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A META-REVIEW OF TEN YEARS OF GREEN HUMAN RESOURCE
MANAGEMENT: IS GREEN HRM HEADED TOWARDS A ROADBLOCK OR
REVITALISATION?

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A META-REVIEW OF TEN YEARS OF GREEN HUMAN RESOURCE MANAGEMENT: IS GREEN HRM HEADED TOWARDS A ROADBLOCK OR A REVITALISATION?

Over the past decade Green Human Resource Management (GHRM) has emerged as a growing field of conceptual and empirical work both within, and separate from, the broader topic of Sustainable HRM. As such, we believe it is an opportune time to provide an overview of the Green HRM literature up to 2020, together with a critical consideration of Green HRM into the future. Representing the first meta-review in the Green HRM field, we surmise key aspects of Green HRM research emerging over the previous decade. We conclude by presenting an exploration of how Green HRM may evolve into the future, and pose the following question: With a myriad of implications from COVID-19 on business survival and society in general, how will this affect the development of Green HRM? Is it headed towards a roadblock, or revitalisation?

Keywords: Green HRM, meta-review, COVID-19, pandemic

Introduction

The past decade has witnessed the field of Green HRM emerging from broader tenants of Environmental Management (EM) research, in conjunction with societal expectations concerning business' roles in global environmentalism (Jabbour & de Sousa Jabbour, 2016; N. Pham, Hoang, & Phan, 2019). Societal expectations of organisation's roles in environmentalism are ostensibly expressed in several ways ranging from government regulations designed to impose pro-environment conditions and limitations on business activity, through to consumer behaviours where individuals apply purchasing power that signal reactions to an organisation's environmental impacts.

Responding to these pressures in the twenty-first century, organisations have implicitly or explicitly acknowledged and addressed environmental responsibilities. Progressive organisations do so willingly. For example, in 2003 LEGO became the first toy manufacturer to commit to the United Nation's Global Compact "a voluntary initiative based on CEO commitments to implement universal sustainability principles" (The LEGO Group, 2020; United Nations). LEGO has committed to achieving environmental sustainability by 2030

through developing sustainable packaging and materials, facilitating product recycling, and investing \$US150 million in a Sustainable Materials Centre (Kundu, 2019; The LEGO Group, 2020). Despite such positive initiatives, other organisations fail to meet even minimum societal expectations enunciated as regulations for environmental protection, sustainability and social well-being. A specific Australian example concerns operators of the Hazelwood Power Station (HPS), a major national coal-fired energy producer. In 2019, the operators were found guilty in the Australian Supreme Court of inadequate environmental risk assessment and risk-event preparation in response to a major fire-event within the Power Station's open-cut coal mine. The fire burned for 45 days, coating the adjacent town of Morwell (housing approximately 14,000 residents) in coal dust and blanketing coal-smoke (Asher, Jarrod, & Karen, 2019). Failure to adhere to required standards resulted in an HPS operator fine of \$(AUS)1.9 million (Asher, Whittaker, & Percy, 2020).

A second example concerns recent destruction of ancient Indigenous cultural sites in Western Australia's Juunkan Gorge by mining company Rio Tinto. A preliminary report from a subsequent parliamentary inquiry stated that local Indigenous communities were "let down" by both Rio Tinto and government (Department of the House of Representatives, 2020). The report requests that Rio Tinto rehabilitate the destroyed site, among other stated actions (Joint Standing Committee on Northern Australia, 2020). In addition, three top executives lost their jobs because of the incident and the public outrage that ensued. Financial and other consequences falling upon companies that fail to meet expected environmental standards are detailed by these recent examples and numerous others across the globe.

Through legal rulings, government entreats, UN initiatives, and shareholder and customer pressures, organisations are subject to increasingly stronger signals on the growing importance of sustainability. Such actions have reinforced corporations to act in a socially responsible manner; a trend becoming increasing central to governance and decision making (Cochran, 2007). Strategically focussed HRM can play a critical role in meeting an organisation's aspirations towards corporate social responsibility (de Souza Freitas, Caldeira-Oliveira, Teixeira, Stefanelli, & Teixeira, 2020). The development of this role has led to associated corporate activities, and their study, termed Green HRM.

Green HRM exists both as a subset within the sustainable HRM field and a stand-alone field of enquiry. Sustainable HRM, as the umbrella concept, is defined by Kramar (2014, p. 1084) as "patterns of planned or emerging HR strategies and practices intended to enable the

achievement of financial, social and ecological goals whilst simultaneously reproducing the HR base over a long time.” This definition remains consistent with Elkington’s (1997, 2004) seminal Triple Bottom Line concept encompassing three sustainability aspects: economy, society and, environment. Current research in Green HRM, a concept defined by Wagner (2013, p. 444) as “those parts of sustainable HR management dealing with the needs that relate to environmental sustainability”, is developing and evolving rapidly. The recent emergence of research on Green HRM is highlighted through the appearance of 10 review papers on the topic since 2013 (Table 1). The level of attention from researchers suggests that Green HRM is emerging as a discreet field of enquiry within the human resources management literature.

This paper reflects on the emergence of the Green HRM field through a meta-analysis of review papers and from the findings, proposes the concept’s potential directions into the future. We posit that a meta-analysis review is timely in the context of a global pandemic creating a ‘new normal’. A post-COVID future poses as both a potential opportunity for, and threat into, more widespread implementation of Green HRM initiatives within organisations.

