



# The International Journal of Human Resource Management

ISSN: 0958-5192 (Print) 1466-4399 (Online) Journal homepage: <https://www.tandfonline.com/loi/rjih20>

## Contemporary developments in Green (environmental) HRM scholarship

Douglas W.S. Renwick, Charbel J.C. Jabbour, Michael Muller-Camen, Tom Redman & Adrian Wilkinson

To cite this article: Douglas W.S. Renwick, Charbel J.C. Jabbour, Michael Muller-Camen, Tom Redman & Adrian Wilkinson (2016) Contemporary developments in Green (environmental) HRM scholarship, *The International Journal of Human Resource Management*, 27:2, 114-128, DOI: [10.1080/09585192.2015.1105844](https://doi.org/10.1080/09585192.2015.1105844)

To link to this article: <https://doi.org/10.1080/09585192.2015.1105844>



Published online: 09 Nov 2015.



Submit your article to this journal [↗](#)



Article views: 1413



View Crossmark data [↗](#)



Citing articles: 31 View citing articles [↗](#)

## INTRODUCTION

### Contemporary developments in Green (environmental) HRM scholarship

Douglas W.S. Renwick<sup>a\*</sup>, Charbel J.C. Jabbour<sup>b</sup>, Michael Muller-Camen<sup>c</sup>,  
Tom Redman<sup>d</sup> and Adrian Wilkinson<sup>e</sup>

<sup>a</sup>*Sheffield University Management School, University of Sheffield, Sheffield, UK;* <sup>b</sup>*Department of Production Engineering, Sao Paulo State University (UNESP), Sao Paulo, Brazil;* <sup>c</sup>*Vienna University of Economics and Business, Vienna, Austria;* <sup>d</sup>*Durham University Business School, University of Durham, Durham, UK;* <sup>e</sup>*Centre for Work, Organization and Wellbeing, Griffith University, Brisbane, Australia*

This article reviews the contemporary literature on Green Human Resource Management (GHRM) to contextually frame the seven articles appearing in this Special Issue. Review findings reveal the embedded nature of GHRM workplace-level practices and additional research needing to focus on HR systems, individual behaviors and emerging theoretical lenses. As a set, the articles herein span green recruitment, competencies, employee participation, financial/environmental performance links, and contextual issues utilizing national culture, paradox, and stakeholder theories. By recognizing such multi-level dynamics, HRM scholars and practitioners can enhance GHRM initiatives that stimulate progress toward workplace environmental sustainability.

**Keywords:** environment; green; human resources; organizations; sustainability

#### Introduction

As addressing climate change is frequently discussed among the general public and governments, the impact of green issues on work organizations appears more transparent and well known (Sonenshein, DeCelles, & Dutton, 2014, pp. 11, 12), and ecologically damaging incidents such as air/water pollution and nuclear power accidents have revitalized concerns on the negative impact industrialization is having on humans as evidenced in workplace-related fatalities globally (Jackson, 2012a, pp. 4–9). Additionally, workplace and public health are further compromised through workplace emissions, as seen in the United Kingdom (UK) where the service and industry sectors contribute up to twice the carbon into the atmosphere than the domestic (residential) sector does (Parker, 2011, p. 37). In response, work organizations are developing and accepting many methods for reporting and certifying deleterious impacts from industrial activity including Environmental Sustainability (ES), which reflect multiple stakeholder calls for action to tackle workplace emissions, and to add green jobs and duties to existing HR processes (Jackson, 2012a, pp. 13–16, 18).

Within this context, the dissemination of green workplace HRM research is progressing through a new Academy of Management division entitled Organizations and the Natural Environment and a free website resource at [www.greenhrm.org](http://www.greenhrm.org) for learners

---

\*Corresponding author. Email: [d.renwick@sheffield.ac.uk](mailto:d.renwick@sheffield.ac.uk)

curious to know more on Green Human Resource Management (GHRM) (Jackson, Renwick, Jabbour, & Muller-Camen, 2011, p. 100; Jackson & Seo, 2010, p. 278). Early academic contributions linking Environmental Management (EM) and HRM include Wehrmeyer (1996), Huffman, Watrous-Rodriguez, Henning, and Berry (2009) and Renwick, Redman, and Maguire (2013). Some journals have published special issues on ES, e.g. the *Zeitschrift fur Personalforschung* in 2011, *Human Resource Management* in 2012, and the *Journal of Organizational Behavior* in 2013, which arguably relate to prior work examining sustainability and HRM more widely (Wilkinson, Hill, & Gollan, 2001). Indeed, the generic topic of climate change and organizations has also appeared in some *Academy of Management Journal* publications over the last 15 years (see Howard-Grenville, Buckle, Hoskins, & George, 2014, p. 522). But as scholars note, it is this journal, *The International Journal of Human Resource Management* that has consistently published many specifically GHRM-related research articles (see Harvey, Williams, & Probert, 2013, p. 153 for examples).

As a result, while the GHRM-related field is therefore growing (see Renwick et al., 2013), it seems relatively small, young, and needing movement to generate an environmentally sustainable outlook (Harris & Tregidga, 2012, p. 238). Here, interdisciplinary research is needed in GHRM to alter and advance scholarship and practice, and to comprehend how various management systems impact on staff environmental attitudes and behaviors internationally (Jackson, 2012b, pp. 288, 416, 422, 424).

Drawing on the points above, the purposes of this article are to review contemporary developments in the emerging research literature to frame the new works appearing in this collection on GHRM and to extend such understanding through detailing a new research agenda. As such, this article is structured as follows. We begin by detailing our research methods and literature review, and then outline a future research agenda. Our next sections explore implications for practitioners arising and study limitations. Our final section details how the articles enclosed extend GHRM scholarship. We now describe the methods we used to select the relevant papers detailed in our review.

