *green human resource management* (GHRM), encompassing a "set of HRM practices adopted to achieve organizational green goals" (Dumont et al., 2017, p. 613). This includes practices throughout the entire HRM cycle, such as recruiting and selecting employees with green attitudes, training environmental skills and knowledge, and implementing green performance management and compensation systems (see Fawehinmi et al., 2022; Pham et al., 2020; Ren et al., 2018; Renwick et al., 2013, for reviews). Meta-analytic evidence suggests that GHRM is positively related to organizational environmental performance and green supply chain management (Carballo-Penela et al., 2023). Research further indicates that GHRM shapes employee and leader green behavior, both directly and indirectly via other macro-, meso-, and microlevel factors, such as green organizational climate (Dumont et al., 2017; Rubel et al., 2021) and green commitment (Ansari et al., 2021). Furthermore, GHRM strengthened the positive relationship between leader and employee green behavior in a series of two experiments and a field study by Tu et al. (2023). However, most of the studies on GHRM and EGB focused on general GHRM perceptions rather than particular GHRM practices and relied on cross-sectional survey designs, limiting understanding of how specific GHRM practices enhance employees' green skills, knowledge, attitudes, and performance and, in turn, organizational environmental performance (Jackson, 2022).

Several organizational *interventions* have been tested to increase EGB. These may include distributing information about environmental crises and environmentally sustainable behaviors (Russell & Ashkanasy, 2021), providing feedback (Carrico & Riemer, 2011), setting environmental sustainability goals (Davis et al., 2020), and modifying employees' choice architecture. The last category includes boosts (i.e., reflective interventions that improve decision-making competencies; Bastini et al., 2023), nudges (i.e., making green behavior the easiest option; Bastini et al., 2023), and prompts (i.e., visual and verbal reminders to behave environmentally sustainable; Gemmecke et al., 2025; Russell et al., 2016). Further, interventions demonstrating how green behavior

contributes to employees' personally important goals (e.g., financial gains, health) have also been effective (Unsworth *et al.*, 2013; Unsworth & McNeill, 2017). However, organizational environmental sustainability interventions have not always been successful, with some studies reporting no significant effects (Pandey *et al.*, 2016) or small effects (Bastini *et al.*, 2023). Some research suggests that combinations of interventions may be more effective than single interventions (Endrejat *et al.*, 2015; Osbaldiston & Schott, 2012; Unsworth, 2015). So far, most intervention studies have focused on changing conserving behavior including reducing waste, recycling, energy saving, and transportation (Unsworth, 2015). Overall, more research is needed to explore the mechanisms and boundary conditions of how interventions can increase a variety of employee and leader green behaviors.

Organizational climate and culture related to environmental sustainability may also impact employee and leader green behavior (Yuriev *et al.*, 2018). Green organizational culture is defined as "the shared values, beliefs, and assumptions of organizational members regarding the correct way to think and feel about environmental sustainability" (Zacher *et al.*, 2023, p. 479), whereas green organizational climate comprises employees' shared perceptions of organizational policies, procedures, and practices related to environmental sustainability (Magill *et al.*, 2020; Norton *et al.*, 2017). Meta-analytic evidence showed a strong positive association between green organizational climate and EGB (Katz *et al.*, 2022). In a cross-sectional study, green organizational climate was positively related to employee pro-environmental behavior inside and outside of work, beyond individual motivation to act pro-environmentally (Magill *et al.*, 2020). Additionally, green organizational climate and culture may function as important boundary conditions facilitating associations between individual antecedents and leader and employee green behavior. In a daily diary study, for example, Norton *et al.* (2017) found that pro-environmental behavior intentions and next-day EGB were positively related when green organizational climate was high but not when it was low.

Corporate social responsibility (CSR) constitutes an umbrella term differentially defined in various disciplines (e.g., organizational behavior, economics, marketing), which is why the concept has to be treated with some caution. In psychology research, the definition by Aguinis and Glavas (2012) is used most often. They define CSR as "context-specific organizational actions and policies that take into account stakeholders' expectations and the triple bottom line of economic, social, and environmental performance" (p. 933). Previous CSR research mainly focused on economic performance and reputational outcomes of CSR, thereby neglecting the environmental impact of CSR (Fatima & Elbanna, 2023; Zhao *et al.*, 2022) and psychological microfoundations of CSR (i.e., how employees perceive, interpret, react to, and participate in CSR; Aguinis & Glavas, 2012). Only recently, research started to consider individual antecedents, evaluations, and reactions to CSR (Gond *et al.*, 2017; Zhao *et al.*, 2022). Related meta-analytic evidence suggests that CSR perceptions are positively related to favorable employee outcomes, such as job satisfaction and organizational citizenship behavior, mainly via mechanisms of organizational justice, trust, and identification (Zhao *et al.*, 2022). CSR is further positively related to EGB, as demonstrated by a meta-analysis (Katz *et al.*, 2022) and several cross-sectional studies (e.g., Ruepert *et al.*, 2017; Tian & Robertson, 2019). Given that CSR is an umbrella term covering various organizational sustainability initiatives and with CSR constructs varying greatly across studies (Gond *et al.*, 2017; Rupp & Mallory, 2015), it is difficult to disentangle which specific facets of CSR are related to EGB and why.

Organizations differ in their approach to *environmental communication*. Two important communication strategies that have been discussed in the literature are greenwashing (i.e., "any communication that misleads people into adopting overly positive beliefs about an organization's environmental performance, practices or products"; Lyon & Montgomery, 2015, p. 226) and brownwashing (i.e., "underreporting of environmental achievements"; Huang *et al.*, 2022, p. 2518). Research on the antecedents and consequences of such communication strategies increased rapidly in recent years across various disciplines (e.g., business, management, communication,

ethics, marketing, see Montgomery et al., 2024; Montgomery & Robertson, 2022, for reviews). Although research mainly considered how these communication strategies relate to reactions of external stakeholders such as customers and investors, the effects on employees in general and on EGB in particular have been largely neglected. However, there is initial evidence that such communication strategies could affect EGB. For example, analyzing cross-sectional data from the agricultural industry in Pakistan, Tahir et al. (2020) found that organizational greenwashing was negatively related to EGB via employee value orientation and green psychological climate. In a three-wave study with alumni of an environmental science and sustainability program at an American university, perceptions of organizational greenwashing were positively related to employee turnover intentions via perceptions of corporate hypocrisy (Robertson et al., 2023).

Furthermore, *business strategy* factors could significantly influence the motivators and barriers of engaging in green decision-making and behavior in organizations. For instance, employees in industries heavily reliant on environmentally harmful practices such as oil and gas, automotive, and chemical industries will likely encounter more obstacles in actively promoting organizational environmental performance (Strauss et al., 2017). Additionally, corporate environmental strategy, encompassing an organization's strategy regarding the natural environment, plays a crucial role (Ramus & Steger, 2000). When such strategies are in place, they lower the barriers for environmental sustainability initiatives and engagement in green behaviors. For example, Ramus and Steger (2000) found that organizational environmental policy is positively related to employee "ecoinitiatives." Similarly, research suggests that business strategy is an important antecedent of GHRM, which, in turn, might benefit employee and leader green behavior (Ren et al., 2018). Furthermore, corporate governance of environmental sustainability, reflecting a firm's distribution of rights, responsibilities, and decision-making around environmental sustainability (Aguilera et al., 2021), can serve as an additional catalyst for green behavior. When environmental responsibilities are distributed more broadly across the organization, it can empower more employees to participate in and support environmentally sustainable practices. Additionally, strategy related to environmental innovation (i.e., "innovative measures implemented by the firm to achieve sustainable development and to reduce their negative impact on the environment," Liao & Liu, 2021, p. 1853) may offer opportunities for employees to engage in green behavior.