The contributions of this article are twofold. We firstly undertake a meta-review of Green HRM literature reviews, thus providing a succinct and novel overview of key fields of enquiry within the Green HRM literature. A meta-review approach was chosen due to this being an effective method to summarise findings from previous literature review articles in the Green HRM field and so providing “an effective way to understand the status quo” (Jiang & Messersmith, 2017, p. 7). The second contribution of this paper is to place Green HRM within the context of seismic changes the (business) world is experiencing, and will continue to experience, due to the COVID-19 pandemic and what follows – often described as the ‘new normal’. Specifically, we identify and consider potential ramifications of COVID-19 induced changes on the future of Green HRM implementation and research.

Any critical exploration Green HRM’s future should be informed by past events and knowledge. Following an outline of Green HRM’s origins, the methodological approach taken is provided. Next, we provide a meta-review of Green HRM literature based on ten literature reviews that focussed specifically on Green HRM. Both descriptive data and summary of content from these ten reviews are reported based on the aim to synthesise extant key literature. We conclude the paper in postulating that Green HRM is now at crossroads,

where COVID-19 pandemic implications for the ‘new normal’ may either drive sustainability initiatives towards a roadblock in resource availability and/or allocation, or revitalisation, where the pandemic provides the opportunity to reassess and re-evaluate priorities for future development.

Origins of Green HRM

Research exploring the role of employees in achieving an organisation’s environmental management dates from the 1990’s (Bunge, Cohen-Rosenthal, & Ruiz-Quintanilla, 1996; Ruiz-Quintanilla, Bunge, Cohen-Rosenthal, & Freeman-Gallant, 1996). Early research followed an Environmental Management (EM) perspective, drawing on the role and impact of an organisation’s employees on EM practices and performance. Wehrmeyer’s (1996) edited book provided an early example bridging the gap between Human Resource Management (HRM) and EM. This work was followed by Renwick et al.’s (2008) whitepaper that reviewed the Green HRM concept which focused on ‘greening’ HRM practices. Concurrently, the concept of Sustainable HRM had emerged following Ehnert’s (2009) seminal book *Sustainable human resource management : a conceptual and exploratory analysis from a paradox perspective*.

Building on these beginnings, 2011 marked an emergence of empirical research defining and exploring Green HRM. Wagner (2011, p. 444) at this time provided a widely cited definition of Green HRM as “those parts of sustainable HR management dealing with the needs that relate to environmental sustainability.” This interpretation located Green HRM within the broader sustainable HRM field, with research in both fields developing simultaneously (Paulet, 2019). 2011 also witnessed the first special issue of a journal focused on Green HRM in *The German Journal of Human Resource Management*. (Jackson, Renwick, Jabbour, & Muller-Camen, 2011). Hence, and while acknowledging the earlier origins and development of the field, it is from 2011 that Green HRM came to fore as an emerging as a field of research in and of itself.

Methodology

Identification of published reviews for the meta-review reported here was undertaken in two stages. Stage one followed Ren, Tang and Jackson (2018) and Yong, Yusliza and Fawehinmi (2019), where a systematic approach identified Green HRM literature published in or prior to 2020. Online databases (Scopus and EBSCO) provided the sources for Green HRM literature identification. We used keywords ‘Green Human Resource Management’ and ‘Green HRM’

to delineate focus on the study field of interest. Following the journal inclusion criteria adopted by Ren et al. (2018), qualifying publications appeared in high-quality peer-reviewed English language journals. Specifically, the search was restricted to papers published in journals ranked B or higher in the Australian Business Dean Council's 2019 Journal Quality List (Australian Business Deans Council, 2019) or those ranked Q1 in Scimago (Scimago, 2021). This search identified 122 articles published from 2011 to 2020.

The second review stage involved selecting systematically-styled literature reviews published on Green HRM using identical journal quality criteria as stage one. These reviews were sourced from abstract screening for stage one papers. Screening revealed ten Green HRM systematic literature reviews.

Meta-Analysis Results

Figure 1 illustrates the 122 Green HRM papers by publication date. The figure depicts Green HRM as a field of growing interest, with publication frequency increasing five-fold since 2016. Review of the 122 Green HRM papers revealed ten literature reviews, defined as such by the author/s, within the Green HRM field. The ten Green HRM literatures were thematically reviewed revealing the review's search parameters, focus area, key topics reviewed, contribution of the review, and future research agenda, an overview of which is provided in Tables 1 and 2, and now discussed in more detail.

Figure 1 – Distribution of Green HRM journal articles by year

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Descriptive Overview of Published Green HRM Literature Reviews

Table 1 surmises a descriptive overview of the ten literature reviews included in the meta-review.

Table 1 – Descriptive data of prior Green HRM Literature Reviews

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As table 1 shows, Green HRM literature reviews have appeared in both single discipline and multi-discipline journals. Reflecting this, review authors have applied various approaches to identify and include papers. This variation in the search terms and journal inclusion criterion

used across the reviews has unsurprisingly resulted in a range of findings among reviews (Table 1).

