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Green Human Resource Management- A Review and Research Agenda

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The paper advocates for merging the separate realms of environmental management (EM) and human resource management (HRM) research. Using the framework of Ability-Motivation-Opportunity (AMO) theory, it organizes existing literature and highlights the significance of Green human resource management (GHRM) processes in people management. Its contributions include synthesizing current research, outlining the field's landscape, pinpointing gaps, and proposing potential future research directions. The review reveals a disparity: while there's ample understanding of how organizations cultivate Green abilities and offer opportunities for environmental involvement, comprehension of how GHRM practices influence employee motivation in this context lags behind. Additionally, organizations aren't fully leveraging GHRM practices, potentially limiting their effectiveness in enhancing environmental management efforts.

Introduction

Recent global attention has focused on environmentalism, spurred by initiatives like the Kyoto Protocol in 1997 and conferences such as Bali 2007 and Copenhagen 2009, as well as notable industrial accidents like the BP Texas City Refinery incident in 2005, which resulted in fatalities and injuries. Within the management discipline, there's a burgeoning body of research on various aspects of sustainability, including Green marketing, Green accounting, Green retailing, and Green management in general. However, Green human resource management (GHRM) research, which addresses the HRM dimensions of environmental management (EM), remains fragmented and diverse in comparison.

This paper has three primary aims: firstly, to synthesize and consolidate the HR components of EM; secondly, to chart the landscape of this interdisciplinary field; and thirdly, to propose avenues for further investigation in GHRM. In doing so, we respond to calls in the literature to integrate EM and HRM research, broaden the scope of strategic HRM to encompass sustainability issues, and specifically address the question raised by Bunge et al. (1996) regarding the role of human resource management in pollution prevention.

We commence with a discussion on our chosen methodology and then introduce the theoretical framework guiding our review. Subsequently, we delve into a comprehensive examination of the literature on the HR aspects of EM. Finally, we analyze the implications of our literature review and present overarching conclusions on the current state of the field, identifying potential areas for future research.

Methodology

To achieve the objectives of the paper, we employ a systematic review methodology, as outlined by Tranfield et al. (2003), utilizing an archival approach to construct a robust knowledge base of the GHRM field. Our analysis involves categorizing and organizing the existing literature in both environmental management (EM) and human resource management (HRM), spanning over two decades (from 1988 to 2011) to track the evolution of the field since the emergence of GHRM papers. We selected over 200 relevant sources, including books, journal articles, edited works, and discussion papers, for detailed examination. Specifically, we focus on papers that present empirical findings or develop theoretical arguments concerning the relationship between EM and HRM, excluding those offering unsupported prescriptions for GHRM development.

Our review encompasses various GHRM practices gleaned from diverse sources, such as case studies, business reports, and survey findings. To determine which aspects of people management to include in the review, we apply the Ability-Motivation-Opportunity (AMO) theory, as proposed by Appelbaum et al. (2000). This theory, widely used in empirical studies, posits that HRM practices enhancing human capital contribute to organizational performance by increasing employees' abilities, motivation, and opportunities for engagement. Specifically, it suggests that HRM achieves this by attracting and developing highperforming employees, fostering motivation through contingent rewards and effective performance management, and enabling employee involvement in knowledge-sharing and problem-solving activities. Our review systematically examines each of these core components of GHRM.

Developing Green abilities: attracting and developing talented staff *Recruitment and Selection*:

In the competitive landscape of talent acquisition, organizations, particularly multinational corporations, are embracing Green Human Resource Management (GHRM) practices as a means of enhancing their appeal to environmentally conscious job seekers. The alignment between organizational values and environmental reputation is increasingly crucial in recruitment efforts. With the shift towards web-based recruitment, employers now have the opportunity to showcase their environmental initiatives more extensively compared to traditional media. Research suggests that a positive environmental image significantly influences an organization's attractiveness to potential candidates. However, while environmental practices may catch candidates' attention, factors like pay tend to have a stronger impact on job pursuit intention.

These trends align with signaling theory in recruitment, where candidates rely on organizational attributes, such as environmental reputation, to gauge future actions. Studies indicate a preference among university students for organizations with pro-environmental images. Moreover, high-achieving graduates consider a company's environmental performance when making jobrelated decisions. This shift in candidate preferences is influencing organizational strategies, with many employers now prioritizing Green initiatives in their recruitment efforts.

Creating and Sustaining a Pro-environment Organization:

Building a pro-environmental organizational culture necessitates hiring employees who are willing to engage in environmental management (EM) activities. Some employers are adjusting their recruitment criteria to prioritize candidates with environmental knowledge and motivation. While systematic studies on 'Green-collar' recruitment practices are limited, there's a growing body of literature offering guidance on how organizations can align their hiring practices with environmental goals.