## Methodology

We sought to update earlier reviews in the GHRM field (detailed above) by examining themes emerging in the HRM, EM, and ES literatures. As such, this review primarily seeks to fill GHRM literature gaps since a prior review (e.g. Renwick et al., 2013), and also includes lesser-known high-quality works to present a wider picture of green HR knowledge overall. Using accepted literature definitions (see Ones & Dilchert, 2013, p. 115), we searched for published papers in English from the Business and Management and Psychology fields in the Social Sciences on Green HRM themes. Here, we used the keywords of environment, environmental, pro-environmental, ecology, ecological, green, human resources, human resource management, sustainability, and ES. Our use of relevant web-based search facilities such as Scopus, Web of Science, EBSCO, ProQuest, and PsycINFO identified 693 potentially useful articles, books, chapters, and reports. These works were benchmarked against established research criteria of originality, significance, and rigor (Higher Education Funding Council for England [HEFCE], 2012, p. 7) to ensure inclusion of the highest quality works herein, which we completed by reading such studies further. Our investigations resulted in a final sample of 50 usable, relevant articles which we now detail using the established theoretical lenses to guide us: of Ability, Motivation, Opportunity to evaluate GHRM workplace practices (Renwick et al., 2013), and Strategic HRM to assess moves toward ES (Jackson & Seo, 2010).

## Literature review: cutting-edge scholarship on Greening HRM

### *Developing EM abilities*

#### *Recruitment and selection*

Prior research reveals some US graduates showing interest in jobs having a supportive influence on the environment, and many choosing a green-friendly employer (Anderton & Jack, 2011, p. 78). Here, results from 332 job seekers find work moderating the impact of recruitment signals about organizational Social and Environmentally Responsible (SER) values on recruitment processes and outcomes, and such job seekers being most attracted to, likely to seek, and accept, jobs from companies with strong SER values (Gully, Phillips, Castellano, Han, & Kim, 2013, pp. 935, 937, 941). Some companies are recruiting more hires for posts which include green attitudes and tasks, while many French organizations signing up to voluntary environmental standards report a smoother ride in recruiting employees overall (Ones & Dilchert, 2013, pp. 128, 129).

#### *Training and development*

Organizational change efforts to tackle green issues frequently use education and training programs to disseminate environmental practices (Stalcup, Deale, & Todd, 2014), and publicize organizational values to inform employees about needed change(s) during the initial pursuit of ES, e.g. adjusted performance evaluation criteria and enhanced staff competencies (Jackson, 2012b, pp. 418, 427). In the UK, the Environment Agency has included internal environment management in the electronic learning package of staff induction processes, which are prioritized on management training courses to demonstrate environmental importance and the managerial role in it (Feasby & Wells, 2011, pp. 25, 26). However, other UK case data at EcoConcierge finds a lack of staff 'eco-mindedness,' meaning employee education and training needs tailoring to engage staff on EM issues (Anderton & Jack, 2011, p. 78).

Within Europe, Vidal-Salazar, Cordon-Pozo, and Ferron-Vilchez's (2012) study of 252 Spanish tourism companies reveals systematic voluntary environmental approaches and innovation as origins of environmental training and company learning, which both encourage staff to enact proactive environmental strategies (Taylor, Osland, & Egri, 2012, p. 791), while in China, top management team data from manufacturing firms finds senior staff displaying a stronger firm environmental attitude being more likely to show enhanced environmental protection performance (Ji, Huang, Liu, Zhu, & Cai, 2012, pp. 3002–3004).

Employee behaviors can also be shaped through intervention-based approaches that target principles of educational and motivational strategies that relate to learning, training, development, and organizational change (Ones & Dilchert, 2013, p. 127). Indeed, some authors view environmental knowledge as a key factor regarding environmental concern (Parker, 2011, p. 50), while others see training and incentives as more effective when joined by on-boarding and socialization best practices if designed as foundations for later HRM initiatives to promote environmentally friendly staff actions (Jackson, 2012b, p. 427).

#### *Management development and leadership*

Robertson and Barling's (2013) study of 139 Canadian and US leader-subordinate dyads identifies transformational leadership behaviors positively encouraging the

pro-environmental behaviors of staff followers, and positive emotion mediating relationships between green transformational leadership and staff pro-environment behaviors (Andersson, Jackson, & Russell, 2013, pp. 152, 153). Empirical observations among many international organizations find executives actively participating in pro-environmental initiatives, and commitment to ES now being more formalized in Chief Sustainability Officer positions (Ones & Dilchert, 2013, p. 118). Here, UK case findings at Eco Concierge see staff keen to act in EM utilized as internal green champions (Anderton & Jack, 2011, p. 78), and as such EM leaders score higher than non-champions on positive dimensions and setting an example to staff, they may help drive positive change regarding organizational efforts to become greener (Parker, 2011, pp. 47, 53, 54, 56).

### ***Motivating green staff***

#### *Performance management and appraisal*

Some authors see embedding environmental concerns into performance management and appraisal (PMA) systems as a prerequisite of going beyond Corporate Social Responsibility rhetoric (Anderton & Jack, 2011, p. 78; Maley, 2014), while others state that altering PMA practices and leadership competencies are required to maintain progress on ES goals (Jackson, 2012b, p. 418). Case examples include Eco Concierge (UK), who identify and use individuals keen to act in EM as internal green champions (Anderton & Jack, 2011, p. 78), and the individual performance plan objectives of construction project managers at the UK Environment Agency (Feasby & Wells, 2011, p. 26). In the UK civil aviation sector, research also reveals a (direct) HRM contribution to green performance as PMA systems and training programs help achieve optimum flight levels, while an (hard) HRM effect sees management implementing policies coercing employees to adopt green behaviors too (Harvey et al., 2013, pp. 154–156).

#### *Pay, rewards, and organizational culture*

Merriman and Sen's (2012) US study of middle-level managers finds that indirect compensation benefits associated with sustainability projects are not enough to attract senior management attention to such initiatives, and that changing organizational financial culture appears critical to facilitating staff routinization of designing energy resource efficient products (Taylor et al., 2012, p. 791). Moreover, in English Universities, HEFCE link capital funding to carbon management and withhold 40% of funding if such Universities do not produce credible and signed-off environmental plans (Kane, 2011, p. 14).