Search terms used in the reviews typically included variants of ‘green human resource management’ and ‘environmental management’ (Table 1). The earlier reviews (Renwick, Jabbour, Muller-Camen, Redman, & Wilkinson, 2016; Renwick, Redman, & Maguire, 2013) use of search terms related to environmental management (EM) reflects Green HRM origins within EM literature. Recent reviews have continued to use EM within search criteria (Table 1).

Variation is also evident in criteria used to determine paper inclusion in reviews. The majority (six of ten) limit this to peer-reviewed journal articles, though other reviews included relevant books, empirical case studies, institutional reports or policy documents. Some reviews qualified journals using criteria. Ren et al. (2018), for example, limited inclusion to ‘high-quality’ journals rated B or higher in the ABDC ranking index while Renwick et al. (2016) benchmarked papers against the Higher Education Funding Council for England (HEFCE) research criteria specifying standards for originality, significance and rigour.

Further variation in paper inclusion was revealed in the types of papers included. Six of the ten literature reviews included a mix of empirical, conceptual and/or review type papers in their criteria, one review included only empirical (termed ‘scientific’ by the authors) papers, and three of the reviews did not state the types of papers included in their reviews. All reviews followed a systematic process (reflecting the applied including criteria here) to identify relevant sources. Most reviews reported the criteria used to select articles in detail sufficient to allow replication. Various standards within inclusion criteria were applied to assess paper quality including journal rank, external benchmarks or author evaluation (Table 1).

Differing approaches taken by listed reviews for search terms and paper source reflect the volume of included papers (Table 1). Pham and Paille (2019) identified 22 papers whereas Amrutha and Geetha (2020) included 174, indicating respectively research depth in Green HRM specialty areas and the broader field encompassing Green HRM that incorporates, among other aspects, sustainable development (Table 1).

Summary of Content of Published Green HRM Literature Reviews

Table 2 provides a summary of the ten identified literature reviews by focus, key topics, contribution and proposed future research.

Table 2 – Summary of Content of prior Green HRM Literature Reviews

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Six of ten Green HRM literature reviews scoped the concept in entirety while those remaining focused on Green HRM subsets. These subsets, representing standard HRM activities and responsibilities, included green recruitment and/or selection (Adjei-Bamfo, Bempong, Osei, & Kusi-Sarpong, 2019; D. D. T. Pham & Paillé, 2019), green training (Stefanelli, Teixeira, De Oliveira, Ferreira, & Sehnem, 2019) or green employee empowerment (Tariq, Jan, & Ahmad, 2016).

Three literature reviews provided descriptive meta-style data to analyse Green HRM literature. Reported criteria and outcomes were: Distribution of papers by year demonstrating increasing Green HRM publications over time); quantity and range of Green HRM publications by journal where the *Journal of Cleaner Production* (JCP) and the *International Journal of Human Resource Management* (IJHRM) contained the highest number of Green HRM papers, and; distribution of Green HRM publications by country with Brazil, China, Italy and India being the most frequent country of context.

The overarching contribution, reflecting the aim of each review, fell within three domains (Table 2). These were (1) overviews of the Green HRM literature—seven papers, (2) development of conceptual frameworks—three papers, and/or (3) identification of research gaps—two papers.

Overviews of the literature - domain 1 – were further categorised into research focused on Green HRM practices and research focused on Green HRM strategy. This classification follows Ehnert's (2014) identification of two ways in which HRM can impact on sustainability; 1, through HR practices specifically focused on impacting sustainability (ie; Green HRM practices) and 2, through HRM's overarching support of the organisation's sustainability goals (ie; Green HRM strategy). The literature reviews identified research on Green HRM practices topics such as the 'greening' of core HRM practices, specifically HR

practices of recruitment and selection and training. Pham and Paille's (2019, p. 268) Green recruitment and selection (R&S) review concluded that "both a pro-environmental employer and a pro-environmental job seeker look for the option that matches the other party's environmental needs". Reviews were consistent where Green R&S was found to positively impact on job seeker's attraction to an organisation, job acceptance, job satisfaction and retention (D. D. T. Pham & Paillé, 2019) and conversely employer's attractiveness to high quality candidates (Adjei-Bamfo et al., 2019). A second key HRM practice within domain 1 identified in reviews was Green Training. Here Yong et al. (2019, p. 2014) reported this to be "the most important or useful initiative" available to organisations when initiating a Green HRM strategy. Moreover, Stefanelli et al.'s (2019) review found that 49 percent of reviewed papers focussed on environmental training practices. Pham et al.'s (2019) review reported other HRM practices having green focus including green rewards (49% of reviewed articles), green employee engagement (28%) and green performance management (46%).

The second category of domain 1 —literature overview— were reviews reporting on Green HRM strategy. In explaining Green HRM strategy, reviews within domain 1 reported several underlying explanatory theories. These comprised of; occupational psychology theories (Renwick et al., 2016), ability, motivation and opportunity (AMO) theory (Ren et al., 2018; Renwick et al., 2013), stakeholder theory (Ren et al., 2018), social identity theory (Yong et al., 2019) and the resource based view (RBV) (Ren et al., 2018; Yong et al., 2019). In regard to Green HRM theoretical foundations, both Ren et al. (2018) and Yong et al.'s (2019) reviews concluded that systematic theoretical bases require further development to advance Green HRM research. Key research questions concern organisational alignment with green initiatives, roles played by national cultures, impacts of HRM digitalisation plus linkages and spill-overs among employees, employee grouping and the wider organisation. As Ren et al. (2018, p. 798) states "owing to the relatively young age of GHRM as a field, there is not yet sufficient variety in the theoretical perspectives utilized to assess which are likely to prove most useful for future development", a point reflected in the variety of explanatory theories revealed in this meta-review.