Finally, *organizational performance outcomes*, particularly financial performance, may influence engagement in green behavior. Although organizational environmental performance and economic success may initially appear in conflict—due to investment costs for sustainable materials and technologies, or choosing more expensive sustainable solutions (Andreou & Kellard, 2021; Dilchert & Ones, 2012)—evidence suggests they are compatible. Enhancing environmental sustainability can improve revenue growth through improved market access and product differentiation, and reduce costs associated with pollution taxes, energy consumption, and carbon pricing (Ambec & Lanoie, 2008; Dilchert & Ones, 2012). In fact, meta-analyses repeatedly confirmed the positive bidirectional association between organizational environmental and financial performance (e.g., Dixon-Fowler et al., 2013). Additionally, higher organizational environmental performance relates to higher labor productivity (Delmas & Pekovic, 2013), positive stock market reactions (Endrikat, 2016), and higher organizational attractiveness ratings (Belinda et al., 2018). As these potential cobenefits of enhancing organizational environmental performance become evident to employees and leaders, their engagement in green behavior is likely to increase, especially among top management. Overall, most research on the macrolevel considered GHRM, but cross-sectional study designs and focus on global GHRM perceptions limit understanding of how and why specific GHRM practices are related to EGB. Additionally, more research is needed on the role of other macrolevel factors for EGB, such as organizational environmental sustainability interventions and environmental communication.

Magnolevel

Organizations are embedded in political, economic, cultural, and environmental contexts, which pose important boundary conditions for environmental sustainability at work. These factors are represented at the magnolevel of the conceptual framework (Figure 1). So far, such factors have been largely neglected in I-O psychology research, and we mainly draw on literature from related fields (e.g., business strategy, management) to incorporate these factors into the conceptual framework.

The *political system* and government legislation, encompassing both environmentally beneficial (e.g., pro-environmental laws, carbon pricing) and harmful regulations (e.g., corporate law on maximizing shareholder profit; governmental fossil-fuel subsidies; International Energy Agency, 2023; Keay, 2010) pose important boundary conditions for environmental sustainability at work, because they can enable, encourage, incentivize, inhibit, and prevent green decision-making and behavior in organizations. In fact, some scholars argue that governmental regulations are the most relevant measure to change organizational behavior toward environmental sustainability (Aragón-Correa et al., 2020; Chater & Loewenstein, 2022; Lindenberg & Steg, 2013). There is hardly any I-O psychology research investigating the processes through which government regulations influence individual and collective decision-making toward environmental sustainability in organizations. Evidence from the management literature suggests that mandatory governmental regulations, such as domestic (e.g., US Federal Clean Air Act) and global (e.g., restrictions on greenhouse gas emissions from the Kyoto Protocol) initiatives, can positively influence organizational environmental performance (Aragón-Correa et al., 2020). In contrast, voluntary regulations, such as the European EMAS, ISO codes, and industry-specific initiatives (e.g., Chemical Industry Responsible Care), seem to be less effective. Finally, resolutions and statements of international organizations, such as NGOs, the World Bank, or the United Nations, might shape organizational decision-making on environmental sustainability (Cormier, 2018).

Economic systems and developments can be another important boundary condition that determines how environmental sustainability is perceived and enacted upon in organizations. For example, financial crises may negatively influence organizations' capacity for sustainability initiatives by impacting the accessibility of credits for environmental investments (Tienhaara, 2010). Additionally, economic advancements, such as Industry 4.0 and the circular economy, which involve technologies like additive manufacturing, Internet of Things, and cloud systems, present opportunities for organizations to increase their investments in material reuse, reduction, recycling, and extraction from end-of-life products, enhancing their potential to improve environmental performance (Awan et al., 2021; Ritter et al., 2024). Furthermore, competitors, industry-specific institutions, and broader industry developments such as market expansions, technological innovations, and circular economy practices (e.g., Ritter et al., 2024) can shape decision-making and behavior related to environmental sustainability in organizations. Industry-specific environmental alliances, for instance, share environmental sustainability-related knowledge and work together toward positive environmental impact (Niesten & Jolink, 2020). Furthermore, other external stakeholder groups within the economic system can positively influence green behavior within organizations. These groups include, for example, consumers who are increasingly interested in buying green products (Statista, 2024; Umweltbundesamt, 2024). Shareholders' activism strategies (Cundill et al., 2018), such as divestment (i.e., selling shares of unsustainable organizations, not investing in environmentally harmful companies), dialogue with a company's management, and proposals presented and voted on at annual general meetings, might further cause employees and leaders to prioritize environmental sustainability.

The *cultural context*, for example, differences in power distance, collectivism, and appreciation of nature, may further determine opportunities, perceptions, and preferences regarding organizational environmental sustainability (Eisler et al., 2003; Etzion, 2007; Hofstede, 1984). Although previous research on environmental sustainability at work was conducted in multiple countries (e.g., Europe, the United States, Australia, China), very few studies systematically explored how cultural context functions as a boundary condition for relations at the other levels of

the conceptual framework. In a notable exception, Jiang et al. (2022) conducted a study among employees from five countries (i.e., Austria, Brazil, China, Germany, and India) and found that power distance moderated the positive association between leader and employee green behavior, such that it was stronger for higher levels of power distance. Further studies suggest that employee and leader green behavior might differ across cultural contexts. For example, in a qualitative study, Yuriev and Sierra-Barón (2020) found that nonacademic employees of Canadian and Colombian universities differed in their intentions to engage in green behavior. Additionally, in a meta-analysis by Liu et al. (2015), the influence of regulations, stakeholder norms, and mindset of top managers on proactive environmental strategy was stronger in China than in Western countries.

Finally, *environmental dynamics* might shape how organizational members perceive and act on environmental sustainability. The restricted availability of natural resources, for instance, can prompt organizations to rethink their production cycle and transition to ecofriendly input products (Speirs et al., 2015). Moreover, the rise in natural disasters and extreme weather events may heighten awareness among organizational members about the risks associated with environmental crises, thereby prompting them to engage in environmentally sustainable behavior. Climate change risk perceptions and worry, for example, have been associated with increased green behavior (Kühner et al., 2024; van Valkengoed et al., 2021). Overall, regarding the magnolevel, literature from management and economics suggests that magnolevel factors shape organizational environmental sustainability efforts. However, I-O psychology has yet to systematically investigate the psychological mechanisms through which these factors influence green behaviors among employees and leaders.

Advancing I-O psychology research and practice on environmental sustainability

Focus on high environmental impact as a fundamental premise

From the literature review, multiple avenues for future research emerge. In line with broader recommendations in the behavioral sciences (e.g., Nielsen et al., 2021; 2024), and in light of the severity of environmental crises, we argue that researchers should adopt an “impact-first” approach when selecting topics for future research, prioritizing those with the highest potential to catalyze meaningful environmental change. This necessitates a focus on (a) behaviors with substantial (positive or negative) environmental consequences, and (b) systemic changes at the meso, macro, and magnolevels that cause widespread behavior changes.

A narrow focus on individual-level antecedents (e.g., environmental attitudes) of low-impact EGBs (e.g., switching off lights, printing double sided) comes with two major concerns. First, low-impact behaviors lack the potential to significantly change organizational environmental performance. Thus, I-O psychology risks generating research with limited practical and societal relevance. For example, ExxonMobil, a US-based oil company, produced 98 million metric tons of CO² equivalents in 2023 (Statista, 2025), considering direct and indirect market-based emissions from company activities.⁶ Even if all 70,000 employees engaged in daily conserving activities (e.g., switching off lights), the impact on the company’s overall environmental performance would be negligible. Instead, to improve environmental performance, employees and leaders need to engage in high-impact EGB, such as restructuring business strategies toward renewable energies. Second, focusing on individual-level antecedents of low-impact EGBs can misleadingly imply that the responsibility for improving organizational environmental performance rests primarily on individual employees’ everyday activities and that addressing environmental crises does not require substantial systemic change (Chater & Loewenstein, 2022). This may divert attention from, and undermine public support for, more impactful strategies and interventions at higher organizational levels. Thus, we argue that future research should focus on high-impact behaviors

⁶The total emissions are much higher when including Scope 3 emissions (i.e., those produced by the company’s supply chains or from customers’ use of its products).

and expand research on contextual factors at the meso, macro, and magnolevels of the conceptual framework, which potentially influence widespread behavior changes.