### ***Facilitating EM opportunities***

#### *Employment relations*

Company statements on EM in New Zealand seem to place lower importance on workplace management and employee relations (Harris & Tregidga, 2012, p. 241), and some authors argue that workforce involvement is needed to embed EM into organizational identity (Ones & Dilchert, 2013, pp. 115, 116). Further, one UK survey of 214 organizations finding management involvement as the most prevalent HR practice encouraging employees to become more pro-environmental (Zibarras & Coan, 2015, p. 2121).

Here, Martinez-Del-Rio, Cespedes-Lorente, and Carmona-Moreno's (2012) study of 233 Spanish firms finds High-Involvement Work Practices (HIWPs) encouraging proactive implementation of environmental strategies which in turn mediate HIWPs and firm economic performance in green strategies (Taylor et al., 2012, p. 791). Further, Delmas and Pekovic's (2013) study of 5220 French firms finds many organizations who use Environmental Management Standards (EMS) reporting labor productivity as higher when compared to organizations not adopting EMS overall (Andersson et al., 2013, p. 153). However, UK research in civil aviation also reveals that reducing staff numbers and employee voice options in the business cycle makes persuading workers to enact greener practices 'more difficult' (Harvey et al., 2013, p. 157).

### *Employee engagement*

While empirical survey data from 675 employees in two Australian-based organizations finds participation in environmental initiatives associated with higher levels of employee engagement with the organization and its green performance and reduced staff intentions to quit (Benn, Teo, & Martin, 2015), findings from New Zealand see one employee survey revealing only 'a vocal minority' of staff interested in ES of 1–2% overall (Harris & Tregidga, 2012, p. 248). Additionally, a conceptual paper by Unsworth, Dmitrieva, and Adriasola (2013) finds employees viewing green behaviors as expressing many values, meaning staff with egoistic values could connect with pro-environmental behavior as equally as those with altruistic/bio-spheric values (Andersson et al., 2013, p. 153), while case data from Caribou Coffee reveals employee engagement and organizational tenure as associated with employee green behaviors (Ones & Dilchert, 2013, p. 123). Further, Muster and Schrader's (2011) work outlines how work–life balance may facilitate both eco-friendly behavior from employees at work and as consumers at home, and to possible linked benefits of increased staff motivation, commitment, and job retention arising (Jackson et al., 2011, p. 102).

## ***Studies connecting Green HRM and Strategic HRM***

### *Greening HRM systems and roles*

The conceptual article by Dubois and Dubois (2012) using a systems perspective details a Strategic HRM framework underpinning sustainable adjustments to contextual challenges for businesses (Taylor et al., 2012, p. 790), and one survey of 89 HR and sustainability managers in 41 Italian-based companies see sustainability managers viewing sustainability as an organization's 'moral obligation' to society to prevent staff injury or harm, and HR managers regarding HRM systems and competency development as key influences to extend organizational sustainability overall (Guerci & Pedrini, 2014, pp. 1788, 1790, 1791, 1804). However, UK survey research reports the limited extent to which management teams engage HR staff specialists to compile, enact, and assess HRM initiatives focused on increasing pro-environmental behavior (Zibarras & Ballinger, 2011, p. 89). Here, just 45% of UK HRM departments have responsibility for environmental initiatives, and only 29% of UK employers agree that HR is pro-actively engaged in ES (Harris & Tregidga, 2012, p. 240). Indeed, findings from 14 HR managers in New Zealand indicate their private positions of green concern, but a 'passive approach' to ES because it is not 'a priority' for HR, as HR managers do not have resources to undertake ES initiatives, and because HR view it as 'another department/individual's' responsibility – which all make HR managers reluctant to actively

champion sustainability initiatives (Harris & Tregidga, 2012, pp. 236, 242, 246, 247). Additionally, such HR managers have not changed job roles and practices toward ES, nor greatly or pro-actively aligned the HR function with it either, meaning that HR lack potential leadership roles in ES too (Harris & Tregidga, 2012, pp. 249–251).

#### *Individual-level green behaviors*

ES specialists report that when pro-environmental behaviors are enacted that relate to individual jobs, they turn into employee green behaviors which are seen as a key contributor to firm environmental performance (Ones & Dilchert, 2013, p. 119). Across various jobs in US and European industries, between 13 and 29% of such staff green behaviors appear required as part of role duties or as company expectations of voluntary staff inputs (Ones & Dilchert, 2013, pp. 122, 124). Here, higher neuroticism is linked to conserving behaviors and preservation, while agreeableness and conscientiousness connect to self-reported electricity conservation, and older staff seem more engaged in conserving behaviors (Ones & Dilchert, 2013, pp. 129–132). Further, individual EM knowledge rather than environmental problem awareness is more strongly related to pro-environmental behavior, and advancing the ease of EM behaviors appears more effective than informational and instructional green interventions (Ones & Dilchert, 2013, pp. 131, 132, 135, 136, 138). Additionally, Bissing-Olson, Iyer, Fielding, and Zacher's (2013) study on 'affective states' shaping Australian workplace pro-environmental behaviors finds employees being more likely to complete work duties in an environmentally friendly manner if they feel 'calm, relaxed, and content,' that staff with higher pro-environmental attitudes display more pro-green behaviors, and that pro-environmental attitudes act as moderating influences on green behavior (Andersson et al., 2013, p. 152).

Related Green Organizational Citizenship Behaviors include employee green behaviors containing individual initiative, altruism, and rule compliance aimed at environmentally relevant targets outside of their main job duties (Ones & Dilchert, 2013, p. 124). Here, survey findings from 325 office workers in three South Korean-based organizations reveal conscientiousness and moral reflectiveness as associated with group leader and individual group member Voluntary Workplace Green Behavior (VWGB). Here, direct relationships are seen between leader and subordinate VWGB, and indirect relationships to be mediated by green advocacy among work groups (Kim, Kim, Han, Jackson, & Ployhart, 2014, pp. 1–9). Most recently, scholars differentiate between personal and contextual influences on Employee Green Behavior (EGB), and provide evidence to support distinctions between needed and voluntary EGBs, but as yet supply little empirical evidence regarding EGB outcomes so far (Norton, Parker, Zacher, & Ashkanasy, 2015, pp. 113–117).

