



## IMPLEMENTING GREEN HRM IN THE INDIAN OIL AND GAS SECTOR: A QUALITATIVE ANALYSIS

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### Abstract

This study explores the Green Human Resource Management (Green HRM) practices followed within the Indian oil and gas sector and the process of implementation of these practices. Using a qualitative case study approach, interviews were conducted with 11 experienced HR professionals across three oil and gas companies. Data analysis utilized thematic coding with Atlas-ti software, to reveal key themes around the Green HRM practices, individual roles and systematic processes that drive Green HRM implementation, such as top management commitment, cross-functional collaboration, and green-focused incentive systems. Findings highlight the complex interplay between organizational culture, leadership, and structured HR policies in fostering sustainability. This study contributes to the understanding of Green HRM implementation in India's energy sector, offering a detailed framework to guide practitioners and policymakers in integrating environmentally sustainable HR practices effectively in their core business operations.

**Keywords:** Green HRM, Green HRM Practices, Oil and Gas, Qualitative Study.

### 1. INTRODUCTION

Indian oil and gas companies are increasingly moving towards sustainable practices due to their prominent role as major contributors to environmental harm. Recognizing this impact, organizations face substantial pressure from diverse stakeholders, including government regulators, investors, customers, and local communities, to critically re-evaluate and realign their operations (Raut et al., 2017). In response, Indian oil and gas companies are compelled to transform their business frameworks by embedding sustainability into their core strategies to meet these expectations. This includes aligning their operations with United Nations Sustainable Development Goals (UN SDGs) (United Nations, 2023), thereby demonstrating their commitment to reducing ecological footprints and adopting cleaner, more responsible energy production and distribution practices (IEA, 2021).

Green Human Resource Management (Green HRM) is widely recognized as a significant strategy for embedding environmental values and practices within organizational processes (Arulrajah et al., 2016). It integrates sustainability into HR functions such as recruitment, training, performance management, and reward systems (Ren et al., 2018) to cultivate eco-friendly behaviour among employees (Renwick et al., 2013a). However, the literature extensively discusses various Green HRM practices (Chen et al., 2021; Muisyo & Qin, 2021; Surya et al., 2024), there exists a significant gap regarding the detailed processes for effectively implementing these initiatives in oil and gas sector (Rani & Mishra, 2014). Many studies mention what practices should be adopted (Bangwal & Tiwari, 2020; Dumont et al., 2017; Gupta, 2018; Tang et al., 2018) but fall short of explaining how organizations operationalize and embed these practices within their specific contexts.

This study addresses the mentioned critical gap in the literature by focusing on the detailed implementation process of Green HRM, particularly within India's oil and gas sector, a field of tremendous economic importance (Rojo-Suárez et al., 2024). While much of the existing research elaborates on green HRM practices conceptually (Albloush et al., 2022; Ghouri et al., 2020; Pinzone et al., 2016; Tang et al., 2018), there is limited understanding of how these

practices are operationalized in complex, real-world organizational settings. By examining three top-tier Indian oil and gas companies across the upstream, midstream, and downstream sectors, this research provides nuanced insights into the processes and strategies involved in embedding sustainability into HR functions.

The research is directed by the following research objectives:

1. What specific Green HRM practices and policies are adopted by Indian oil and gas companies?
2. In what ways are these Green HRM policies and practices implemented within the Indian oil and gas sector?

The paper proceeds systematically, starting with a comprehensive sectoral context of Indian oil and gas sector, literature review followed by the research methodology, Findings and discussion sections and concluding with study's conclusions, implications and limitations.

## 2. SECTORIAL CONTEXT

### *Oil and Gas sector in India*

India is a lower-middle-income economy categorized by a diverse energy sector, with oil and gas playing a critical role in fuelling economic development (Ministry of Petroleum and Natural Gas, 2024). Since economic liberalization in 1991, India has experienced substantial industrial growth and urbanization, leading to a sharp increase in energy demand. The oil and gas sector is central to this transformation, accounting for approximately 35% of India's primary energy consumption, and contributes significantly to government revenues and foreign exchange expenditure. Although India is not endowed with vast reserves, compared to oil-rich nations, it ranks as the third-largest energy consumer in the world and is heavily reliant on imports to meet over 80% of its crude oil demand (IEA, 2021).