Following this “impact-first” rationale, we identified 10 areas for future research across the four levels of the conceptual framework (see summary in Table 3). For each, we present relevant theoretical perspectives, methodological approaches, and connections to related disciplines. In line with calls for research adopting a dynamic-systems perspective considering the interplay between different levels of analysis (e.g., Felin *et al.*, 2015; Glavas, 2016; Strauss *et al.*, 2017; Unsworth *et al.*, 2021), we also offer suggestions for research addressing interconnections across the four levels. Although we do not delve into detailed theory building and hypothesis development, nor claim our selection of topics, theories, and methods to be exhaustive, our intention is to offer I-O psychology researchers a valuable resource and a source of inspiration to advance research on environmental sustainability. We look forward to comments supplementing, advancing, and critically questioning our suggestions.

(1) Classification and measurement of EGBs and organizational environmental performance

If future research is to prioritize high impact, we need orientation as to which EGBs potentially offer the highest “return on investment” in terms of environmental impact and to apply reliable methods for measuring both EGB and organizational environmental performance. A promising approach to classifying EGBs based on their potential environmental impact involves extending existing EGB taxonomies to include an “impact” dimension. For example, the performance-based “Green Five” taxonomy (Ones & Dilchert, 2012b) categorizes EGBs into five broad dimensions (i.e., conserving, transforming, avoiding harm, influencing others, and taking initiative), covering 17 narrower behavioral subdimensions. These could be further organized according to their environmental impact potential. Similarly, Francoeur *et al.* (2021) proposed a framework that categorizes different types of EGB across three continuous dimensions (i.e., direct vs. indirect, in role vs. extra role, low vs. high intensity). This framework could be expanded by adding a fourth dimension, arranging EGBs on the dimension of low versus high environmental impact. To inform such classification processes, insights from the environmental sciences could be useful, quantifying the mitigation potential of different pro-environmental behaviors (e.g., Ivanova *et al.*, 2020; Wolske & Stern, 2018). Additionally, expert interviews (e.g., with sustainability experts) could provide guidance. Although the actual environmental impact of an employee’s green behavior depends on numerous factors (e.g., the hierarchical level of the person conducting the behavior), a rough classification of EGBs based on their potential environmental impact would serve as a critical tool.

To determine whether EGBs have a tangible environmental impact, future research needs to develop and establish valid and, if available, objective measures for EGB. Many studies currently rely on self-reports, which are prone to biases and inaccuracies (Kormos & Gifford, 2014). Lange and Dewitte (2019) provide recommendations on how to reliably measure pro-environmental behavior. Among others, they discuss opportunities for field observations via informant reports (e.g., supervisors, coworkers), trained observers (e.g., researchers, student assistants), and device measurement (e.g., meter readings for energy consumption, GPS data for transportation choices). Although such approaches are rather rare in the measurement of EGB, there are some exceptions. For example, in an intervention study aiming to reduce energy consumption, Carrico and Riemer (2011) measured group-level energy use in kilowatt hours per building. In cases where objective measures are unavailable or impractical, validated measurement instruments for green behavior are essential. Several measures for EGB exist in the literature (see Francoeur *et al.*, 2021 for an overview), but rigorous validation studies are needed to ensure their reliability, validity, and measurement invariance across different organizational contexts and cultures.

Additionally, future research should establish objective measures to evaluate organizational environmental performance. Currently, the majority of studies fail to investigate whether

Table 3. Recommendations for Future Industrial and Organizational Psychology Research on Environmental Sustainability

Research area	Exemplary research questions	Theoretical perspectives	Methodological approaches	Connections to related disciplines
Relevant for all levels				
1: Classification and measurement of employee green behavior and organizational environmental performance	<ul style="list-style-type: none">• How can employee green behaviors be classified in terms of their environmental impact?• How can employee green behavior and organizational environmental performance be measured objectively, and how does this correspond with subjective measures?	<ul style="list-style-type: none">• Green Five Taxonomy (Ones & Dilchert, 2012b)• Continuous dimensions of employee green behavior (Ciocirlan, 2017; Francoeur et al., 2021)	<ul style="list-style-type: none">• Objective behavioral measures (e.g., energy use via smart meters)• Multi-perspective ratings (e.g., supervisors and colleagues)• Observational studies (e.g., of recycling behavior)• Analysis of publicly available organizational data (e.g., sustainability reports)	<ul style="list-style-type: none">• <i>Environmental sciences</i>: Environmental impact of different behaviors (e.g., Ivanova et al., 2020; Wolske & Stern, 2018)• <i>Environmental psychology</i>: Measurement of pro-environmental behavior (e.g., Lange & Dewitte, 2019)• <i>Management</i>: Measuring the environmental impact of organizations (e.g., Sharma, 2022)
MICROLEVEL				
2: Individual-level motivators and barriers of high-impact employee green behavior	<ul style="list-style-type: none">• What are individual motivators and barriers to engage in high-impact employee green behavior?• What is the relationship between high- and low-impact employee green behavior?	<ul style="list-style-type: none">• Theory of planned behavior (Ajzen, 1985)• Goal setting theories, for example, goal hierarchy (Cropanzano et al., 1993)• Theorizing on environmental spillover (e.g., Verfuert & Gregory-Smith, 2018)	<ul style="list-style-type: none">• Validated and established self-report instruments for variables subject to introspection (e.g., goals, attitudes, personal norms)• Daily/weekly diary and longitudinal studies	<ul style="list-style-type: none">• <i>Environmental psychology</i>: Findings on environmental spillover between high- and low-impact pro-environmental behaviors (e.g., Carrico, 2021)
3: Green jobs and careers	<ul style="list-style-type: none">• What motivates and qualifies employees for green jobs and careers? What makes employees leave such career paths?• What are motivators, barriers, and psychological success factors for founding green start-ups?	<ul style="list-style-type: none">• Career theories, for example, social-cognitive career theory (Lent et al., 1994)• Action theory process model of entrepreneurship (Frese & Gielnik, 2023)	<ul style="list-style-type: none">• Longitudinal studies following employees' educational and vocational decisions• O*NET classification of green occupations• Qualitative research (e.g., semi-structured interviews) to explore green career paths	<ul style="list-style-type: none">• <i>Economics</i>: Research on the green economy and associated changes in labor markets and workforce skills (e.g., Thake, 2025)• <i>Entrepreneurship research</i>: Insights into success factors of green entrepreneurship (e.g., Demirel et al., 2019)
MESOLEVEL				
4: Team processes and employee green behavior	<ul style="list-style-type: none">• What cognitive, motivational, behavioral, and affective team processes influence employee green behavior?	<ul style="list-style-type: none">• Social identity theories, for example, social identity model of pro-environmental action (Fritzsche et al., 2018)	<ul style="list-style-type: none">• Observational studies (e.g., analysis of team meetings)• Longitudinal studies and multilevel modeling to explore reciprocal relations between employee green	<ul style="list-style-type: none">• <i>Social and environmental psychology</i>: Insights into collective pro-environmental action (e.g., Barth et al., 2021)

(Continued)

Table 3. (Continued)