Employee Training in EM:

Training plays a pivotal role in GHRM, enhancing staff awareness of environmental impacts and equipping them with necessary skills. Organizations worldwide are investing in training programs focused on eco-friendly business practices. Trade unions, particularly in Europe, are also involved in environmental training initiatives, highlighting the importance of skill development in EM.

Environmental Knowledge:

Developing an environmental knowledge base is essential for effective training and fostering a culture of environmental responsibility. Studies emphasize the significance of integrating employees' tacit knowledge into EM efforts to identify sources of pollution and develop preventive solutions.

Management Development and Leadership: Management staff training is crucial for effective GHRM implementation. Business schools are increasingly incorporating environmental management into their curricula, nurturing future environmental leaders. Studies underscore the influence of personal values on Green leadership behaviors, emphasizing the role of individual champions in driving ecological responses within organizations.

Green Leadership:

Research into environmental leadership reveals that personal values strongly influence leaders' behaviors in promoting sustainability. Studies involving leaders from various sectors in Canada, the US, the UK, and Japan consistently show that individuals with eco-centric, adaptable, and self-transcendent values tend to champion environmental initiatives within their organizations. Rather than adhering to universally applied decision rules, these leaders are driven by their own values when making ecological decisions.

In China, executives are observed to spearhead new environmental initiatives based on their personal values and principles, indicating the significant role of managerial attitudes in shaping organizational responses to environmental challenges. Similarly, in the US wine industry, managerial attitudes and norms serve as powerful drivers for active engagement in environmental management behaviors.

Moreover, studies of management practices in mediumsized and large organizations in Germany and the Netherlands highlight a participatory leadership style, with leaders actively involving employees in sustainability processes. These findings underscore the importance of leadership in fostering a culture of environmental responsibility and engaging employees in sustainable practices.

Motivating Green employees

Performance management and appraisal

Performance Management (PM) in Environmental Management (EM) poses several challenges, particularly in measuring environmental performance standards across various organizational departments and obtaining usable data on the environmental performance of these units and staff. Some firms have tackled this issue by implementing corporate-wide environmental performance standards and employing Green information systems/audits to gather useful data on environmental performance. One effective approach to implementing Green PM systems is to establish performance indicators for each environmental risk area.

Green performance appraisal (PA) encompasses aspects such as environmental incidents, adherence to environmental responsibilities, and communication of environmental concerns and policies. Challenges in environmental PA include the need for managers to be held accountable for EM performance in addition to broader performance objectives. However, environmental PA systems often seem limited to plant or division managers and executives, rather than being applied more broadly to other employees. There's also debate regarding the effectiveness of negative reinforcements in PA systems to drive environmental improvements, as they may not necessarily educate staff in good EM practice and may lead to self-protective behaviors.

Pay and Reward Systems:

In line with a strategic approach to reward management, organizations are developing reward systems to incentivize EM, especially for senior managers. For instance, some British companies have included Available online at: https://jazindia.com 620

environmental targets in their performance-related pay assessments for senior managers. Research suggests a positive relationship between CEO compensation and firm environmental reputation, although CEOs may not always be rewarded for their firms' EM records. However, recent studies indicate stronger support for executive compensation being positively associated with environmental performance.

There's emerging evidence suggesting that paying for EM performance can be effective, with companies offering contingent remuneration for senior managers showing higher EM performance. However, causation remains unclear, as firms may be reacting to environmental concerns by implementing managerial rewards for EM performance. Pay and EM linkages for other staff are less reported in the literature, with examples primarily focusing on competence-based reward schemes for frontline staff acquiring specific environmental competencies.

Non-monetary recognition rewards for EM, such as public recognition and innovative incentives like paid vacations and gift certificates, have been found to significantly impact employee willingness to generate ecoinitiatives. These initiatives foster open communication and encourage employees to discuss their environmental ideas openly. In the UK, examples of company practices include the use of carbon credit cards, cash incentives for purchasing hybrid cars, and tax incentives for loaning bicycles to employees, demonstrating a growing trend towards integrating environmental incentives into reward strategies.

Providing Green opportunities: employee involvement

Encouraging broader employee participation in Environmental Management (EM) rather than limiting involvement to managers and specialists is often viewed as essential for achieving successful outcomes. Employees themselves are frequently identified as a source of pressure for organizations to address environmental issues. Research suggests that organizations with proactive environmental commitment profiles tend to view employees as a significant source of pressure.