The strategic importance of the oil and gas industry in India is emphasized in the national energy strategy, which aligns with the country's development goals under the "Atmanirbhar Bharat" (self-reliant India) initiative. India's Vision 2047 and the National Hydrogen Mission underscore a dual objective, securing energy access for a growing population while transitioning to a sustainable energy future. However, the oil and gas sector in India faces significant environmental and sustainability challenges (TERI, 2020). As a signatory to the Paris Agreement, India is committed to reducing the carbon intensity of its GDP by 45% by 2030 compared to the 2005 levels. Thus, it is imperative for the oil and gas industry to adopt greener practices.

To address these concerns, Indian oil and gas companies have invested increasingly in environmental sustainability initiatives. Major public-sector enterprises, such as the Indian Oil Corporation (IOC), Bharat Petroleum (BPCL), and ONGC, have implemented Environmental Management Systems (EMS) and are pursuing ISO 14001 certification (Indian Oil Corporation Limited, 2024). Furthermore, there is growing emphasis on integrating green HRM strategies, including eco-friendly training programs, sustainable performance metrics, and employee involvement in environmental initiatives.

Companies are increasingly disclosing their environmental and social performance through sustainability reports aligned with global standards, such as the GRI and Business Responsibility and Sustainability Report (BRSR) mandated by the SEBI this shows their Commitment to sustainability. For instance, ONGC's latest sustainability report outlines its progress in emission reduction, biodiversity conservation, and employee health and safety. The

company also highlighted its investments in renewable energy and hydrogen technology as part of its long-term strategy to decarbonize operations.

In conclusion, while the oil and gas sector continue to be the keystone of India's energy landscape, its long-term viability depends on a successful balance between economic growth and environmental stewardship. Indian companies' current efforts to align their operations with sustainability goals reflect a broader shift in corporate and governmental priorities, signalling the need for continued research and policy innovation in this evolving sector.

### 3. LITERATURE REVIEW

Green HRM integrates environmental management into traditional HRM functions to promote environmental sustainability in organisations (Shafaei et al., 2020). It involves designing HR policies, practices, and systems that encourage employees to adopt environmentally responsible behaviours and contribute to organizational sustainability goals (Renwick et al., 2013). Green HRM recognizes that employees are key stakeholders and agents of environmental change within organizations and thus seeks to align HR strategies with environmental objectives to reduce ecological footprints and foster a green culture (Amrutha & Geetha, 2020). It has been observed that human resource dimensions are essential for maintaining environmental programs on a daily basis in organizations (Jose & Jabbour, 2011). Green HRM is considered as the extension of Human Resource Management, Green HRM integrates many HRM techniques to attain environmental objectives (Faisal, 2023). The green HRM practices listed in literature are mentioned below.

#### *Green recruitment and Selection*

Green recruitment refers to the process of selecting individuals who possess the knowledge, skills, attitudes, and behaviours aligned with an organization's environmental management practices (Ahmad, 2015). It is considered a fundamental HR function because it forms the foundation for effective Green HRM implementation (Jackson et al., 2011; Shah, 2019). Organizations are increasingly building their reputation as environmentally responsible employers to attract candidates who are conscious of sustainability issues (Gupta, 2018; Masri & Jaaron, 2017). The most important characteristics of green recruiting and selection (GRS) are-

- Hiring a candidate with awareness and understanding of the environment(Ahmad, 2015; Masri & Jaaron, 2017; Nejati et al., 2017; Rajabpour et al., 2022)
- Green branding to attract green employees (Gupta, 2018; Rajabpour et al., 2022; Tang et al., 2018; Zahrani, 2022)
- Considering candidates who prefer to work with green organisation (Gupta, 2018; Rajabpour et al., 2022; D. Renwick et al., 2013b; Tang et al., 2018)
- Considering employee of our organisation who is environmental conscious to fill the internal vacancy (Gupta, 2018; Rajabpour et al., 2022; Tang et al., 2018; Zahrani, 2022)
- Separate positions for managing green practices (Gupta, 2018; Nejati et al., 2017)
- Making candidate mindful about the environmental policies, goals of the organisation (Gupta, 2018; Opatha & Arulrajah, 2014)
- Use of online medium (video conferencing) for recruitment (Gupta, 2018; Nejati et al., 2017)