In any case, the analysis of Green HRM strategy reported by reviews concerned impacts of, or outcomes from, Green HRM on organisational performance and/or environmental performance. For example, both Amrutha and Geetha (2020) and Yong et al.'s (2019) reviews reported evidence of Green HRM positively impacting organisational performance. Further aspects of Green HRM strategy reported by reviews included roles and systems

pertaining to green HRM contextualised within the wider organisation (Renwick et al., 2016), employee empowerment in greening organisations (Tariq et al., 2016), and Green HRM within broader sustainability objectives (Amrutha & Geetha, 2020).

The second domain evident from reviews concerned development of conceptual frameworks from reviewed papers. Ren et al. (2018), for example, developed a framework linking antecedents, consequences and contingencies associated with Green HRM. Amrutha and Geetha's (2020) conceptual model described employee green behaviour as mediating the link from Green HRM practices to an organisation's social sustainability. Adjei-Bamfo et al. (2019) developed an empirically derived framework for selection by organisations of environmentally committed employees.

Domain 3 provides for identified gaps in the literature. Stefanelli et al. (2019), Pham et al. (2019) and Yong et al. (2019) provide a systematic identification of gaps in the research. Gaps relate to both the breadth and/or knowledge across industry and depth of understanding of processes and interactions. Such concerns parallel key research questions within the broader HRM field. The reviews used these gaps to inform and guide future Green HRM research agendas that include empirical studies from a broader base of geographic regions including developed and developing countries, assessing implications for Green HRM stemming from cultural norms, gauging effects on supply chains, evaluating training effectiveness and uncovering new knowledge through use of multiple methods applying rigorous designs including longitudinal studies.

Synthesis of review findings across three domains provides a clarified view of outcomes. Essentially, three outcomes consistent with the identified domains may prove useful to both academics and practitioners. Firstly, the reviews inform the 'state of play' of the Green HRM field, articulating the main focal areas and findings. Key areas here are employee selection and training plus considerations for strategy. Reviews by Amrutha and Geetha (2020), Adjei-Bamfo et al. (2019) and Ren et al. (2018), representing domain 2, go beyond the current state of play in offering conceptual frameworks that illuminate the relationships within the Green HRM field. Amrutha and Geetha (2020), for example, proposed a model linking green HRM to corporate social responsibility, Adjei-Bamfo et al. (2019) specify a green candidate selection process while Ren et al. (2018) provide a comprehensive research framework accounting organisation's internal and external environments. Within domain 3, several

reviews systematically identified gaps in the literature, thereby generating future research agendas that are borne from the extant literature. Some key gaps are identified above.

While future research agendas proposed in reviews varied, commonalities in proposed research agendas are apparent. Common threads include calls for more empirical research drawing on qualitative, quantitative and mixed-methods approaches exemplified and contextualised across countries (Adjei-Bamfo et al., 2019; N. Pham et al., 2019; Ren et al., 2018; Stefanelli et al., 2019; Yong et al., 2019). Review calls for investigation and development of variables and measurement scales pertinent to Green HRM emerged from four reviews (Amrutha & Geetha, 2020; Ren et al., 2018; Renwick et al., 2016; Stefanelli et al., 2019). Lastly calls for future research assessing Green HRM outcomes for both environmental and organisational performance manifested across multiple reviews (Adjei-Bamfo et al., 2019; Amrutha & Geetha, 2020; Renwick et al., 2016; Renwick et al., 2013; Stefanelli et al., 2019; Yong et al., 2019). While prima facie the future research agendas presented by the reviews appears comprehensive, we suggest that in actuality the focus of Green HRM research to this point is quite limited, reflecting the relative infancy of the field. We propose future research in Green HRM could explore the implications of Green HRM from an employee perspective (such as impact on job satisfaction, productivity, employee commitment and voice), employer perspective (such as ‘spill over’ benefits from Green HRM, economic outcomes, benefit/cost analysis and realities of Green HRM in small and medium sized businesses) and societal perspective (such as occurrence and impact of greenwashing). Many other topics, beyond those covered in the literature reviews, are likely to be pursued going forward, to be reflected in subsequent reviews of the Green HRM literature.

Concluding Comments on Meta-Review

This meta-review demonstrates continuing and strong researcher interest in developing and understanding the field of Green HRM. Nevertheless, significant and likely enduring changes sweeping the world, evident particularly in the workplace due to the COVID-19 pandemic, have re-shaped a future described under the umbrella term the ‘new normal’. Hence, a critical re-evaluation of the Green HRM field may be necessary. Framed within growing societal awareness of climate change and the COVID-19 pandemic, we now provide a critical exploration of contemporary Green HRM and from this, forecast issues that may concern Green HRM into the future.

Green HRM into the future: heading towards a roadblock or revitalization?

The steady evolution of Green HRM has continued to gain momentum internationally since the mid-1980s. We would argue the COVID-19 pandemic, and the subsequent global shutdown, economic downturn, and the move to working on-line – part of the ‘new normal’ – has a myriad of far-reaching implications, many of which are still unknown. Changes made in response may pose a fork in the road for Green HRM setting the scene as to which direction the concept and development of Green HRM will take into the future.