Research area	Exemplary research questions	Theoretical perspectives	Methodological approaches	Connections to related disciplines
	<ul style="list-style-type: none"> What is the role of “social tipping points” for causing widespread changes in employee green behavior across teams? 	<ul style="list-style-type: none"> Social exchange (Cropanzano & Mitchell, 2005), comparison (Festinger, 1954), and contagion theories (Christakis & Fowler, 2013) 	<ul style="list-style-type: none"> behavior, team processes, and organizational environmental outcomes 	<ul style="list-style-type: none"> <i>Socioeconomic systems research</i>: Insights into social tipping dynamics (Otto et al., 2020)
5: Green leadership	<ul style="list-style-type: none"> Under which conditions do top management teams (TMTs) prioritize environmental sustainability? How can TMT members convince their fellow members to engage with environmental sustainability? What are the consequences of and potential solutions to misalignment between employee and leader green characteristics and behaviors? 	<ul style="list-style-type: none"> Upper echelons theory (Hambrick, 2007) Negotiation theories, for example, cooperation theory (Axelrod & Hamilton, 1981; Deutsch, 1973; Walton & McKersie, 1991) Theorizing on green leadership (Zacher et al., 2024) Person-supervisor fit (Edwards et al., 1998) 	<ul style="list-style-type: none"> Observational studies (e.g., analyzing TMT discussions) Comparative analysis across organizations: Associations between organizational environmental performance and characteristics of TMTs Multilevel modeling including individual-, leader-, and organization-level data 	<ul style="list-style-type: none"> <i>Management Research</i>: Insights into top management team decision-making (Edmondson et al., 2003; Liu et al., 2022)
6: Work design to facilitate employee green behavior	<ul style="list-style-type: none"> How are different job characteristics specific to environmental sustainability (e.g., task autonomy, task significance, feedback, job demands) related to employee green behavior? How are technological aspects of the work environment related to employee green behavior? 	<ul style="list-style-type: none"> Work design theories (Hackman & Oldham, 1975; Morgeson & Humphrey, 2006) Technology-related theories, for example, task-technology-fit model (Goodhue & Thompson, 1995) 	<ul style="list-style-type: none"> (Quasi-/field-)experimental designs (e.g., systematically manipulating characteristics of the job and the technical work environment) Experience sampling, longitudinal studies 	<ul style="list-style-type: none"> <i>Economics</i>: Theorizing on the twin transition of digitalization and sustainability (e.g., Christmann et al., 2024; Veit et al., 2024) <i>Human factors and ergonomics</i>: Physical facilitation and technological support of green behavior (e.g., Ruscio et al., 2018)
MACROLEVEL				
7: Green human resource management	<ul style="list-style-type: none"> How can green recruiting and selection processes contribute to organizational environmental performance? How can training help to increase green knowledge, skills, abilities, and behaviors? 	<ul style="list-style-type: none"> Signaling theory (Connelly et al., 2024; Spence, 1973) Meta-frameworks of training effectiveness and transfer (e.g., Cheng & Hampson, 2008) 	<ul style="list-style-type: none"> Experimental studies (e.g., green recruiting) Validation studies (e.g., predictive validity of green selection methods) Comparative analysis between organizations with various green recruiting and selection practices Intervention studies (e.g., effectiveness of different trainings) 	<ul style="list-style-type: none"> <i>Strategic human resource management</i>: Training transfer and effectiveness (Blume et al., 2010; Jiang et al., 2012) <i>Environmental education</i>: Research on the impact of environmental education (e.g., van de Wetering et al., 2022)

(Continued)

Table 3. (Continued)

Research area	Exemplary research questions	Theoretical perspectives	Methodological approaches	Connections to related disciplines
8: Organizational environmental sustainability policies and interventions	<ul style="list-style-type: none"> Under which conditions do employees oppose versus support organizational environmental sustainability policies? What are effective organizational interventions to increase high-impact employee green behavior? 	<ul style="list-style-type: none"> Theories related to organizational justice, for example, equity theory (Adams & Freedman, 1976), organizational justice theory (Colquitt et al., 2001, 2013) Goal setting theories and self-concordance (e.g., Unsworth et al., 2013) Theorizing on the effectiveness of pro-environmental interventions (van Valkengoed et al., 2022) 	<ul style="list-style-type: none"> Vignette studies (e.g., exploring the acceptance of organizational environmental policies) Intervention studies testing the effectiveness of different intervention strategies 	<ul style="list-style-type: none"> <i>Political psychology</i>: Acceptance of environmental sustainability policies (Bergquist et al., 2022; Kukowski et al., 2023) <i>Environmental psychology</i>: Taxonomy of interventions for pro-environmental behavior (van Valkengoed et al., 2022)
9: Organizational communication related to environmental sustainability	<ul style="list-style-type: none"> How is organizational communication of environmental strategies (e.g., greenwashing, brownwashing) related to employee green behavior? How should organizational communication of environmental issues be framed to encourage employee green behavior? 	<ul style="list-style-type: none"> Behavioral integrity theory (Simons, 1999; Simons et al., 2022) Media richness theory (Daft & Lengel, 1984; Ishii et al., 2019) Framing theory (Entman, 1993) 	<ul style="list-style-type: none"> Experimental studies (e.g., manipulating communication framing, channel, and integrity gap) Combination of content analysis of organizational communication on environmental sustainability with survey data of employee green behavior 	<ul style="list-style-type: none"> <i>Management, business, marketing, ethics</i>: Insights into antecedents and consequences of greenwashing and brownwashing (e.g., Montgomery et al., 2024; Montgomery & Robertson, 2022) <i>Communication science</i>: Insights into framing of environmental issues (e.g., Spence & Pidgeon, 2010)
MAGNOLEVEL				
10: Magnolevel factors and employee green behavior	<ul style="list-style-type: none"> What are the economic and political boundary conditions of environmental sustainability at work? What is the role of cultural differences in the adoption of employee and leader green behavior? Does the experience of extreme weather events increase employee and leader green behavior? 	<ul style="list-style-type: none"> Institutional theory (DiMaggio & Powell, 1983; Meyer & Rowan, 1977) Hofstede's cultural dimensions (Hofstede, 1984), Schwartz' values theory (Schwartz, 1999) Event system theory (Morgeson et al., 2015) 	<ul style="list-style-type: none"> Combining data on employee green behavior with secondary data on economic and political indicators (e.g., provided by the World Bank, United Nations) Cross-cultural surveys, international collaboration Longitudinal studies covering a significant time period with potentially significant environmental events (e.g., heatwaves, floods) 	<ul style="list-style-type: none"> <i>Political economy</i>: Insights into environmental policies (e.g., Hu et al., 2021) <i>Cultural studies</i>: Insights into cultural differences in environmental values (e.g., Cordano et al., 2010) <i>Environmental psychology</i>: Effects of extreme weather events and risk perceptions on pro-environmental behavior (Bradley et al., 2020; van der Linden, 2015)

employee and leader green behavior translates into tangible improvements in organizational environmental performance. To address this gap, researchers should develop and utilize green key performance indicators that encompass a broad spectrum of environmental outcomes, such as reductions in carbon emissions and waste as well as increases in renewable energy use, water conservation, and environmental certifications (Sharma, 2022). Potential sources for such information could be public organizational documents (e.g., annual environmental reports) or public secondary sources (e.g., newspaper and media items, data from NGOs; Barnett et al., 2020). Additionally, databases such as the CSRHub environmental sustainability rating (<https://www.csrhub.com>) can provide valuable information on organizations' environmental performance. Where more objective measures are unavailable, self-reports from informed organizational members (e.g., sustainability managers) could be used.

We acknowledge that obtaining objective data will require researchers to collaborate closely with organizations. This could present a significant challenge, as many organizations may be hesitant to disclose data, particularly if the results might reveal shortcomings in their environmental performance. To address this challenge, we encourage researchers with experience in building successful research partnerships with organizations to share their insights and recommendations on how to establish collaborations that facilitate the study of high-impact EGBs and organizational environmental performance.