### *Green Training and Development*

Training plays very vital role in preparing employees with new skills, particularly through environmental training that prepares them to address ecological challenges effectively (Tang et al., 2018). Training contributes significantly in achieving environmental objectives and enhancing overall environmental performance. According to Opatha & Arulrajah, (2014), environmental education helps cultivate an organizational culture rooted in green practices and has the most substantial influence on raising employees' environmental awareness.

- Developing training programs according to the organisational needs. (Gupta, 2018; Mandip Gill, 2012; Masri & Jaaron, 2017; Tang et al., 2018)
- Initiatives for green knowledge management. (Gupta, 2018; Masri & Jaaron, 2017; D. Renwick et al., 2013a; Tang et al., 2018)
- Conduct online training and provide study material online to reduce paper waste (Gupta, 2018; Masri & Jaaron, 2017)
- Training how to save energy in organisation. (Ahmad, 2015)
- Training on waste management (Gupta, 2018; Renwick et al., 2016)
- Job rotations on green projects or assignment (Arulrajah et al., 2016; Gupta, 2018)
- Involve employees in environmental problem solving (Gupta, 2018)

### *Green Performance Management*

Green performance management is defined as a process that inspires employees to improve their professional skills to meet organizational goals and objectives (Ahmad, 2015). By holding employees accountable for creating and sustaining an environmentally responsible workplace, this approach motivates them to engage actively in the organization's sustainability efforts (Khamdamov et al., 2023). Therefore, many companies prioritize implementing standardized green performance management systems to drive sustainability across their operations (Shah, 2019).

- Using green indicators to measure Performance. (Ghouri et al., 2020; Gupta, 2018; Tang et al., 2018)
- Establishing green goals for employees (Ghouri et al., 2020; Gupta, 2018; Masri & Jaaron, 2017; Nejati et al., 2017; Tang et al., 2018)
- Establishing targets for managers to achieve green outcomes by their groups. (Ghouri et al., 2020; Gupta, 2018; Tang et al., 2018)
- Negative appraisal for the employees with negative environmental performance (Gupta, 2018; Masri & Jaaron, 2017; Nejati et al., 2017; Tang et al., 2018)
- Regular feedback to employees (S. Ahmad, 2015; Gupta, 2018; Masri & Jaaron, 2017; Nejati et al., 2017; Tang et al., 2018)

### *Green Pay and Reward System*

Organizational culture refers to the collective norms, standards, and expectations that shape how employees behave and perform tasks within an organization (Maheshwari et al., 2024). It encompasses the shared values, beliefs, and unwritten rules that guide interpersonal interactions, decision-making, and work practices (Gupta, 2018). It sets the tone for acceptable behaviours and establishes consistency in how tasks are carried out, fostering a sense of

identity, belonging, and commitment among members (Pham et al., 2020). This culture is reflected in visible artifacts like rituals and symbols, articulated values, and deep-seated assumptions that evolve over time, ultimately shaping organizational effectiveness and employee engagement (Ahmad et al., 2023).

- Green Travel benefit to employees (Gupta, 2018; Jackson et al., 2011; D. Renwick et al., 2013b; Tang et al., 2018)
- Financial benefits to purchase green products (Gupta, 2018; Jackson et al., 2011; D. Renwick et al., 2013b; Tang et al., 2018)
- Recognition for environmental management activities (Gupta, 2018; Jackson et al., 2011; D. Renwick et al., 2013b; Tang et al., 2018)
- Bonus pay for employees who achieve their environmental targets (Gupta, 2018; Jackson et al., 2011; D. Renwick et al., 2013b; Tang et al., 2018)
- Rewards for green suggestions (Gupta, 2018; Jackson et al., 2011; D. Renwick et al., 2013b; Tang et al., 2018)
- Provide team rewards (Gupta, 2018)
- Create negative reinforcement like warnings, suspensions for lapses (Bangwal & Tiwari, 2020)

#### *Green Employee Empowerment and Involvement*

Green employee empowerment and involvement refer to the practice of enabling and engaging employees in the creation and implementation of environmentally sustainable initiatives within the workplace. As noted by (Tariq et al., 2016), empowering employees plays a moderating role in enhancing their motivation to adopt and support green HRM practices, strengthening their commitment to environmental responsibilities (Mishra, 2017).