Although Walls and Hoffman's (2013) study of 294 US-listed firms finds organizational directors who have more environmental experience being most likely to practice *positive* environmental deviance (Andersson et al., 2013, p. 153), environmentally *irresponsible* behaviors are also emerging too. Such irresponsible behaviors are viewed as aspects of the counterproductive work behavior domain, and include restricting green-friendly behaviors (e.g. not recycling) and pro-actively engaging in detrimental behaviors (e.g. polluting) (Ones & Dilchert, 2013, p. 124). Here, relevant European data reveals approximately 18% of behavioral examples and two US-based studies of 25% of examples as being environmentally irresponsible ones (Ones & Dilchert, 2013, p. 124).



### *Organizational alignment with environmental activities*

Wagner's (2011) longitudinal study finds it probable that larger German manufacturing firms are actively engaged in EM, as managers state that green activities have positive outcomes and consequences for staff satisfaction and recruitment/retention (Jackson et al., 2011, pp. 102, 103), while Millard's (2011) work on environmental improvement activities in UK Small to Medium-Sized Enterprises (SMEs) finds a lack of recognition regarding the importance of organizational learning in achieving green improvements (Jackson et al., 2011, p. 103).

Effective organizational EM practices in the UK seem facilitated by supportive senior managers and staff open to pro-environmental practices, yet reward programs and promotion decisions are least used and most UK organizations also did not assess methods for staff engagement in EM (Zibarras & Ballinger, 2011, pp. 86–88). Here, UK-based barriers to HR greening include: supervisors not always being 'on board,' HR systems not always aligned with EM change, employees not being skilled enough in EM, and HR structures needing to reflect organizational vision (Kane, 2011, p. 16), while case findings at the UK Environment Agency reveal staff experts in EM as hard to change because they produce 'well-rounded, opposing views' (Feasby & Wells, 2011, pp. 18–24).

Moreover, one US study reveals environmental issue support as not tied to specific contexts (e.g. organizations, work, and school), and that such social issue support frequently needs 'perseverance' (Sonenshein et al., 2014, pp. 20, 23, 25, 30, 32), while some scholars argue that EM/ES and climate change are hugely important to management researchers as it encroaches on specific staff work patterns and practices, require rethinking manager and employee interaction, motivation, and engagement, and how staff identify with employers too (Howard-Grenville et al., 2014, pp. 615, 618).

### *Emerging theories in GHRM*

Some authors see occupational psychology theories helping to craft and enact environmental initiatives (e.g. Bartlett, 2011, pp. 2, 3). Here, research in one UK workplace showed 48% of staff behavioral intentions regarding recycling explained by planned behavior variables, and attribution theory being utilized to argue that staff undertake sense-making to 'identify' the important causes of EM events (Parker, 2011, pp. 43–48). Psychology theories may help businesses understand how to form and enact green schemes and change staff behavior to address sustainability issues (Zibarras & Ballinger, 2011, p. 84), as some commentators see 'going green' as related to individual staff behaviors (e.g. Bartlett, 2011, p. 1), while existing work regarding VWGBs in identifying general personality and moral traits could stimulate underlying employee motives and contribute a new theoretical direction forward (see Kim, Kim, Han, Jackson, & Ployhart, 2014, p. 18). Additionally, other non-psychology theories are emerging, and the most recent critical theorizing using Marxist social and employment relation's theory may help explain Trade Union behavior within the climate domain too (see Hampton, 2015).

### *Toward a new understanding*

In summary, the contemporary GHRM literature focuses on workplace-, firm-, and industry-level practices (Ones & Dilchert, 2013, p. 115), and the most recent studies emerging examine green HR systems and individual staff behaviors, along with



multi-level dynamics and new theoretical directions. We now outline a detailed research agenda in GHRM to provide an updated, specific exposition of possible research avenues arising to help guide scholars further in this field.

### **Future research**

The featured papers in this collection show that HR scholars are undertaking serious discussion and practical interventions that may extend global debates on the HRM role in reducing ecological degradation. For example, they reveal how the extant GHRM literature may benefit from including national culture, paradox and stakeholder theories, insights from green recruitment, competency and employee participation practices, and a greater focus on linking GHRM to financial and environmental performance outcomes. Nonetheless, these works only address part of the research agenda we outlined in our paper call. As such, our next section describes additional ideas for future research, beginning with research connections between HRM functions and EM.

### ***Research linking EM and specific HRM functions***

On recruitment, further research is needed to comprehend how job candidates establish understandings of company environmental credentials, if they use green job descriptions and environmentally friendly venues, and at which stages in their evaluations of potential employers green management information is most important (Jackson et al., 2011, p. 104). We could benefit from knowing how SER job board messages may affect individual job pursuit intentions and perceived fit, how the underlying attitudes and values of job candidates facilitate or stall the impact of SER recruitment cues, and how environmental recruitment impacts on job seeker preferences in less known or smaller organizations (Gully et al., 2013, pp. 939, 943, 944, 961). Here, scholars might undertake research using existing measures of company SER, firm attraction and job pursuit intention, control variables of age, work experience and educational level, and social adjustment measures too (see Gully et al., 2013, pp. 948–950, 965).

For PMA, research is required on how to use performance appraisal metrics to best understand the means by which employees can be held accountable for EM, and to comprehend how to use environmental metrics to set performance targets, generate recognition, allocate compensation, and shape career advancement (Jackson et al., 2011, pp. 104, 105). Here, studies could also evaluate the extent to which PMA processes typically ignore longer term environmental goals (Maley, 2014).