(2) Individual-level motivators and barriers of high-impact EGB

Considerable research has examined the relationships between individual-level variables and EGB. However, these studies primarily rely on cross-sectional designs with self-report measures of conserving behaviors or very broad conceptualizations of EGB (e.g., task-related EGB; Bissing-Olson et al., 2013), limiting the ability to draw causal conclusions on how individual differences are related to specific high-impact EGBs. Addressing this gap, future research could explore the individual-level motivators and barriers influencing diverse high-impact EGBs (e.g., proactively driving environmental sustainability initiatives, developing sustainable business processes). Leveraging theories from social and environmental psychology could provide valuable insights here. For example, the theory of planned behavior (Ajzen, 1985) suggests that environmental attitudes, personal norms regarding environmental sustainability, and self-efficacy jointly shape intentions and actual engagement in EGB. This framework has been tested in the context of conserving and broader EGBs (e.g., Katz et al., 2022), but its applicability to specific high-impact EGBs remains underexplored.

Additionally, goal-setting theories have lately been applied to EGB research, especially in the context of interventions (see research area (8); e.g., Davis et al., 2020; Guo et al., 2024; Unsworth et al., 2013). According to these theories, goal hierarchies and potential goal conflicts play a crucial role in shaping EGB. Employees who prioritize environmental sustainability and perceive EGB as aligned, rather than conflicting, with other important goals (e.g., maintaining positive workplace relationships) might engage in more high-impact EGB. Building on this line of theorizing, future research could systematically explore potential goal conflicts for high-impact green behaviors and strategies to resolve them.

Future studies could further investigate how high- and low-impact EGBs are interconnected within individual employees. Theorizing on environmental spillover (Carrico, 2021; Verfuert & Gregory-Smith, 2018) suggests that engaging in pro-environmental behavior may either encourage further pro-environmental action via dynamic identity-building processes (Bem, 1972) or discourage it via moral licensing processes (Blanken et al., 2015). In this context, it would be interesting to explore whether low-impact EGBs, which are often easier to implement, serve as a gateway to high-impact, typically more challenging, EGBs (i.e., foot-in-the-door effect; Freedman & Fraser, 1966). In contrast, it is also possible that engagement in low-impact EGBs leads

employees to withdraw from high-impact EGBs due to a sense of having already fulfilled moral obligations.

To address these questions, we propose employing several methodological approaches. High-impact EGBs should be measured objectively wherever possible to capture actual behaviors rather than subjective perceptions. At the same time, individual-level factors (e.g., goals, attitudes, norms) are subject to introspection, requiring subjective assessment using validated self-report measures and ensuring anonymity to reduce social desirability biases. Expanding upon the predominantly cross-sectional research designs in this area (Zacher et al., 2023), future research should incorporate daily and weekly diary methods to explore dynamics in behavior over time (Ohly et al., 2010). Furthermore, full-panel longitudinal studies over longer time periods (i.e., months and years) are important for tracking changes in infrequent yet impactful EGBs (Ployhart & Vandenberg, 2010).

(3) Green jobs and careers

Transitioning to a green economy requires a highly skilled workforce to conduct emerging green jobs, particularly in key sectors like renewable energy, energy efficiency, and sustainable agriculture (Boone et al., 2023; Thake, 2025). According to LinkedIn's latest Green Skills Report (Kaura, 2024), the global demand for green talent grew at an annual rate of 5.9% between 2021 and 2024, but the supply of green talent has not kept pace with this rising demand. Thus, it could be an important and impactful future research area to explore what qualifies and motivates employees for green jobs (e.g., sustainability manager) and green careers (e.g., studying renewable energies; Boone et al., 2023). Theorizing on vocational choices and career development provides guidance here. For example, drawing on propositions of social cognitive career theory (Lent & Brown, 2013; Lent et al., 1994), future research could investigate how self-efficacy beliefs (i.e., individuals' confidence in their ability to perform green jobs or pursue green careers) and outcome expectations (i.e., the anticipated positive and negative consequences of engaging in such careers) interact to shape educational and vocational interests related to environmental sustainability. Research might further explore how person (e.g., environmental attitudes and values) and context factors (e.g., environmental legislation, social pro-environmental norms) may influence these processes. Additionally, future research could investigate potential challenges or barriers that may hinder long-term commitment to green career paths. For example, frustration or disappointment that environmental sustainability initiatives are not consistently pursued by the organization could play a role here, as evidenced in a study by Robertson et al. (2023), where corporate greenwashing was associated with increased turnover intentions for employees holding a graduate degree in environmental sciences.

The transition toward a green economy also relies on innovative new business ideas. Thus, future research might explore the motivators, barriers, and psychological success factors for founding green start-ups, thereby advancing understanding of green entrepreneurship, a field that is gaining increasing attention in the economic sciences (see Demirel et al., 2019). Applying the action theory process model of entrepreneurship (Frese & Gielnik, 2023) to the context of environmental sustainability, studies could explore how green entrepreneurs set goals and seek information, as well as plan, execute, and monitor their actions in the different stages of the entrepreneurial process (i.e., prelaunch, launch, postlaunch) and how individual characteristics related to environmental sustainability (e.g., environmental attitudes and knowledge) influence these processes. Furthermore, economics research might provide insights into the contextual boundary conditions of these processes, such as environmental government regulations (Hall et al., 2019) and knowledge networks related to environmental sustainability (Sunny & Shu, 2019).

Regarding methodological approaches to researching green jobs and careers, longitudinal studies might be particularly valuable. These designs allow researchers to track individuals' career and vocational decisions over time, offering insights into the dynamic interplay between personal

and contextual factors. Such an approach would also enable the exploration of long-term influences, such as career success, labor market trends, and emerging environmental crises. Furthermore, qualitative research methods, such as semi-structured interviews, might be helpful to explore the experiences of individuals on green career paths and during the founding of green businesses. To conduct research focused on specific green occupations, future studies could draw on established classifications of green jobs, such as those provided by the O*NET Resource Center (O*NET, 2024).

(4) Team processes and EGB

As outlined in the literature review, insights into how dynamic team processes facilitate EGB and contribute to organizational environmental performance are limited. Findings from social and environmental psychology, however, underscore the importance of group dynamics and collective perceptions in promoting pro-environmental behavior (Barth *et al.*, 2021). Thus, future research could systematically explore how cognitive (e.g., pro-environmental team norms), motivational (e.g., team green efficacy), affective (e.g., team members' environmental passion), and behavioral (e.g., coworker green advocacy) team processes (Kozlowski & Chao, 2018) jointly contribute to employee and leader green behavior. This research could be informed by social-psychological theories such as the social identity model of pro-environmental action (SIMPEA; Fritzsche *et al.*, 2018), which has already been applied to private pro-environmental behaviors like resource conservation (Hoppe *et al.*, 2023) and environmental activism (Wallis & Loy, 2021). The model proposes that ingroup identification, collective efficacy beliefs, and ingroup norms jointly determine pro-environmental action. Applied to EGB, future research might explore how team identification, beliefs in the efficacy of the team in addressing environmental issues, and pro-environmental team norms jointly shape EGB.

Furthermore, building on social exchange theory (Cropanzano & Mitchell, 2005), future research could investigate how mutual support and perceived reciprocity within teams influence the likelihood and consistency of EGB. Employees in supportive teams that recognize green efforts may be more likely to sustain these behaviors, whereas an uneven distribution of environmental responsibilities could diminish motivation. Additionally, social comparison processes (Festinger, 1954) might play a role, with employees adjusting their EGB—either increasing or decreasing it—to align with the other team members' behavior.