With many businesses struggling to negotiate and simply endure the pandemic, environmental objectives, and with them Green HRM, may present a catalyst for change and survival. Alternatively, the pandemic event may relegate Green HRM from organisational objectives to a secondary element as organisations focus on economic survival. In the high-road ‘revitalisation’ scenario, businesses may see the pandemic and its implications as a driver towards renewal and re-invigoration of their ‘Green’ objectives. As Cooke, Dickmann and Parry (2021, p. 11) rightly comment in regard to organisational viewpoints, “global challenges beyond the current pandemic will not disappear and we note a strong interest in sustainable HRM, including issues of ‘green HRM’”. It may be that environmentalism, and therefore Green HRM, see a resurgence in importance among world communities in the post pandemic period. Examples abound of organisations adapting to pandemic driven changes in ways that both support economic survival and, concurrently, catalyse positive environmental impacts. One such example is an Australian gin producer’s 2020 commencement of a second product line utilising existing gin production facilities. The new line production of hand sanitiser both supported the organisation financially while providing environmental benefits through re-purposing a by-product previously considered waste (Keating, 2020).

The ‘new normal’ created by the pandemic continues to challenge and change the boundaries of work organisations. Existing technology, available pre-pandemic but underutilised, underpins a shift to virtual workplaces. Organisations may soon recognise that changed work practices now support and can maintain fundamental changes in how work is undertaken. As organisations embrace these new dynamics, we may explore here this emerging landscape of work in the context of Green HRM.

The technical aspects of moving to working from home (WFH), appears to have worked reasonably well in most advanced economies, although the impact on the workforce has yet to be fully understood (Holland & Brewster, 2021). However, post-pandemic will this change

how we do things from a Green HRM perspective? For the employer, remote working offers clear ‘Green’ benefits such as reduced requirements for expensive office space, and associated heating, lighting and other utility costs. Further environmental responsibility gains accrue through reduced CO2 emissions from commuting to and from work (Fuhr & Pociask, 2011). Some argue that these changes will enhance staff well-being and increase satisfaction with work-life balance (Felstead & Henseke, 2017). However, we should also note the impact of social isolation and work intensification in this new model of work (Holland & Brewster, 2021). The fact that most people can work and meet remotely also challenges the notional requirement for expensive air travel when attending meetings, conventions or conferences. Though employer set-up costs for employees to working remotely may be high (e.g., setting up and updating IT systems plus ergonomic assessments), overall cost reductions reflected by reduced environmental footprints are potentially significant.

As Wheatley (2020) noted, with the increased digitisation and globalisation of work, the opportunity for greater diversity and flexibility has made the location of work increasingly fluid. The irony of course with this change is that it did not come from a concerted effort by either employers or employees. Because of this lack of structure or strategy from employers, the alternate or low road ‘roadblock’ approach to Green HRM in the post-pandemic world is that work patterns and practices return to normal and in the global recession the focus becomes survival. In this scenario, green initiatives are relegated in importance, or indeed a worse-case scenario, simply become aspirational targets or abandoned within the organisation, with focus on survival and cost cutting, and investing less in green initiatives – which can be perceived as taking precious resources away from basic survival strategy.

Whichever policy is adopted, it is clear that the world of work for many has been fundamentally changed by the pandemic of 2020. Whilst the long-term impact of this change is difficult to estimate, we argue, that this will be a significant fork in the road for many policies and practices not least Green HRM. Which road will be taken will play out in the years to come; the hope is it will be the high-road, simply because economic and environmental benefits are likely to accrue from these initiatives.

Ehnert, Harry and Zink’s (2014) work in Sustainable HRM proposed three alternative viewpoints taken by organisations concerning the relationship between dimensions of sustainability, that is, economic, environment and social. These three elements may be represented as interconnecting circles. The first alternative follows Elkington’s (1994) win-

win-win approach. Here, the three pillars of economics, environment and social sustainability are seen as equally important, represented by three equally sized, interconnected circles representing each of the three pillars of sustainability. A second viewpoint is where "... economic sustainability takes precedence, with social and environmental concerns only given attention if doing so contributes to economic success" (Paulet, 2019, p. 161). This view should be contextualised of course by the role of government and society in sustainability aspirations mandated, for example by legal requirements. Regardless, following this second viewpoint encourages a short-term focus on economic outcomes that may result in little fundamental change to organisational practices (Ehnert et al., 2014).

The third viewpoint stated by Ehnert et al. (2014, p. 15) suggest that the environmental dimension provides "in fact the limiting pillar and therefore needs to be imagined as a 'circle' and that the societal and economic 'circles' need to be placed into the ecological one". Green HRM initiatives are consistent with this third viewpoint and readily recognised through continued depletion of non-renewable resources exacerbated by population growth. Much of the research on the topic is underpinned by the tenant that Green HRM provides organisations with the strategic driver to align organisations with viable sustainability strategies while reducing where possible, through technical and other change, the organisation's environmental footprint.