- Clear policies and vision for environmental management (Gupta, 2018; Jackson et al., 2011; D. Renwick et al., 2013b; Tang et al., 2018)
- Create a healthy work culture for learning and practicing environmental practices (Gupta, 2018; Jackson et al., 2011; D. Renwick et al., 2013b; Tang et al., 2018)
- Involvement of employees in solving green issues (Gupta, 2018; Tang et al., 2018)
- Regular practice sessions for employee involvement (Gupta, 2018; Masri & Jaaron, 2017; Tang et al., 2018)
- No punishment for failed environment suggestion (Gupta, 2018; Nejati et al., 2017)
- Introducing policies to report unethical practices regarding environment (Gupta, 2018; Masri & Jaaron, 2017; Tang et al., 2018)
- Involving employees in decision making and strategy formulation (Gupta, 2018; Masri & Jaaron, 2017; Tang et al., 2018)

#### *Green Management of Organizational Culture*

Organizational culture can be understood as the collective standards and expectations that dictate how employees behave and perform tasks within an organization (Rajabpour et al., 2022). It comprises the shared norms, values, and practices that influence employee interactions, decision-making, and overall work behaviour. Within this broader concept,

organizational environmental culture specifically plays a critical role in shaping the adoption of Green HRM practices and directly impacts an organization's environmental performance (Shafaei et al., 2020).

- Use of formal and informal channels to spread green culture (Gupta, 2018; Rajabpour et al., 2022; Ren et al., 2018)
- Top management support on green practices (Gupta, 2018; Haldorai et al., 2022; Rajabpour et al., 2022; Tang et al., 2018)
- Involving environmental goals with business goals (Gupta, 2018; Masri & Jaaron, 2017; Rajabpour et al., 2022; Tang et al., 2018)
- Separate budget for environmental concerns (Gupta, 2018; Haldorai et al., 2022; Rajabpour et al., 2022)
- Introduce games with green themes for employees (Gupta, 2018)
- Improve employee health and safety (Gupta, 2018; Rajabpour et al., 2022; Tang et al., 2018)

Green HRM practices aimed at promoting environmental sustainability are well recognized and encompass recruitment, training, performance management, and employee engagement oriented towards eco-friendly objectives. However, the process of implementing these practices remains unclear and underexplored (Bahuguna et al., 2022). While the concept and practices of Green HRM are established, the actual implementation process requires more clarity and systematic development (Mishra, 2017) to overcome these challenges and effectively integrate sustainability into everyday HR functions and organizational culture. This gap highlights the need for research focused specifically on refining and operationalizing the implementation process of Green HRM for tangible environmental impact.

#### 4. METHODOLOGY

##### *Research approach*

This study adopts a qualitative research approach (Creswell, 2007), using the case study method which is well-suited for exploring the complex organizational phenomenon like implementing Green HRM in the Indian oil and gas sector (Yin, 2009). Qualitative methods allow for an in-depth examination of how organizational and environmental factors interact in the adoption and execution of Green HRM strategies, revealing both shared dynamics and sector-specific nuances. Theoretical sampling was employed, selecting three top Indian oil and gas companies representing distinct supply chain streams: Company A (upstream), Company B (midstream), and Company C (downstream). This sampling ensures a comprehensive view across the sector. Within these companies, a targeted group of HR professionals — five from Company A, and three each from Companies B and C — were chosen based on a minimum of five years' managerial experience in human resource management. This criterion ensured participants possessed deep insights into HR decision-making and policy implementation relevant to organizational performance and Green HRM strategies.