EGBs could also spread through teams via social contagion (Christakis & Fowler, 2013), where employees model and replicate green behaviors observed in others. This could potentially trigger “tipping points” where EGB becomes widespread throughout the team and the broader organization. Indeed, the concept of social tipping points has been considered in socioeconomic systems research, demonstrating how social tipping interventions (e.g., education on climate change, establishing pro-environmental norms and value systems) could cause rapid systemic change and, in turn, decrease greenhouse gas emissions (Otto *et al.*, 2020). Applying this theoretical lens to team contexts could reveal similar dynamics, where targeted strategies lead to increases in EGBs across the workforce.

In terms of methodological approaches, observational studies are helpful for detecting interactional patterns, such as support and enactment of environmental norms. For instance, by combining observational data with assessments of EGB, studies could analyze how team interactions (e.g., during meetings on environmental issues) influence subsequent green behaviors. To explore the dynamic and reciprocal relationships between EGB, team processes, and organizational outcomes, full-panel longitudinal studies and multilevel modeling would be particularly useful, especially regarding potentially reciprocal relations between these levels (Lehmann-Willenbrock, 2024).

(5) Green leadership

A substantial body of research examined antecedents and employee-level outcomes of green leadership (see Zacher et al., 2024, for a review). Building on this foundation, we propose two key directions for expanding research on green leadership. First, greater attention must be given to green decision-making and behavior of leaders at the top of the organizational hierarchy. According to upper echelons theory (Hambrick, 2007), organizational performance is a reflection of an organization's top management. Members of top management teams (TMTs) hold strategic authority to facilitate (or hinder) organizational change toward environmental sustainability (Arena et al., 2018). This includes initiatives like transitioning to renewable energy sources, fostering sustainable innovation, and integrating environmental sustainability into business strategies and performance indicators. Consequently, it is important to understand the conditions under which TMTs prioritize environmental sustainability, how their decisions translate to lower management levels, and ultimately, how they influence EGB. For example, drawing on negotiation theories such as cooperation theory (Axelrod & Hamilton, 1981; Deutsch, 1973; Walton & McKersie, 1991), future research could explore how TMT members convince other members to engage (more) in environmental sustainability and which negotiation strategies they use to achieve their sustainability-related goals. Furthermore, upper echelons theory suggests that TMT characteristics, such as demographics, values, and team constellations, shape strategic decision-making (Edmondson et al., 2003; Hambrick, 2007; Liu et al., 2022). Future research could explore which specific characteristics and team configurations foster environmental sustainability-oriented decisions. To explore these dynamics, observational studies or video analyses of TMT discussions could provide insights into their interaction patterns and decision-making processes. Additionally, publicly available data on organizational environmental performance (e.g., sustainability reports) and TMT characteristics (e.g., demographic data, education, experience) could be combined in comparative analyses across organizations to explore which TMTs most likely improve environmental performance.

A second critical area that requires further exploration is the (mis)match between leaders' and employees' environmental attitudes, motivations, intentions, and green behaviors. Research suggests that the alignment between employee and supervisor environmental values is positively associated with favorable job attitudes, such as job satisfaction (Kühner et al., 2024). However, there is limited understanding of the ideal leader–follower dynamics that maximize the potential for high environmental impact. For instance, a scenario where a leader has visionary environmental sustainability ideas but faces resistance from employees can hinder progress. Conversely, employees who are eager to engage in green initiatives may face obstacles if their leaders oppose their initiatives. Drawing on theorizing on green leadership (Zacher et al., 2024) and person–supervisor fit (Edwards et al., 1998), future studies could provide valuable insights into how leader–follower (mis)alignments impact organizational environmental performance. Studies could also aim to identify strategies to address these challenges to foster effective green leadership dynamics. To achieve this, multilevel modeling is essential, incorporating data at the employee, leader, and organizational levels to capture the complexity of these interactions and their influence on environmental outcomes.

(6) Work design to facilitate EGB

Emerging evidence suggests that specific work characteristics, such as job demands and job autonomy, may contribute to higher levels of EGB (e.g., Katz et al., 2023; Stein et al., 2025). Guided by theorizing on work characteristics and work design (Hackman & Oldham, 1975; Morgeson & Humphrey, 2006; Parker et al., 2017), future research should systematically examine how a broad range of work characteristics influences various forms of EGB. Importantly, traditional work characteristics may need to be adapted to incorporate elements specific to environmental

sustainability (Stein et al., 2025). For example, in terms of task characteristics, research could explore the role of autonomy in adopting environmentally sustainable work practices (e.g., choosing trains over planes for business travel, discretion in selecting eco-friendly input materials), the role of perceived significance of one's job for environmental sustainability, and the impact of feedback mechanisms (e.g., dashboards showing daily energy use) on EGB. Furthermore, future studies could investigate how job demands such as task complexity, problem-solving requirements, or workload affect EGB.

Despite theoretical considerations that technology could facilitate EGB (e.g., Andrews et al., 2013; Norton et al., 2018), empirical research on this topic remains limited. Building on insights from economics that digital and sustainable transformations can mutually reinforce each other, a phenomenon referred to as the “twin transition” (Christmann et al., 2024; Veit et al., 2024), future studies could investigate how technology can be designed to promote EGB. Technology-related theories provide promising theoretical frameworks for such investigations. For example, the task-technology-fit model (Goodhue & Thompson, 1995) proposes that compatibility between task requirements, individual abilities, and the functionality of a given technology determines effective utilization and associated performance outcomes. Applied to environmental sustainability, future research could explore how alignment between environmental sustainability tasks (e.g., reducing greenhouse gas emissions), employee abilities (e.g., environmental knowledge), and relevant technologies (e.g., a digital tracking tool of greenhouse gas emissions) might optimize EGB. Additionally, insights from human factors and ergonomics research could provide helpful insights. For example, studies on ecodriving assistance devices have shown that such tools can reduce CO₂ emissions. However, first-time use can also increase fatigue, underscoring the need for adequate support during the initial adoption of such technologies (e.g., Ruscio et al., 2018).

To further explore how job characteristics and technological aspects of the work environment are related to EGB, we recommend that future research advances beyond previous cross-sectional survey studies by employing methods suited for drawing stronger causal conclusions, such as (quasi-/field-)experimental studies with control-group designs. For example, perceived job significance regarding environmental sustainability could be enhanced through an intervention on “environmental impact” (similar to prosocial impact interventions in the context of work design, Grant, 2008) that highlights how employees' daily tasks contribute to environmental sustainability goals. The behavior of participants receiving this intervention could then be compared to those of a control group. Similarly, field experiments could help evaluating the effectiveness of digital feedback tools that visualize energy consumption. In addition, experience sampling methods (Fisher & To, 2012) and longitudinal studies could deepen the understanding of dynamic short- and longer term within-person relations between EGB and work characteristics. This way, it could also be explored whether proactive forms of EGB contribute “bottom-up” to changes in work characteristics related to environmental sustainability (e.g., increasing green task autonomy), thereby “greening” the workplace through pro-environmental job crafting (Norton et al., 2018; Stein et al., 2025). Random intercept cross-lagged panel models (RI-CLPM; Hamaker et al., 2015) might be helpful in studying such reciprocal relations as they not only account for temporal stability but also for stable trait-like individual differences by including a random intercept.

(7) Green human resource management

A substantial body of research demonstrates that GHRM practices are positively related to organizational environmental performance and EGB. However, these studies predominantly examine “a complete bundle of GHRM practices,” leaving our understanding of the relative impact of specific GHRM practices underdeveloped (Jackson, 2022, p. 207). Furthermore, the mechanisms underlying these positive associations remain largely unclear. We selected two specific GHRM practices for future research that are deeply rooted in psychological research: recruiting and selection, as well as training and development. It is important to note, however, that

other GHRM practices (e.g., rewards and benefits) also warrant further exploration. For a more detailed outlook on the future of GHRM research, Jackson (2022) provides a timely overview, including important considerations on the interplay of different GHRM practices and optimal sequencing for the introduction of GHRM practices.