Conclusion

This review of Green HRM shows significant interest in the field with the breadth and depth of research incorporating processes, strategies and frameworks to continue the development of Green HRM. The COVID-19 pandemic, with its myriad of far-reaching implications, many of which are still unknown, sets the scene as an effective crossroads at which to review the field of Green HRM. With many businesses struggling to survive the implications of the pandemic, environmental objectives, and with them Green HRM, may be relegated from organisational objectives as economic survival becomes paramount. Such outcomes reflect Ehnert et al.'s (2014) second view of the relationship between the dimensions of sustainability. Alternatively, with many businesses likely seeing the pandemic and its implications as a driver towards renewal and re-invigoration of their objectives, it may be that environmentalism, and therefore Green HRM, see a resurgence in importance. Perhaps Ehnert et al.'s (2014) third view of the relationships between sustainability dimensions, that

the environment is not infinite and is therefore *the* limiting factor, may become more widely accepted, driving greater interest in how organisations can operate more sustainably, including through Green HRM.

Key Points

- A meta-review of Green HRM literature demonstrates an established through to emerging field of research developed on empirical research over the past decade.
- Reviews provided three important outcomes for Green HRM—identification of key literature, proposed conceptual frameworks and identified research gaps
- Green HRM provides a key driver aligning organisations towards sustainable outcomes
- Further work is required including empirical studies in developing countries and application of rigorous research designs
- The implications of the COVID-19 pandemic are likely to have ramifications on the adoption and practice of Green HRM.

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Figure 1 – Distribution of Green HRM journal articles by year

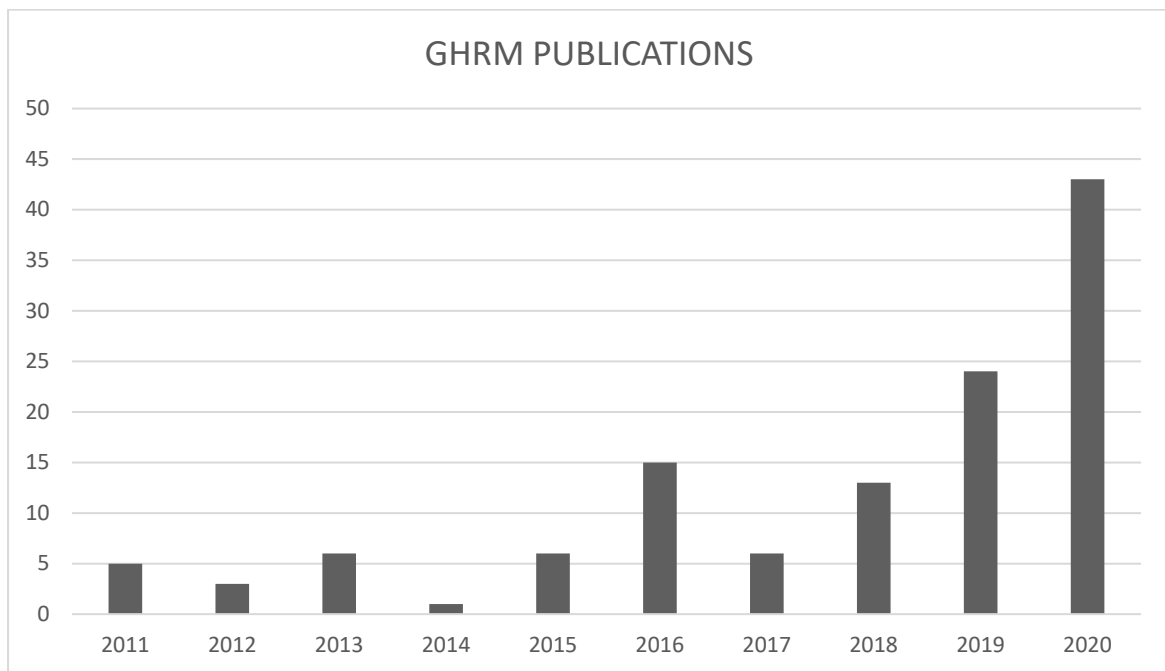


Table 1 – Descriptive overview for identified Green HRM published reviews listed by year of publication

AUTHOR/S	JOURNAL OF PUBLICATION	STATED REVIEW AIM	DATABASE/S ACCESSED	YEARS INCLUDED	INCLUSION CRITERIA	TYPES AND NUMBER OF PAPERS INCLUDED	APPLIED SEARCH TERMS	INCLUDED PAPERS
Amrutha and Geetha, 2020	Journal of Cleaner Production	“this paper attempts to find out the possible research gaps in GHRM literature, assessing the current trends and key elements underlying GHRM domain, using peer reviewed journal publications from the Scopus and Google Scholar databases.” (p. 2)	Scopus, Google Scholar	1995-2019	Peer reviewed journals	Empirical (N=174)	Green human resource management, sustainability, sustainable development	174
Adjei-Bamfo et al., 2019	International Journal of Manpower	“to propose a new typological environmentally sustainable human resources management evaluation framework to aid green candidate selection process for environmental management in developing economy local government agencies” (p. 1081)	Emerald Insight, Oxford Academic, Springer, Science Direct, Sage, Wiley Online Library, Elsevier, JSTOR, Taylor and Francis and Google Scholar	N/A	Peer-reviewed, plus relevant books, institutional publications, policy documents and evaluation reports	Not stated	sustainable organisations, organisational environment management, green business, green human resource management, green recruitment and selection, green human resource management in local government, green recruitment in local governments, green HRM in developing countries, local government and environmental management	N/A
Yong et al., 2019	Benchmarking	“to examine the Green HRM research in terms of how the field is represented along a number of aspects including journal, year, national context and research methods.” (p. 2006)	Science Direct, Emerald Insight, Springer Link, Taylor & Francis, Wiley Online Library, SAGE publications, Inter Science Publishers	2007-2018	‘High quality’ peer reviewed journal articles.	Empirical and Conceptual (n=70)	Green HRM, Green Human Resource Management, Green Human Resource, Environmental HRM, Green Training, Environmental Training	70