In researching connections between training and development measures and ES, scholars might investigate links between the independent variables of firm environmental attitude and employee training, and control variables such as firm size, location, ownership, financial performance, and ownership level (as per Ji et al., 2012, pp. 3001, 3002). We could benefit from comprehensive evaluation studies on how green training may shape change staff behaviors and environmental outcomes, and work on barriers to effective green training including evaluating preparedness in green learning overall (Jackson et al., 2011, p. 105; Jackson & Seo, 2010, p. 285).

Green HRM research may usefully examine the complexities of employment relations where staff are required to meet different and ‘often contradictory’ goals including ES, generate data on perceived harm to staff from ‘polluting’ workplace contexts (e.g. power generation and agriculture), and evaluate if achieving green targets places enhanced staff-led pressure on HR managers (Harvey et al., 2013, pp. 156, 163). Here,

scholars might wish to explore whether employee motivation, commitment, identification, or pro-social behaviors are manifested and addressed regarding climate change issues in different organizations, how climate change might alter work conditions in developing countries, and if organizations plan to (re) structure staff relationships and compensation benefits accordingly (Howard-Grenville et al., 2014, pp. 620, 621).

Researchers could examine the views of all staff groups toward ES (Zibarras & Coan, 2015, p. 2137), test existing findings of staff commitment and engagement regarding climate change social issue support, and examine the challenges informants may experience which could drain or tax cognitive resources towards ES support (Sonenshein et al., 2014, pp. 11, 19, 30, 31). Future research might also investigate HRM and EM performance links (whether direct via training and performance management/appraisal or indirect through employee voice), and workplace, industry, and country impacts concerning 'industrial sabotage' (e.g. fuel dumping in civil aviation) (Harvey et al., 2013, p. 163), and particular factors shaping favorable Green HRM practices too (Zibarras & Coan, 2015, p. 2137). Here, generic research is also required to scope the effective means of generating and implementing compensation practices that help realize environmental goals (Jackson et al., 2011, p. 107), and scholars could utilize Merriman and Sen's framework on specific managerial pay incentives to do so (see Taylor et al., 2012, p. 792). We now detail some research connections between Strategic HRM and ES.

### ***Research connecting ES and Strategic HRM***

New empirical work investigating links between strategic orientations and how organizations design HRM systems toward ES seems needed, particularly in polluter industries prone to high-level physical risk to individual staff (e.g. mining or building construction), as HRM sustainability outcomes may emphasize enhanced staff safety and minimizing worker injuries (Taylor et al., 2012, p. 794), and future research might direct attention to reducing empirical gaps in staff views on the contributions HRM systems make to sustainability-driven change (Guerci & Pedrini, 2014, pp. 1805–1807).

Scholars could investigate HR manager viewpoints on their own HR role in ES (Zibarras & Coan, 2015, p. 2137), what ES may mean for HR functions, if HR managers advancing ES enhances staff morale and retention, and if HR helps establish and enact organizational green strategies (Harris & Tregidga, 2012, pp. 237, 249). Here, research gaps exist on opinion differences between HR and sustainability managers on ES in different locations, industries and company types (Guerci & Pedrini, 2014, pp. 1805–1807).

Research is required to identify the determinants of EGBs, which HR scholars could undertake using existing taxonomies of EGBs and related hierarchical models (see Ones & Dilchert, 2013, pp. 124, 125). Researchers might wish to account for personality variables expected to relate to pro-environmental behaviors, to model the psychosocial determinants of pro-environmental behavior in assessing causal mechanisms, and undertake field research to improve and deepen applied practices of staff-led ES initiatives (Ones & Dilchert, 2013, pp. 131, 140–142). Here, experts suggest using self-determination theory to evaluate whether different motivation types explain varying staff engagement with EGBs, and the process mechanisms driving EGBs too (Norton et al., 2015, p. 120).

Future research could further investigate how individual traits and contextual variations influence VWGBs, and scholars might construct and utilize more rounded

measures of environmental behavior and qualitative data to comprehend how staff can use words and behaviors to progress improved green behavior (Kim et al., 2014, p. 18). Researchers could examine employee approaches to generating changes in organizational ES (including harmful ones), undertake longitudinal work detailing voluntary green advocacy behavior and group leader influence in VWGB on the 'voluntary green advocacy' of followers (Kim et al., 2014, pp. 19, 20).

Opportunities exist for scholarship to assess the effectiveness of processes used in HRM system alignment with ES objectives, and to investigate consequences arising for employees from working in different organizations with sophisticated or lapse green policies and procedures (Jackson et al., 2011, p. 109). HR researchers may find particular gains from working with non-HR staff partners to illuminate the complexity of measures of appropriate individual ES behaviors and values (Jackson & Seo, 2010, pp. 286, 287). Research is also needed to illustrate how organizations might effectively utilize specific HRM practices to implement ES, e.g. 'workforce management tools' and new schemes to evaluate employee commitment and engagement regarding green interventions (Jackson, 2012b, pp. 416–418; Zibarras & Coan, 2015, p. 2137).

In developing an International perspective on Green HRM, research could benefit from understanding how Multinational Companies react in assessing the processes through which ES convergence happens globally and how such firms develop HRM capacities in it (Jackson & Seo, 2010, p. 283), while multi-level work is required investigating how national cultures shape the greening of organizational cultures too (Jackson et al., 2011, pp. 107, 108). On green work–life balance, research may benefit from testing prior study findings that external, impersonal, or situational factors relating to individuals seem less likely to drive positive green behaviors than personal, internal ones (Parker, 2011, p. 50), and as many studies investigate green behaviors at home but overlook workplaces (Parker, 2011, p. 38), the conceptual case outlined by Muster and Schrader (2011) on green work–life balance could also be empirically investigated.