An important future research question is how green recruiting and selection processes contribute to organizational environmental performance. Current findings provide limited insights into the mechanisms linking green recruiting and selection strategies to specific environmental outcomes. Building on established theories (e.g., signaling theory; Connelly et al., 2024; Spence, 1973) and methodological approaches (i.e., validation studies) commonly applied in psychological research on recruiting and selection, future research should produce actionable knowledge on how to design, implement, and evaluate green recruiting and selection strategies. For example, in times of a “war for green talent” (LinkedIn, 2023), organizations need to attract employees with critical green skills. To guide practice on how to achieve this effectively, experimental studies among graduates of environmental disciplines (e.g., environmental management, green energy) could investigate the effectiveness of different recruitment messages.

Additionally, organizations need guidance on how to select employees who are motivated and equipped to contribute to organizational environmental sustainability goals. This necessitates the development and validation of novel selection tools such as environmental knowledge tests or environmental case studies. Given the large sample sizes required for validation studies exploring the effectiveness of such tools, which are often limited by low selection rates, collaborative multilab studies could be a practical solution. Beyond individual-level research, comparative analyses across organizations could enhance understanding at the organizational level. For example, studies could match data on green recruiting and selection practices, obtained from chief human resource officers or similar sources, with objective measures of organizational environmental performance, such as metrics from sustainability reports. Finally, longitudinal studies could assess whether the implementation of green recruiting and selection practices fosters changes in organizational environmental culture and norms, as well as the underlying processes facilitating this transformation.

Future research should further explore which training and development practices are most effective for increasing green knowledge, skills, and abilities and, in turn, fostering EGB. These efforts could begin with comprehensive training needs analyses (Noe et al., 2014), defining target groups (e.g., sustainability managers, HR professionals), establishing green learning objectives (e.g., knowledge regarding environmental regulations, ability to conduct carbon footprint analysis), and outline key success indicators for green training and development (e.g., measurable improvements in organizational environmental performance). In a second step, integrating findings on environmental education (e.g., van de Wetering et al., 2022) and applying meta-frameworks of training effectiveness and transfer from the field of strategic human resource management to the context of environmental sustainability (e.g., Blume et al., 2010; Cheng & Hampson, 2008; Colquitt et al., 2000), future research could systematically explore how trainee characteristics (e.g., environmental attitudes, self-efficacy beliefs regarding environmental issues), training design (e.g., case studies, serious games), and situational factors (e.g., environmental supervisor and coworker support) interact to determine the effectiveness and transfer of environmental sustainability-related training and development initiatives. For example, combining on-the-job training with peer support could be particularly effective in helping production workers reduce material usage, whereas case studies might be better suited for training managerial staff on implementing an environmentally sustainable strategy. Comprehensive intervention studies are needed to rigorously test the effectiveness of various training approaches. These should include control groups, long-term follow-up assessments, and evaluations of how training outcomes translate into broader organizational environmental performance improvements.

(8) Organizational environmental sustainability policies and interventions

Enhancing organizational environmental performance necessitates the implementation of organizational environmental sustainability policies. These policies encompass a wide array of actions, ranging from transforming business and production processes (e.g., adopting circular economy practices, green product design) to more employee-focused policies, such as transitioning fleet vehicles to electric, banning short-distance flights for business travel, introducing plant-based meal options in cafeterias, and implementing waste separation systems. For such policies to succeed, acceptance and support for green organizational change among employees are essential. However, little is known about the specific conditions under which employees oppose versus support such policies. To address this gap, future research could draw upon insights from political psychology and behavioral economics. For example, a large-scale survey study by Kukowski *et al.* (2023) found that perceptions of the necessity for systemic change and trust in governments were key predictors of acceptance for climate policies, such as taxes on red meat and subsidies for long-distance train travel. Furthermore, in a meta-analysis, Bergquist *et al.* (2022) found that perceived fairness and effectiveness of climate change policies were the most important determinants of support. Building on these findings, future research could conduct vignette studies with employees, systematically varying factors such as perceived necessity for organizational environmental policies, trustworthiness of organizational leaders, perceived policy effectiveness, and fairness, to examine how these elements influence employee acceptance of organizational environmental policies. Regarding fairness, equity theory (Adams & Freedman, 1976) or theorizing on organizational justice (Colquitt *et al.*, 2001; 2013) might provide helpful frameworks.

Besides the implementation of policies, the large-scale adoption of interventions could cause widespread increases in employee and leader green behavior. Current intervention research is mainly focused on conserving EGBs, often relying on university samples, and has yielded partly inconsistent findings (Unsworth, 2015; 2013). Thus, future research should conduct robust intervention studies (i.e., control group designs, employee samples) to identify effective interventions to increase different kinds of EGB, especially high-impact EGB. Building on theorizing on goal setting, goal hierarchy, and self-concordance, Unsworth *et al.* (2013) provide an insightful framework explaining when, why, and how organizational interventions should effectively increase EGB. Specifically, they suggest that the degree to which the intervention goal (e.g., commuting to work by bike) is perceived as efficacious and attractive, aligns with important goals of the employee (e.g., improving physical fitness), conflicts with other goals (e.g., minimizing commute time), and is perceived as complete determines short- and long-term changes in EGB. Although there is already some support for the model (e.g., intervention study by Unsworth & McNeill, 2017), more research is needed here.

Additionally, future research could draw on findings from environmental psychology regarding the effectiveness and mechanisms of various interventions to increase pro-environmental behavior. Building on multiple theoretical frameworks such as value-belief-norm theory (Stern *et al.*, 1999) and theory of planned behavior (Ajzen, 1985), van Valkengoed *et al.* (2022) proposed a classification system of interventions in six categories (i.e., information provision, commitment, feedback, incentives, goal setting, and choice architecture), linking them to the determinants of specific target behaviors. They emphasize that interventions should be tailored to address the primary determinants of the pro-environmental behavior in question. For instance, following this framework, if perceived self-efficacy is identified as the key determinant of a given EGB, interventions combining goal setting with information provision may be most effective. Future research could build on this framework by systematically investigating the effectiveness of various interventions designed to target specific determinants of EGB. To this end, previous theorizing (e.g., Zacher *et al.*, 2023) and meta-analyses on EGB (e.g., Katz *et al.*, 2022) could offer valuable insights into identifying the most critical determinants of EGB.

(9) Organizational communication related to environmental sustainability

As highlighted in our literature review, research on how organizational communication related to environmental sustainability impacts employee and leader green behavior is very limited. Given that organizational communication can reach a broad audience of employees, future research should systematically explore how such communication affects the extent, content, and continuity of employees' engagement with environmental issues.

Behavioral integrity theory (Simons et al., 2022) could be a helpful theoretical lens in this context. Behavioral integrity refers to employees' perceptions of organizations' and managers' consistency between words and actions. When employees perceive a misalignment between managerial statements and actions, it can erode trust and, in turn, reduce willingness to support organizational change, diminish organizational citizenship behaviors, and lower performance. Thus, an actual or perceived disconnect between organizational environmental strategies and the communication about them could undermine employees' perceptions of organizational integrity, thereby potentially limiting their willingness to contribute to environmental sustainability and engage in EGB. Individual-level factors, such as environmental attitudes and values, may influence these dynamics.

Based on media richness theory (Daft & Lengel, 1984; Ishii et al., 2019), future research could further explore how the medium of communication affects EGB. The theory suggests that communication channels differ in their richness, particularly in the nonverbal cues they provide. For example, face-to-face communications such as town halls or CEO speeches on environmental issues might have a greater impact on employees than addressed documents (e.g., an email about the organizational environmental footprint) or unaddressed documents (e.g., environmental sustainability claims on company websites). Understanding these differences could inform the design of more effective communication strategies.