Pham et al., 2019	International Journal of Manpower	“to conduct a systematic literature review on GHRM aimed at proposing detailed research gaps and agendas for future study.” (p. 845)	Scopus and Web of Science	2008-2019 (Aug)	Not stated	Empirical and Reviews (N=74)	“Green human resource management,” “GHRM,” “green HRM,” “greening HRM,” “green human resource”. • “Environmental human resource management,” “environmental HRM”. • “Environmental management & human resource management,” “environmental management & HRM,” “sustainability & human resource management,” “sustainability & HRM.”	74
Pham and Paille, 2019	International Journal of Manpower	“to fill this gap while exploring the following questions: How do organisations select candidates in line with their pro-environmental stance? What impact do a company’s corporate environmental sustainability (CES) practices have on attracting pro-environmental job seekers?” (p. 258)	Web of Science, EBSCO and ProQuest plus expert recommendations and snowballing	2008-2017	online, peer-reviewed journal articles	Empirical, Conceptual and Reviews (N=22)	environmental management, environmental performance, corporate environmental performance, green performance, green human resource management, green recruitment, green selection	22
Stefanelli et al., 2019	Benchmarking	“to identify, in the Scopus database, the most relevant articles that address environmental training; to analyze, classify and codify each work found; to present a brief summary of the main results of each work; and to propose a future research agenda that will fill the main gaps in the theme, which will facilitate the development and dissemination of knowledge about environmental training.” (p. 2050)	Scopus, Web of Science	1981-2018	peer-review, available for download	Empirical and Conceptual (N=51)	environmental training, green training	51

Ren et al., 2018	Asia Pacific Journal of Management	“advance the conceptual and empirical development of the GHRM field by providing a systematic and focused review of GHRM research” (p. 771)	Business Source Complete, Expanded Academic ASAP, Science Direct, Academic One File, and Google Scholar	2008-2017	ABDC A*, A, B plus highly rated in other disciplines	Empirical and Conceptual (N=42)	green HRM, green human resource management, environment + HRM, and environment + human resource management	42
Tariq et al., 2016	Quality and Quantity	“to explore and synthesize existing literature regarding the mediating impact of green employee empowerment as it relates to employees’ inclination to practice GHRM” (p. 239)	Web of Knowledge	1990-2013	Published and reviewed	Not stated (N=104, plus “a few exceptions” [p. 262])	Green employee empowerment + green HRM (with range of related sub-terms)	104
Renwick et al., 2016	The International Journal of Human Resource Management	“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.” (p. 115)	Scopus, Web of Science, EBSCO, ProQuest, PsychInfo	2011-2015	Benchmarked against research criteria of originality, significance, and rigour (HEFCE)	Not stated (N=50)	Environment, environmental, pro-environmental, ecology, ecological, green, human resources, human resource management, sustainability, ES	50
Renwick et al., 2013	International Journal of Management Review	“first, survey and draw together the HR elements of EM; second, to map the terrain of this field; and third to outline some avenues for potential further study in GHRM” (p. 1)	N/A	1998-2011	Empirical papers, case studies, business reports and survey findings	Empirical and conceptual (N not stated)	"categorizing and classifying the existing literature in EM and HRM (across the full range of HRM practices)" p. 2	N/A

Table 2 – Summary of Content of Green HRM Literature Reviews

AUTHOR	FOCUS AREA	KEY TOPIC AREAS	CONTRIBUTION OF REVIEW	FUTURE RESEARCH AGENDA
Amrutha and Geetha, 2020	Green HRM (GHRM) - Content coding and cluster analysis to reveal three clusters within the literature	1. GHRM practices, 2. Employee green behaviour at workplace, 3. organisational sustainability	<u>Development of Conceptual framework</u> Conceptual exploration of a theoretical model with employee green behaviour at workplace as mediator in relationship between GHRM practices and social sustainability of organisations.	Empirical research exploring relationship between GHRM and social aspect of organisational sustainability, including consideration of possible determinants such as employee green behaviour, government interventions and trade unions as mediators or moderators.
Adjei-Bamfo et al., 2019	Green Selection - Identified key topics with focus on GRS	1. Org EM, 2. Conceptualising GHRM, 3. GRS, 4. Local government, 5. Theoretical framework	<u>Development of Conceptual framework</u> Development of conceptual framework for evaluating and selection environmentally committed employees, based on a review of the GR&S literature.	1. Qualitative research exploring GS practices of local government in developing countries. 2. Longitudinal research to explore authors' framework impact on environmental sustainability and competitive advantage.
Yong et al., 2019	Green HRM - Identified key topics of GHRM literature	1. Concepts, models, reviews of GHRM, 2. Implementation of GHRM, 3. Determinants of GHRM adoption, 4. Outcome of GHRM (org level), 5. Outcome of GHRM (individual level)	<u>Overview of the Literature (GHRM focus)</u> Summarises the GHRM literature according to the five topic areas identified. Provides practical insights for practitioners.	1. Determinants of GHRM adoption, especially the role of employees in ensuring adoption of GHRM. 2. Ways of implementing effective, flexible and efficient GHRM practices. 3. The role of Big Data management in informing GHRM practice. 4. Determining the consequences of HRM. 5. Application of various theories to understand GHRM. 6. Impact of geographical context. 7. Applying various research methodologies.
Pham et al., 2019	Green HRM - Descriptive data and identified key topics of GHRM literature	1. National contexts, 2. Research methods, 3. Industries/economic sectors, 4. GHRM practices, 5. Role of GHRM for employees, 6. Roles of GHRM for organizations, 7. Role of the external environment, 8. Technology based perspective/Industry 4.0 and the circular economy	<u>Overview of the Literature (HRM focus) AND Identification of Research Gaps</u> Comprehensive descriptive data to give an overview of the GHRM field and specific research agenda proposed based on systematic identification of research gaps in the literature.	Range of specific future research agendas recommended drawn from identified gaps in the research, including examination of GHRM in different contexts, applying different methodologies, examining impact of GHRM in varying industries, the role of external environmental factors, the role of Big Data and industry 4.0, and integration within sustainable development generally.