Involving employees in EM has been shown to improve various key outcomes, including efficient resource usage, waste reduction, and pollution prevention. Practices to increase Employee Involvement (EI) in EM range from traditional methods like newsletters and suggestion schemes to more innovative approaches like establishing specific Green/Environmental action teams and promoting telecommuting and car-sharing among employees.

Employee involvement in EM contributes through three core processes: tapping into employees' tacit knowledge gained from their close links to production processes, empowering employees to make suggestions for environmental improvements, and fostering a culture that supports EM improvement efforts.

Tacit knowledge plays a crucial role, as evidenced by studies in industries like smelting plants and automobile manufacturing, where workers' knowledge has proven useful in identifying pollution sources and developing preventive solutions. Empowerment and engagement of employees are also vital for successful EM, with senior management commitment providing the framework and supportive managerial behaviors encouraging employee engagement in innovative environmental activities.

Cultivating a supportive culture for EM is essential, with organizations needing to embed values that support longterm sustainability. A strong pro-environmental culture is facilitated by informed employees who are actively involved in EM activities. However, sustaining such cultures over the long term can be challenging, particularly with changes in managerial personnel and organizational priorities.

Trade unions play a significant role in promoting employee involvement in EM, driven by their concerns for workplace safety, job protection, and the creation of Green jobs. Initiatives such as environmental education programs for union members and the development of workplace environmental representatives aim to strengthen workplace engagement in EM. Despite some good practices, there remains resistance from some employers to involve unions in EM, often viewing it as a management prerogative.

Discussion and conclusions

The literature on Environmental Management (EM) often emphasizes that since organizations are the primary contributors to environmental problems, they have a significant role to play in addressing these issues. Consequently, there has been a proliferation of ecoinitiatives launched by organizations and managers to tackle EM concerns. This review highlights the emergence of a Green Human Resource Management (GHRM) model as one organizational response to environmental degradation. Various GHRM practices have been identified, focusing on skill development, motivation, and employee involvement, which are summarized in Table 1 based on the AMO model.

The review indicates that while some aspects of the GHRM model have been extensively researched, others remain relatively underexplored. Employee involvement (EI) in EM initiatives has received significant Available online at: https://jazindia.com

attention, likely because EI is a longstanding and well-researched area of Human Resource Management (HRM). Green EI, as the latest variant of these initiatives, has become a natural first step for organizations introducing EM programs. There is considerable evidence suggesting the positive impact of EI on EM outcomes such as resource efficiency, waste reduction, and pollution prevention, as well as some evidence of its positive effects on employee outcomes like job satisfaction.

The key research questions in this area now focus on identifying the distinguishing factors between effective and ineffective Green EI initiatives. Research investigating the key design variables of effective Green EI initiatives and understanding the theoretical mechanisms linking employee participation in EI schemes to positive outcomes would be valuable.

Additionally, research on attracting and developing staff in the context of GHRM is gaining attention. Signaling theory has been used to examine how candidates perceive an organization's environmental image and reputation during the recruitment process. It is evident that being perceived as pro-environment is crucial for attracting high-quality talent, with some candidates willing to accept lower salaries to work for environmentally responsible organizations. However, there is limited research on how organizations select candidates based on their pro-environment stance. A research program exploring the impact of the EM movement on selection criteria and processes would contribute to our understanding of pro-environment recruitment and selection practices.

The literature on Environmental Management (EM) highlights the widespread adoption of environmental training and the significant efforts made by firms to develop environmental knowledge bases, as well as to cultivate pro-environmental managers and leaders. However, there is a lack of careful assessment regarding the overall effectiveness of these developmental efforts. Additionally, there is a need to expand the theoretical basis of Green leadership research beyond a focus on managerial values, personality, and cognition, to consider other potential antecedents of Green leadership.

One promising avenue for research is to explore the overlooked role of emotions in EM. Drawing on theories such as issue ownership, identification theory, and affective theory, researchers argue that an individual's emotional reaction to EM significantly influences their ownership of pro-environmental initiatives. Empirical research addressing this agenda could shed light on the uneven adoption of ecoinitiatives in organizations and inform training initiatives aimed at fostering broader ownership of EM among employees.

Another area of Green Human Resource Management (GHRM) with limited research is the motivation of employees to engage in EM through performance appraisal (PA) and reward-management practices. Despite extensive prescriptive literature on incorporating environmental objectives into formal PA and incentive schemes, empirical research on this topic is scarce. Organizations primarily incentivize EM activities through Green benefits and recognition rather than monetary rewards. Investigating why organizations are hesitant to use reward management to incentivize staff involvement in EM would be valuable.