With regard to theory, the applicability of existing frameworks used in the Green HRM literature such as AMO (Renwick et al., 2013), Strategic HRM (Jackson & Seo, 2010), and VWGB theory (Kim et al., 2014) could be further tested through new empirical works in green HR globally. The utility of the most recent, emerging critical theory could also be empirically examined, e.g. Marxist social and employment relation's accounts which seek to comprehend Trade Union behavior within the climate realm (Hampton, 2015). Here, regarding measurement, Zoogah's (2011) theoretical case that HR managers enact 'Green signature' behaviors might be empirically tested, and scholars could further investigate the role of age and ES linkages too (see Wiernik, Ones, & Dilchert, 2013). Lastly in this section, the ecological worldviews of staff might be researched through the updated, New Ecological Paradigm Scale (NEPS), e.g. by using the 15-item revised NEPS as a single scale to measure 'environmental beliefs' cross-culturally (Dunlap, 2008, pp. 4–12, 13).

As practitioners may rely on process theories to address daily work tasks (Bartunek, 2008), we now consider some implications arising for them from GHRM processes and Strategic GHRM.

### **Implications for practitioners**

Organizations could incorporate ES recruitment efforts by developing materials to communicate information regarding organizational green goals, to train recruiters to fully acknowledge environmentally related questions, emphasize organizational commitment

where recruiting messages enclose ES statements, and target sources with environmentally minded job candidates (Ones & Dilchert, 2013, p. 128). Here, HRM practitioners are guided to examine recruiting managers that prize ES (Zibarras & Coan, 2015, p. 2135), and focus on SER recruiting messages which the prior literature indicates job candidates are more positively affected by (Gully et al., 2013, pp. 964, 965). Managers wanting to increase organizational ES might gain direct control over selection processes to enhance staff skills and knowledge in it (Kane, 2011, p. 8), as possessing a strong group of morally reflective and conscientious leaders and non-leaders appears likely to enhance the efficacy of ES recruitment interventions overall (Kim et al., 2014, p. 18).

If ES is to be a 'serious' organizational issue, HR managers may need to concisely communicate it to staff in performance planning, assess ES in performance reviews, and reward it through particular remuneration structures (Harris & Tregidga, 2012, p. 250; Zibarras & Coan, 2015, p. 2136). Here, HR managers can signal the utility of ES to stakeholders by tying executive compensation to the delivery of environmental performance (Jackson & Seo, 2010, p. 282). HR practitioners may note that excellent employee training in EM seems needed and to be made available for all staff (Zibarras & Coan, 2015, p. 2135) if organizations want to develop in a sustainable way (Ji et al., 2012, p. 3005), and might wish to integrate EM content into leadership programs and consider if their learning and development contractors are assessed for environmental practice (Harris & Tregidga, 2012, p. 250).

Organizations are guided that indirect measures such as employee involvement and participation appear crucial in developing useful, direct HR initiatives in green performance schemes (Harvey et al., 2013, p. 163), and as perceived employee control seems important to ES success, are recommended to make staff green interventions uncomplicated and non-taxing so employees can maintain control regarding them (Parker, 2011, p. 56). Employers could promote environmentally friendly workplace behavior by fostering pro-green attitudes through extending positive affect and employee empowerment initiatives among their staff (Andersson et al., 2013, pp. 152, 153; Zibarras & Coan, 2015, p. 2136). Moreover, the use of planned behavior theory may help HRM practitioners predict staff workplace recycling conduct, as it focuses on social norms and hands employees' control which is seen to lead to positive staff actions in ES (Parker, 2011, p. 44).

HRM practitioners are recommended to adopt a strategic perspective when pursuing ES to ensure a useful alignment of workforce management practices, business strategy, and organizational context, so as to form an integrated and comprehensive ES system (Jackson, 2012b, p. 417). Here, HR professionals may wish to become strategic partners in organizational ES agendas through specific functions like recruitment, development, and PMA, and that as ES requires behavioral change from employees, to lead via staff engagement and strategic integration in ES too (Harris & Tregidga, 2012, pp. 249, 250).

Organizations could work to detail the various positive outcomes arising from green interventions to establish the business case needed to develop voluntary EGBs (Norton et al., 2015, p. 117), and ensure that 'doing good' in ES is well known so that employers can recruit, retain, and inspire staff to develop work in tackling climate change (Howard-Grenville et al., 2014, pp. 620, 621). Lastly in this section, HR practitioners may ultimately wish to note some potential downsides from supporting climate change issues, including costs to staff careers, personal responsibilities, and family life arising (see Sonenshein et al., 2014, pp. 7, 30–32).

**Limitations**

As with other literature reviews and research agendas limitations apply herein, which include topic choice, time frame, and emphasis. Here, using a wider net may have detailed complimentary yet different studies, taking a more historical view could produce a more holistic analysis overall, and scholars stressing the detailed research studies differently may have produced an alternative analysis to the one presented. Nonetheless, we believe our review and research agenda highlights the most contemporary, relevant studies and research issues currently available. We now preview the seven articles appearing in this collection.

**Extending GHRM scholarship**

After considering article novelty, quality, and fit with our paper call, and guided by this journal's standard editorial processes, guest editorial team members read submitted manuscripts and sent to academic referees those deemed most suitable for review. All such manuscripts were triple-blind reviewed and underwent up to three rounds of revision before final acceptance or rejection. The seven articles appearing in this special issue are thus the best of all the manuscripts submitted. We hope readers agree that publication of this carefully selected article set realizes our aim of publishing works with new, original, and excellent insights on GHRM in *The International Journal of Human Resource Management*. In this next section, we scope what these papers offer forward for all HR stakeholders.

The seven empirically based papers included in this collection aim to enhance GHRM scholarship in several ways. The initial three articles focus on green HR practices. The first article by Guerci, Montanari, Scapolan, and Epifanio examines green recruitment practices in Italy, and while uncovering support for the impact of green reputation on applicant attraction, finds none regarding recruitment website information on company environmental policy and practices. The second article by Subramanian, Abdulrahman, Wu, and Nath investigates the influence of green competencies on organizational green practices in China, and reveals acquired green competencies being positively associated with individual green behavior. The third article by Markey, McIvor, and Wright researches employee participation and carbon emission reduction in Australia, and finds that although organizations engage in carbon reduction activities at workplace level and have a role for employee participation in it, that the form of such participation may be less crucial than how it is implemented and the degrees of influence employees have regarding it in practice.