Pham and Paille, 2019	Green Recruitment and Selection - Identified key topics in Green Recruitment and Selection (GR&S)	1. Green criteria for selecting potential candidates, 2. Company Corporate Environmental Sustainability (CES) practices for job seekers perceptions of org attractiveness (mediators/moderators)	<u>Overview of the Literature</u> (GR&S focus) Identifies researched GR&S practices utilised and recommended in the literature, and identifies the mediators and moderators found in empirical research for the relationship between CES and applicant attraction outcomes.	No specific research agenda provided.
Stefanelli et al., 2019	Green Training - Descriptive data and identified key topics in Green Training (GT) literature	1. Descriptive data of GT literature, 2. Overview of key aspects of GT literature including ET objective, EM practices, beneficiaries of ET and training process phases.	<u>Overview of the Literature</u> (GT focus) AND <u>Identification of Research Gaps</u> Identifies and surmises the GT literature. Provides a comprehensive research agenda for GT drawn from the literature.	Range of specific future research agendas recommended drawn from identified research gaps, including topics such as country context, research methods and variable constructs, benefits of GT by stakeholder and breadth of training phases explored.
Ren et al., 2018	Green HRM - Identified key topics in GHRM literature.	1. Origins of GHRM, 2. Conceptualisation of GHRM, exploring practices and strategy, 3. Working definition. 4. Measurement of GHRM,. 5. Theoretical foundations in GHRM research.	<u>Development of Conceptual framework</u> Develops a framework for understanding the antecedents, consequences and contingencies of GHRM.	1 Theoretical research agenda (conceptualisation and theoretical basis of GHRM, employee perceptions and interpretations of GHRM). 2. Empirical research agenda (GHRM interactions with other management functions, measurement of GHRM, multi-level analysis, context and contextualisation, methodology used in GHRM research).
Tariq et al., 2016	Green Employee Empowerment - Descriptive Data	1. Descriptive data of Green Employee Empowerment (GEE) literature, 2. Overview of employee empowerment literature pertaining to GHRM.	<u>Overview of the Literature</u> (Green EE focus) Collates and summarises GHRM literature focused on motivating employees to pursue green tasks.	No specific research agenda provided
Renwick et al., 2016	Green HRM - Identified key topics in GHRM literature.	1. Developing Environmental Management (EM) abilities (R&S, T&D, Mgt development and leadership), 2. Motivating green staff (PM & PA, Pay, rewards and org culture), 3. Facilitating EM opportunities (Employment relations, employee engagement), 4. Strategy and GHRM.	<u>Overview of the Literature</u> (GHRM focus) Provides an update to their earlier literature review, examining GHRM practices by AMO, and emerging literature exploring strategy of GHRM.	1. Research that links EM with specific HRM functions, with specific suggestions for future research by each main HR activity area. 2. Research that links ES and SHRM, such as linkages between strategic orientations and GHRM systems, HR manager viewpoints on ES, determinants of enviro green behaviour, construct and utilisation of EM measures, effectiveness of processes to align HRM with ES, global GHRM, green WLB, and applicability of existing theoretical frameworks.

Renwick et al., 2013	Green HRM Practices - Identified key topics in GHRM literature.	1. Developing green employees (R&S, T&D, Enviro knowledge, Mgt development and leadership, Green leadership), 2.Motivating green (PM and PA, Pay and Rewards), 3. Providing opportunity (tacit knowledge, empowerment and engagement, supportive cultures, role of union).	<u>Overview of the Literature</u> (GHRM focus) Identifies and summarises the main GHRM practices by AMO theory, drawing heavily on research on Environmental Management.	1. Distinguishing causes of effective and ineffective Green Employee Involvement (EI) initiatives. 2. Exploring the theoretical basis of EI and positive organisational and individual outcomes. 3. Examining the impact of EM on selection practices. 4. Examination of effectiveness of developmental GHRM. 5. Exploration of seeming reluctance to implement Green Rewards. 6.Greater exploration of impact of GHRM systems overall.
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