##### *Data collection and sampling*

Semi-structured interviews were taken (Maxwell & Kerja, 2011). It the primary data collection method, appropriate for gaining rich, detailed insights while allowing flexibility to explore emerging themes. A total of 11 HR professionals from three major Indian oil and gas

companies, representing upstream, midstream, and downstream segments, were interviewed. The selected participants' extensive HR managerial experience guaranteed practical knowledge and strategic perspectives on Green HRM implementation. Interviews lasted between 40 to 65 minutes and were conducted in English and Hindi, with participant permission allowing audio recordings; field notes supplemented the data.

#### *Data analysis*

Collected qualitative data were systematically analysed using thematic analysis (Braun & Clarke, 2014) by Atlas.ti software, applying a rigorous three-layer coding framework comprising themes, categories, and codes. This layered approach enabled the distillation of meaningful patterns from the data and facilitated the construction of a comprehensive understanding of Green HRM implementation dynamics. The coding and thematic analysis aligned with best practices in qualitative organizational research, capturing both common themes and unique organizational contexts. Through this careful analytical process, the study extracted nuanced insights into how these major Indian oil and gas firms operationalize Green HRM, addressing sector-specific implementation challenges and strategic enablers. This methodological rigor supports the study's goal to contribute valuable evidence and practical frameworks for refining green HRM implementation in complex industrial environments.

**Table 1: Information of the participants**

S. N0.	Participant	Code	Experience (years)	Company
1	Director	D	25	A
2	General Manager	GM	18	A
3	Deputy General Manager	DGM	10	A
4	Manager HR	M	8	A
5	Manager HR	M	6	A
6	Executive director	ED	19	B
7	HR Head	HH	20	B
8	Manager HR	M	7	B
9	General Manager	GM	28	C
10	Deputy General Manager	DGM	14	C
11	Manager HR	M	6	C

## 4. FINDINGS

This overarching theme focuses on how Green HRM is integrated within Indian oil and gas companies. It captures the strategic, managerial, and operational dimensions involved in embedding sustainability into HR practices and culture.

**Table 2: Summary of Key Research Findings (Green HRM practices)**

S. No.	Theme	Category	Code
1	Green HRM Practices	<b>Green Recruitment and selection</b>	Paperless hiring, Separate green positions.
2		<b>Green Training and Development</b>	Online trainings, online portals for training, online study material
3		<b>Green performance management</b>	Green goals, continuous feedback
4		<b>Green pay and reward system</b>	Reward for suggestions
5		<b>Green Employee Empowerment and Involvement</b>	Include employee suggestions, Employee involvement in policy formulation
6		<b>Green organisational culture</b>	Health and safety, Top management support

**Table 3: Summary of Key Research Findings (Implementation Process)**

S. No.	Theme	Category	Code
1	<b>Implementation of Green HRM</b>	<b>Individuals Involved</b>	<ul style="list-style-type: none"><li>• Top management commitment</li><li>• Sustainability/Green HR units</li><li>• HR managers experienced in policy development</li><li>• Employees</li></ul>
2		<b>Green HRM Implementation Process</b>	<ul style="list-style-type: none"><li>• Embedding sustainability in mission and vision</li><li>• Establishing dedicated green HR teams</li><li>• Cross-functional collaboration</li><li>• Integration of green goals in HR functions</li><li>• Employee training on sustainability</li><li>• Reward systems for green behaviour</li></ul>

#### **4.1 Description of Green HRM Practices in Oil and Gas Companies**

The study's first objective was to identify the Green HRM practices currently followed in Indian oil and gas companies. Based on thematic analysis of interviews, five main categories of Green HRM practices emerged, each further represented through specific codes that capture practical actions being taken in these organizations.

##### *(Category 1) Green Recruitment and Selection*

Green recruitment and selection focus on attracting candidates who are environmentally conscious and capable of supporting sustainability goals. Oil and gas companies are increasingly emphasizing green values during hiring processes by promoting paperless recruitment methods to reduce resource consumption. This includes using online applications, digital documentation, and virtual interviews instead of conventional paper-based approaches. Additionally, some companies are introducing separate green positions or sustainability-focused roles to strengthen their environmental management capabilities. This approach reflects a growing intent to align talent acquisition with the organization's broader sustainability strategy.