Finally, applying insights from framing theory developed in communication science (Entman, 1993), future research could explore how organizational communication about environmental issues should be contextualized to increase EGB. Framing theory posits that the context or perspective in which a message is presented (i.e., the "frame") can shape how the audience interprets and responds to the communication. Prior research has applied framing theory to environmental communication, suggesting that gain framing (i.e., highlighting the benefits of climate change mitigation) is more effective than loss framing (i.e., emphasizing the consequences of inaction) in fostering positive attitudes toward climate action (Spence & Pidgeon, 2010). Future studies should explore how different framing approaches could be leveraged to encourage EGB.

In terms of methodological approaches, experimental studies could be employed to explore causal relations between different forms of organizational communication and EGB. Participants could be presented with videos or other communication materials (e.g., flyer, emails) that systematically differ in framing and integrity gap of the messages. Intentions to engage in EGB within the presented organization could be measured using surveys. To capture EGB more objectively, behavioral paradigms could be used, such as allowing participants to donate part of their study compensation to support the organization's environmental initiatives. To test these hypotheses in field settings, content analysis of organizational communication materials (e.g., marketing campaigns, CEO speeches, company websites) could be combined with surveys and observational data of EGB.

(10) Magnolevel factors and EGB

Previous research on environmental sustainability at work largely overlooked the role of magnolevel factors, including political, economic, cultural, and environmental contexts. Such magnolevel factors could be important boundary conditions, shaping how other factors of our conceptual framework interact. In line with theorizing on the interconnections between organizational actions and economic and political contexts (e.g., DiMaggio & Powell, 1983; Meyer

& Rowan, 1977), political and economic preconditions such as government regulations, market structures, and industry developments may set the stage for opportunities and barriers for environmental sustainability at work (Cormier, 2018; Egri & Herman, 2000; Etzion, 2007; Strauss *et al.*, 2017). Incorporating knowledge from political sciences and economics (e.g., Hu *et al.*, 2021), future research should systematically explore opportunities and barriers to environmental sustainability at work specific to different political and economic systems. This could be achieved by comparative studies, combining secondary data on economic and political indicators (e.g., provided by the World Bank or the United Nations) with assessments of EGB and organizational environmental performance.

Furthermore, future research should compare antecedents and consequences of employee and leader green behavior across cultural contexts. Established cultural theories such as Hofstede's cultural dimensions (Hofstede, 1984) and Schwartz' values theory (Schwartz, 1992) suggest that employees' (work-related) values vary depending on the cultural context. For example, variations in cultural dimensions like individualism and long-term orientation and in self-transcendence values (i.e., caring for the welfare of others and nature) could determine whether employees prioritize collective environmental goals, consider environmental sustainability as a timely issue, and care about environmental integrity. Such cultural differences may moderate how employees perceive and react to green team and leader behavior, organizational environmental sustainability policies and interventions, and GHRM practices. To systematically explore such cultural differences, cross-cultural survey studies are needed, necessitating international collaboration.

Finally, future research should explore dynamic interactions between environmental events and EGB. Event system theory (Morgeson *et al.*, 2015) suggests that broader environmental events (i.e., events happening in the broader societal context an organization is embedded in) trickle down to the organizational, team, and individual levels, influencing individual behavior. These effects are particularly strong for novel, disruptive, and critical events. In line with this theorizing, events related to the natural environment such as environmental disasters (e.g., oil spills, mass extinction) and extreme weather events (e.g., floods, hurricanes, heat waves), could raise awareness for environmental issues and motivate employees and leaders to contribute to environmental sustainability. For example, theorizing and empirical research from environmental psychology suggest that personal experience of extreme weather events increases the perceived risk of environmental crises and, in turn, pro-environmental behavior (Bradley *et al.*, 2020; van der Linden, 2015). By analyzing longitudinal data that enable researchers to examine the effects of infrequent yet significant events at the magnolevel, such as extreme weather events (Jenny & Betsch, 2022), future research could explore the dynamic relations between environmental events, EGB, and organizational environmental sustainability efforts.

Recommendations for practice transfer and I-O practitioners

Known as the science–practice gap, relevant scientific findings often do not find their way into large-scale application in practice (Zhou *et al.*, 2024). This can have multiple reasons, such as communication challenges, resource constraints, or limited accessibility of research. However, I-O psychology research on environmental sustainability at work can only unfold its potential when findings are transferred into organizational practice. There are several steps researchers can take to support successful science–practice transfer. First, researchers can develop tools that can be directly applied in organizational practice, such as performance evaluation systems for green behavior, green personal recruitment and selection tools, or “ready-to-use” interventions to increase EGB. For example, Endrejat *et al.* (2017) developed and evaluated a 2-hour participative workshop intervention to increase energy saving behavior in the workplace.

Second, researchers could actively reach out to practitioners by publishing in practice-oriented journals, organizing scientist–practitioner conferences, and distributing research findings in (online) professional networks (e.g., Lubin & Esty, 2010). Third, scholars could continuously

inform the broader public about latest research findings on environmental sustainability at work via science communication. Disseminating research findings through podcasts, newspaper articles, and interviews could inspire individuals to adopt green behaviors in their work routines or to start environmental sustainability initiatives in their work environment. Fourth, researchers should keep policymakers up to date about the current state of research. A useful approach, originally suggested for clinical settings, could be “living evidence syntheses” (Elliott et al., 2021). These are ready-to-go evidence summaries that rigorously summarize the current state of research on a subject in a way that is easily understandable for policymakers and provides direct recommendations for action.

Based on previous research on environmental sustainability at work, we developed several recommendations to guide I-O practitioners in driving environmental sustainability. First, human resource specialists and coaches could design and implement training and coaching programs for employees and leaders. These programs could strengthen key individual-level antecedents of green behavior such as environmental knowledge, skills, and self-efficacy while also fostering environmental attitudes and values. Leadership trainings could equip managers to foster EGB by providing tangible support, resources, and time to their teams, ensuring that contributing to environmental sustainability is both achievable and prioritized.

Second, team and change consultants could incorporate environmental sustainability into team-building activities, thereby establishing EGB as a collective norm and encouraging collaborative learning and support. For example, practical activities like tree planting, sustainable cooking workshops, or team-wide discussions on reducing environmental footprints could build commitment and foster a sense of shared responsibility.

Third, I-O practitioners could play a pivotal role in redesigning work processes and workplaces that create opportunities and reduce barriers for EGB. For instance, structuring work processes to allow employees the autonomy to make eco-friendly choices and providing essential infrastructure (e.g., recycling stations, bike and car sharing programs) could facilitate EGB.

Fourth, personnel selection experts can implement green recruiting and selection strategies to attract and hire employees who are motivated and equipped to contribute to environmental sustainability goals. Fifth, I-O psychologists can tailor interventions that have been successful in previous research such as self-concordance interventions (Unsworth & McNeill, 2017) or green goal cards (Davis et al., 2020) to specific organizational needs and accompany and evaluate their implementation. Finally, change management experts can support organizations in creating a green organizational climate and establishing a culture for environmental sustainability. This, for example, could include designing communication campaigns that clearly articulate the company’s environmental vision.

Concluding remarks

In a world of many pressing issues competing for scientific attention, researchers face the challenge of prioritizing topics that matter. Calls in I-O psychology (Mullins & Olson-Buchanan, 2023) and the broader management literature (George et al., 2016) urge researchers to act on their potential to tackle societal grand challenges and “make a difference in areas of global concern” (Mullins & Olson-Buchanan, 2023, p. 13). The escalating environmental crises clearly stand out as one of the greatest challenges humanity has ever faced. Given the significant potential of I-O psychology research to increase environmental sustainability at work, it is imperative for the discipline to unleash its full potential, adopt an “impact-first” approach, and seize a leading role in tackling environmental crises. We hope our focal article sparks discussion within the community and inspires impactful future research within our discipline.

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