To date, there are no reported studies on the overall impact of GHRM systems on environmental outcomes or wider organizational performance metrics. It is suggested that GHRM practices should be viewed as interdependent and reinforcing "bundles" of activities, with a synergistic link between practices enhancing their impact when implemented together. Research examining the impact of GHRM systems, rather than individual practices, would be beneficial in this regard.

Despite the potential of GHRM as a management research area, academic research in this field lags behind practice, with an imbalance between practitioner and academic publications. Closing this practice-research gap in GHRM is essential. Additionally, the majority of GHRM literature is Western-centric, highlighting the need for future studies to address this gap, particularly given the significance of Asian economic development for EM

Furthermore, it is proposed that the notion of sustainability applies to HRM itself. GHRM practices can contribute to both organizational and employee wellbeing. Better environmental performance is associated with improved financial performance outcomes, suggesting that GHRM practices may enhance both environmental and financial performance. Moreover, GHRM practices are likely to improve employee wellbeing by enhancing the working environment and meeting the needs of an environmentally aware workforce. Overall, GHRM has the potential to positively impact both employee well-being and organizational performance.

Developing	GreenMotivating Green Employees	Providing	
Abilities		Green	
		Opportunities	

Attracting/selecting	Performance management/appraisal	Pay and rewar		Supportive climate/culture
• Green issue specified in job	es• Green performance indicate	•	ns• EI practices in	
descriptions	included in PM system and	• Reward scheme linked to staff	esnewsletters,	pro-environment culture
candidates, applicant	obappraisals es to• Communication of Gre schemes	gaining EM skil via skill-based eenpay	lsproblem- solving groups,	Union role in EI and EM
 Green employ branding (Green	to all levels of staff throu PMA • erscheme, establishing firm-wi	(transport/travel)		•EM education programmes for union members
	dialogue on Green matters		enEmpowerment and engagement	•Joint management/union training
• Firms recruemployees who are	iit• Managers/employees are Green •	setFinancial/tax incentives (bicyc		programmes in EM
'Green aware'	targets, goals a responsibilities	ndloans, use of le polluting cars)	sssuggestions for EM improvements	Green union representatives
• Green issues induction /socialization processes	in• Managers are set objective on achieving Green outcomes included in appraisals	 esMonetary-based EM reward system Monthly managerial bonuses for 	• Increasing employees' psychological empowerment enhances their willingness to	
Training Development	&• Dis-benefits in PM system	forgood EM	make suggestions fo EM	r
• Employee training EM to increase awarenes skills and expertise	EM •	ngIncluding Gree targets as part of PRP for seni- staff • Executive compensation for	enimprovements or Supportive managerial and supervisor	e
• Training for Gree jobs, and	en	managers part based on EM	lyemployee engagement in EM	n
integrated training create an emotional involvement in EM • Trade union reps g information on EM, and union activist EM	et	• Recognition-base rewards in EM for staff (publ recognition, awards, pa vacations, tim off,	ed ic	

gift certificates) training

Green knowledge

management

Using employees' tacit

knowledge in EM Training

workshops for

managers

- Green MBAs
- Green

leadership styles

Table 1. Summary of GHRM practices ©

Table 2. Summary of an AMO-based research agenda in GHRM

Research Gaps

Attracting and developing staff

- 1. How organizations select candidates in line with pro-EM stances/The impact of the EM movement on selection criteria and processes
- 2. Assessing the effectiveness of developmental efforts

Employee motivation

3. Motivations of employees to be involved in EM via PA/reward practices

Green opportunities

- 4. What distinguishes effective Green Employee Involvement EI initiatives from ineffective ones? Identifying key design variables of effective Green EI initiatives.
- 5. Understanding the linking mechanisms between employee participation in Green EI schemes and positive organizational/employee outcomes

GHRM systems

- 6. Impact of GHRM systems on environmental outcomes/wider firm performance metrics Research Needs
- *Organizational level surveys of Green recruiters to research the criteria used and selection processes involved in selecting environmentally aware staff.
- *There is a considerable general body of work on whether 'training pays'; research could now focus on whether Green training pays.
- * There is a need to understand more fully the causality of relationships between senior manager pay and firm environmental performance using longitudinal research designs.
- *A need for exploratory research to examine why organizations are reluctant to use pay to incentivize EM performance below senior levels.
- *Green EI is the most developed area of GRHM practice, with a growing number of studies. We have a number of meta-analytic studies of EI in general, a meta-analysis of the Green EI literature would add to our understanding.
- *Testing potential mediators of staff tacit knowledge, employee empowerment, supportive work cultures.
- *Organizational level research examining the relationship between GHRM 'bundles', environmental performance and organizational performance.

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