##### *(Category 2) Green Training and Development*

Training and development play a key role in building green competencies among employees. The participating companies have adopted online training platforms and portals that facilitate continuous learning while minimizing environmental impact. The use of online study materials and e-learning systems not only supports flexible education but also reduces paper consumption and travel-associated emissions. These green training initiatives aim to develop employees' awareness and skills related to energy conservation, pollution control, and environmental management, thereby embedding sustainability in everyday professional practices.

*“Most of the training are online now. Study material is also shared online it has helped in saving the resources”* (HR head with 20 years of experience)

##### *(Category 3) Green Performance Management*

Green performance management ensures that sustainability is integrated into how employee performance is measured and evaluated. The companies studied have begun incorporating green goals into individual and departmental performance assessments. Employees are encouraged to contribute to environmental objectives. Continuous feedback mechanisms are also established to monitor progress and reinforce environmentally responsible behaviours. By embedding green performance indicators, organizations ensure accountability and encourage

employees to see environmental stewardship as part of their routine responsibilities.

*(Category 4) Green Pay and Reward System*

The pay and reward system is designed to motivate employees to participate in green initiatives (Shafaei et al., 2020). Oil and gas companies have introduced reward mechanisms for employees who propose innovative sustainability ideas or demonstrate exceptional contribution toward environmental improvement. Rewarding suggestions that lead to measurable resource savings or improved environmental performance strengthens employee engagement in sustainability programs. This approach not only reinforces desired behaviours but also builds a sense of ownership among employees, motivating them to take voluntary initiatives aligned with the organization's eco-friendly goals (Saeed et al., 2019).

*(Category 5) Green Employee Empowerment and Involvement*

Employee empowerment and involvement are vital (Sathasivam et al., 2021) to the success of Green HRM. The study found that employees are encouraged to share their ideas through suggestion on portals. This participatory approach allows employees to take part in formulating environmental policies and implementing sustainability projects. Involving employees in decision-making processes builds a collective sense of responsibility and ensures that green initiatives are tailored to operational realities. Empowered employees act as change agents, translating top management's sustainability vision into practical outcomes at the ground level.

*“Before policy formulations employees are involved they can put their suggestions in the suggestion portals”* (HR manger with 10 years of experience)

*(Category 6) Green Organisational Culture*

The development of a green organizational culture supports all other HRM practices. Oil and gas companies actively promote environmental values through consistent leadership support and strong emphasis on health and safety (Zaid et al., 2018). Top management commitment to sustainability is visible through policies that prioritize environmental protection, resource optimization, and workplace safety. By integrating health, safety, and environmental principles into daily operations, these companies create a sustained culture of ecological responsibility. This cultural alignment helps reinforce the importance of sustainability across all employee levels and operational functions.

## 4.2 Implementation of Green HRM Process

This theme corresponds to the second research objective, which explores the implementation process of Green HRM in the oil and gas sector. Under this theme, two main categories emerged from the data analysis, and each category is further divided into specific codes representing the detailed elements of Green HRM implementation process.

*Category 1 – Individual involved*

In the category of Individuals Involved, top management commitment is critical as these senior leaders embed environmental sustainability into the organization's mission, vision, and strategic priorities. Their visible support and resource allocation signal the importance of green initiatives and inspire organization-wide commitment. Alongside them, dedicated sustainability or green HR units are established to focus specifically on developing, coordinating, and overseeing the implementation of Green HRM policies across departments. Experienced HR managers play a crucial role in translating these strategic goals into actionable HR processes, linking sustainability with talent acquisition, development, and appraisal. Additionally, employees at all levels are actively engaged through training and participatory

green initiatives, fostering a culture where sustainable behaviours become part of everyday work and shared values.