The next article set examines wider contextual issues. Here, the fourth article by Haddock-Millar, Chandana, and Mueller-Camen investigates GHRM in three subsidiaries of a US-based Multinational Corporation located in Europe, and reveals evidence of pro-active EM through varying operational and HRM initiatives, subsidiary differences including positioning and alignment of EM and HR functions, and workforce engagement in EM being explained by strategic/performance drivers and national cultural dimensions. The fifth article by Guerci examines paradoxes in Italian-based GHRM, and finds eight HRM-related paradoxes perceived by members of six organizations that encompass the main characteristics of the green HR systems they utilize.

The final articles focus on GHRM and financial/EM performance linkages. The sixth article by O'Donohue and Torugsa researches pro-EM, GHRM and financial performance links in Australian Small and SMEs, and reveals that GHRM positively moderates associations between proactive EM and financial performance, and increases

financial benefits compared to low levels of GHRM. The final (seventh) article by Luzzini and Guerci investigates stakeholder pressures, GHRM practices and EM performance in Italy, and finds that different GHRM practices mediate relationships between pressures on environmental issues from external stakeholders and environmental performance, which locate such companies in specific sociopolitical contexts.

We now present these papers in the article order detailed above to portray a progression that starts with the most micro-level and leads to a more macro-level analysis. Their specific strength lies in them all using an interdisciplinary perspective to make new and novel contributions to our comprehension of GHRM that extend it as an important new inquiry area. We send our thanks to the article authors for providing such excellent papers which provide a solid basis for future work by researchers new to understanding Green HRM, and to scholars already undertaking such research. We thank all of the other authors who submitted their work forward for consideration, and to the expert academic reviewers who freely gave their time to help produce this issue. Our final notes lie in thanking the journal's Chief Editor Professor David Lepak for superb guidance and support, Penny Smith for excellent administrative help and advice, and Former Editor Professor Michael Poole for the initial opportunity to generate this collection – and to whom it is belatedly dedicated.

### Disclosure statement

No potential conflict of interest was reported by the authors.

### References

- Andersson, L., Jackson, S. E., & Russell, S. V. (2013). Greening organizational behavior: An introduction to the special issue. *Journal of Organizational Behavior, 34*, 151–155.
- Anderton, K., & Jack, K. (2011). Green behavior change: A case study of eco concierge. In D. Bartlett (Ed.), *Going green: The psychology of sustainability in the workplace* (pp. 76–83). Leicester: The British Psychological Society.
- Bartlett, D. (2011). Introduction: The psychology of sustainability in the workplace. In D. Bartlett (Ed.), *Going green: The psychology of sustainability in the workplace* (pp. 1–5). Leicester: The British Psychological Society.
- Bartunek, J. M. (2008). You're an organization development practitioner–scholar: Can you contribute to organizational theory. *Organization Management Journal, 5*, 6–16.
- Benn, S., Teo, S. T. T., & Martin, A. (2015). Employee participation and engagement in working for the environment. *Personnel Review, 44*, 492–510.
- Bissing-Olson, M. J., Iyer, A., Fielding, K. S., & Zacher, H. (2013). Relationships between daily affect and pro-environmental behavior at work: The moderating role of pro-environmental attitude. *Journal of Organizational Behavior, 34*, 156–175.
- Delmas, M. A., & Pekovic, S. (2013). Environmental standards and labor productivity: Understanding the mechanisms that sustain sustainability. *Journal of Organizational Behavior, 34*, 230–252.
- Dubois, C. L. Z., & Dubois, D. A. (2012). Strategic HRM as social design for environmental sustainability in organization. *Human Resource Management, 51*, 799–826.
- Dunlap, R. E. (2008). The new environmental paradigm scale: From marginality to worldwide use. *The Journal of Environmental Education, 40*, 3–18.
- Feasby, J., & Wells, K. (2011). Greening your organization: The case of the environment agency. In D. Bartlett (Ed.), *Going green: The psychology of sustainability in the workplace* (pp. 18–30). Leicester: The British Psychological Society.
- Guerci, M., & Pedrini, M. (2014). The consensus between Italian HR and sustainability managers on HR management for sustainability-driven change – Towards a 'strong' HR management system. *The International Journal of Human Resource Management, 25*, 1787–1814.