*“The direction comes from top management so the main role is of top management definitely. We have a separate department known as sustainability department they look after what and how can a company achieve sustainability.”* (Deputy General Manager with 14 years of experience)

*“Employees are the most important in implementation of policies, without them nothing can be achieved so their participation is very important”* (Manager HR with 8 years of experience)

#### *Category 2 – Green HRM Implementation Process*

In the category of Green HRM Implementation Process, embedding sustainability into mission and vision formalizes the organization's commitment to environmental stewardship as a core value. This step ensures that green HRM is aligned with the broader strategic framework. Establishing dedicated green HR teams institutionalizes sustainability within HR functions, providing the focus and accountability needed to implement initiatives effectively. Cross-functional collaboration facilitates integrated approaches where operations, compliance, and HR departments collectively develop and support environmental practices (Roscoe et al., 2019). Integrating green goals into HR functions means that recruitment, training, performance management, and reward systems explicitly incorporate sustainability criteria, ensuring accountability and motivation. Continuous employee training equips staff with necessary knowledge and skills to perform eco-friendly tasks. Performance appraisals include green criteria to measure individual contributions toward environmental goals, while reward systems recognize and incentivize employee efforts in promoting organizational sustainability. Together, these codes describe a comprehensive, multi-level process that operationalizes Green HRM from leadership commitment to employee engagement and systemic organizational changes.

*“When it comes from top management as a policy it is implemented there is no choice so yes if top management decide anything it becomes mandatory for employees to follow”* (HR head with 10 years of experience)

*“The role of HR department is very important in implementation; they motivate employees to adapt new policies by giving them trainings and further by recognising their achievements”* (General Manager with 18 years of experience)

## **6. DISCUSSION**

The findings of this study provide comprehensive insights into the adoption and implementation of Green HRM practices within the Indian oil and gas sector. The study's focus was to examine how organizations in this energy-intensive industry are incorporating sustainability principles into their HR processes and policies. The discussion integrates the findings obtained from in-depth interviews with 11 participants representing three major public oil and gas companies in India, along with existing literature, to present a synthesized understanding of the Green HRM transition process in this sector.

The review of existing literature indicated that several industries across the world have progressively integrated numerous Green HRM practices such as green recruitment, performance appraisal based on sustainability indicators, green training programs, and reward systems linked to environmental performance (Renwick et al., 2013; Jabbour & Renwick, 2020). However, the present study found that the extent of Green HRM adoption in the Indian

oil and gas sector is relatively limited compared to sectors such as manufacturing (A. Zaid et al., 2018; Haddock-Millar et al., 2016; Jnaneswar, 2023), health care (Mousa & Othman, 2020; Pinzone et al., 2016, 2019) or hospitality (Pham et al., 2019, 2020; Tanveer et al., 2024; Tuan, 2022). This difference appears to stem from two primary reasons. First, the oil and gas sector generally follows a top-down approach in management decision-making, which restricts the implementation of broad-based green initiatives across all organizational levels. Second, the sector's operational nature—comprising field operations, refining, drilling, and transportation—requires specialized competencies, making direct adaptation of practices from other sectors less feasible. What might be crucial in a service-based or technology-driven context, such as green office infrastructure or telecommuting, may not hold equal relevance in physically intensive industries like oil and gas.

Despite these sectoral constraints, the findings reveal that oil and gas companies in India are steadily moving towards cleaner and more sustainable practices. This transition is aligned with the national agenda for energy diversification and climate responsibility. Green HRM, as indicated by this study, serves as a strategic tool to foster environmentally responsible practices among employees and integrate sustainability within organizational operations. The first research objective focused on identifying the Green HRM practices currently followed by Indian oil and gas companies. From the thematic analysis of interviews, five major categories emerged that represent different dimensions of Green HRM application. These included green recruitment and selection, green training and development, green performance appraisal, green compensation and rewards, and employee involvement in environmental initiatives. Each category illustrates a specific HRM function through which sustainability objectives are embedded into organizational processes.

The second research objective aimed to explore how these practices are implemented and sustained in the organizational context. From the thematic interpretation, two overarching categories emerged: strategic implementation and participative culture. Together, these categories capture the dual process through which Green HRM is operationalized in oil and gas companies—through top management commitment and employee engagement. The codes extracted from participant narratives collectively demonstrate a systematic progression in the integration of Green HRM strategies, indicating that Indian energy companies are consciously aligning HR functions with sustainability goals.