- Gully, S. M., Phillips, J. M., Castellano, W. G., Han, K., & Kim, A. (2013). A mediated moderation model of recruiting socially and environmentally responsible job applicants. *Personnel Psychology, 66*, 935–973.
- Hampton, P. (2015). *Workers and trade unions for climate solidarity: Tackling climate change in a neoliberal world*. London: Routledge.
- Harris, C., & Tregidga, H. (2012). HR managers and environmental sustainability: Strategic leaders or passive observers? *The International Journal of Human Resource Management, 23*, 236–254.
- Harvey, G., Williams, K., & Probert, J. (2013). Greening the airline pilot: HRM and the green performance of airlines in the UK. *The International Journal of Human Resource Management, 24*, 152–166.
- Higher Education Funding Council for England (HEFCE). (2012). *Panel criteria and working methods* (Report No. REF 01.2012). London: Author.
- Howard-Grenville, J., Buckle, S. J., Hoskins, B. J., & George, G. (2014). From the editors: Climate change and management. *Academy of Management Journal, 57*, 615–623.
- Huffman, A. H., Watrous-Rodriguez, K., Henning, J., & Berry, J. (2009). ‘Working’ through environmental issues: The role of the I-O psychologist. *The Industrial-Organizational Psychologist, 47*, 1–27.
- Jackson, S. E. (2012a). Chapter one: Portrait of a slow revolution toward environmental sustainability. In S. E. Jackson, D. S. Ones, & S. Dilchert (Eds.), *Managing human resources for environmental sustainability* (pp. 3–20). San Francisco, CA: Jossey-Bass.
- Jackson, S. E. (2012b). Chapter twenty: Building empirical foundations to inform the future practice of environmental sustainability. In S. E. Jackson, D. S. Ones, & S. Dilchert (Eds.), *Managing human resources for environmental sustainability* (pp. 416–432). San Francisco, CA: Jossey-Bass.
- Jackson, S. E., Renwick, D. W. S., Jabbour, C. J. C., & Muller-Camen, M. (2011). State-of-the-art and future directions for green human resource management: Introduction to the special issue. *Zeitschrift für Personalforschung, 25*, 99–115.
- Jackson, S. E., & Seo, J. (2010). The greening of strategic HRM scholarship. *Organization Management Journal, 7*, 278–290.
- Ji, L., Huang, J., Liu, Z., Zhu, H., & Cai, Z. (2012). The effects of employee training on the relationship between environmental attitude and firms’ performance in sustainable development. *The International Journal of Human Resource Management, 23*, 2995–3008.
- Kane, A. (2011). Green recruitment, development and engagement. In D. Bartlett (Ed.), *Going green: The psychology of sustainability in the workplace* (pp. 6–17). Leicester: The British Psychological Society.
- Kim, A., Kim, Y., Han, K., Jackson, S. E., & Ployhart, R. E. (2014). Multilevel influences on voluntary workplace behavior: Individual differences, leader behavior, and coworker advocacy. *Journal of Management, 1*–24. doi:10.1177/0149206314547386
- Maley, J. (2014). Sustainability: The missing element in performance management. *Asia-Pacific Journal of Business Administration, 6*, 190–205.
- Martinez-Del-Rio, J., Cespedes-Lorente, J., & Carmona-Moreno, E. (2012). High-involvement work practices and environmental capabilities: How hiwps create environmentally based sustainable advantages. *Human Resource Management, 51*, 827–850.
- Merriman, K. K., & Sen, S. (2012). Incenting managers toward the triple bottom line: An agency and social norm perspective. *Human Resource Management, 51*, 851–872.
- Millard, D. (2011). Management learning and the greening of SMEs: Moving beyond problem-solving. *Zeitschrift für Personalforschung, 25*, 178–195.
- Muster, V., & Schrader, U. (2011). Green work-life balance: A new perspective for Green HRM. *Zeitschrift für Personalforschung, 25*, 140–156.
- Norton, T. A., Parker, S. L., Zacher, H., & Ashkanasy, N. M. (2015). Employee green behavior: A theoretical framework, multilevel review, and future research agenda. *Organization & Environment, 28*, 103–125.
- Ones, D., & Dilchert, S. (2013). Measuring, understanding, and influencing employee green behaviors. In A. H. Huffman & S. R. Klein (Eds.), *Green organizations: Driving change with I.O. psychology* (pp. 115–148). New York, NY: Routledge.



- Parker, R. (2011). Green organizational performance: Behavioural change interventions based on the theory of planned behavior. In D. Bartlett (Ed.), *Going green: The psychology of sustainability in the workplace* (pp. 36–46). Leicester: The British Psychological Society.
- Renwick, D. W. S., Redman, T., & Maguire, S. (2013). Green Human Resource Management: A review and research agenda. *International Journal of Management Reviews*, 15, 1–14.
- Robertson, J. L., & Barling, J. (2013). Greening organizations through leaders' influence on employees' pro-environmental behaviors. *Journal of Organizational Behavior*, 34, 176–194.
- Sonenshein, S., DeCelles, K., & Dutton, J. (2014). It's not easy being green: Self-evaluations and their role in explaining support of environmental issues. *Academy of Management Journal*, 57, 17–37.
- Stalcup, L. D., Deale, C. S., & Todd, S. Y. (2014). Human resources for environmental sustainability in lodging operations. *Journal of Human Resources in Hospitality and Tourism*, 13, 389–404.
- Taylor, S., Osland, J., & Egri, C. (2012). GUEST editor's introduction: Introduction to HRM'S role in sustainability: Systems, strategies, and practices. *Human Resource Management*, 51, 789–798.
- Unsworth, K. L., Dmitrieva, A., & Adriasola, E. (2013). Changing behavior: Increasing the effectiveness of workplace interventions in creating pro-environmental behavior change. *Journal of Organizational Behavior*, 34, 211–229.
- Vidal-Salazar, M. D., Cordon-Pozo, E., & Ferron-Vilchez, V. (2012). Human resource management and developing proactive environmental strategies: The influence of environmental training and organizational learning. *Human Resource Management*, 51, 905–934.
- Wagner, M. (2011). Environmental management activities and sustainable HRM in German manufacturing firms – Incidence, determinants, and outcomes. *Zeitschrift für Personalforschung*, 25, 157–177.
- Walls, J. L., & Hoffman, A. J. (2013). Exceptional boards: Environmental experience and positive deviance from institutional norms. *Journal of Organizational Behavior*, 34, 253–271.
- Wehrmeyer, W. (Ed.). (1996). *Greening people: Human resources and environmental management*. Sheffield: Greenleaf.
- Wiernik, B. M., Ones, D. S., & Dilchert, S. (2013). Age and environmental sustainability: A meta-analysis. *Journal of Managerial Psychology*, 28, 826–856.
- Wilkinson, A., Hill, M., & Gollan, P. (2001). The sustainability debate. *International Journal of Operations and Production Management*, 21, 1492–1502.
- Zibarras, L., & Ballinger, C. (2011). Promoting environmental behavior in the workplace: A survey of UK organizations. In D. Bartlett (Ed.), *Going green: The psychology of sustainability in the workplace* (pp. 84–90). Leicester: The British Psychological Society.
- Zibarras, L. D., & Coan, P. (2015). HRM practices used to promote pro-environmental behavior: A UK survey. *The International Journal of Human Resource Management*, 26, 2121–2142.
- Zoogah, D. B. (2011). The dynamics of Green HRM behaviors: A cognitive social information processing approach. *Zeitschrift für Personalforschung*, 25, 117–139.