A critical theme that emerged strongly from the data was the role of leadership in driving the transition toward Green HRM. The study confirms that senior management commitment remains the most influential factor determining the success of sustainability initiatives in the sector (Chen et al., 2021; Huo et al., 2020). Leadership acts as the catalyst that embeds environmental consciousness into the organization's strategic vision, policies, and practices. Top executives in the studied organizations have taken deliberate steps to include sustainability objectives in mission statements and to allocate the necessary financial and structural resources for the establishment of dedicated HR units focusing on environmental sustainability. This aligns with global research findings that highlight leadership's central role in championing green change, inspiring employees, and institutionalizing sustainable values across the organization. The operationalization of Green HRM practices in these companies depends on collaboration between various departments. The formation of cross-functional teams was found to be a key enabler (Jabbar et al., 2013). These teams ensure that HR policies addressing green concerns are integrated into organizational functions such as operations, safety, and project management. The cross-functional coordination enhances the ability to design practical and sector-specific green strategies rather than adopting generic models. For example, during

recruitment and selection, companies now increasingly prefer candidates with awareness of environmental safety or prior experience in sustainable project management (Jabbour et al., 2019). This approach demonstrates an institutional effort to attract and retain environmentally conscious talent capable of contributing to the company's sustainability goals.

Furthermore, in the training and development function, Green HRM practices have been applied through targeted programs aimed at upskilling employees in environmental management, waste reduction, and energy efficiency. Training modules focus both on technical competencies such as clean technology handling and on behavioural competencies like eco-friendly workplace habits. Performance appraisal systems in these organizations now incorporate environmental metrics alongside traditional performance indicators, ensuring that employees are assessed not only on productivity but also on their contribution to sustainability. Similarly, reward and recognition frameworks include incentives for employees or teams achieving measurable sustainability targets (Shah, 2019). By linking employee performance to organizational environmental outcomes, these HR interventions reinforce a green organizational culture supportive of continuous improvement.

A notable outcome from this study is the prominent role of employees as active contributors to sustainability transformation. Employees are not only receivers of green policies but also co-creators of environmental initiatives. This observation aligns with Buren (2022) who highlights the central role of employee participation in the success of sustainability programs. In the studied companies, employees were encouraged to suggest eco-initiatives, participate in green committees, and engage in campaigns promoting energy conservation and waste minimization. Such participative mechanisms enable a sense of shared accountability and collective responsibility for environmental outcomes, moving the organization beyond symbolic green practices to meaningful behavioural change.

This two-tier process—strong leadership at the top and proactive participation at the grassroots—creates a holistic framework for Green HRM implementation (Khan et al., 2021). It underlines that for Green HRM to be successful, it must not remain confined to policy documents but must permeate all organizational layers. This observation is consistent with global best practices, where effective Green HRM integrates top-down strategic direction with bottom-up involvement, ensuring alignment between corporate sustainability goals and employee-level actions (Renwick et al., 2016). Overall, the study contributes to the understanding of how Green HRM evolves within a heavy industrial context like the Indian oil and gas sector. It reveals that Green HRM implementation is not a single intervention but a multifaceted process involving strategic vision, structured HR initiatives, and a participative organizational culture (Kodua et al., 2022). The systematic integration of environment-friendly HR practices, coupled with the proactive role of leadership and cross-functional teams, provides a replicable framework for other energy-intensive industries pursuing sustainability transitions. The study affirms that human resource management can play a transformative role in achieving environmental objectives and advancing national and global sustainable development goals.

By synthesizing empirical evidence insights, this discussion underscores the practical viability of Green HRM as a core business strategy for environmental sustainability. The experience of Indian oil and gas companies serves as a reference point for organizations globally, demonstrating that even traditional resource-based industries can progress toward sustainability when environmental considerations are embedded strategically within HRM systems and supported through organizational commitment and cultural transformation.



## 7. CONCLUSIONS

The study concludes that the successful implementation of Green HRM in Indian oil and gas companies is a complex and iterative process involving strategic vision, structural adaptations, and cultural transformation. Leadership commitment, dedicated green HR teams, and comprehensive employee engagement are pivotal in embedding environmental sustainability throughout HR functions. This integrated approach not only facilitates the achievement of corporate sustainability goals but also enhances organizational efficiency and reputation. As Indian oil and gas companies continue to navigate the transition towards a sustainable future, Green HRM emerges as a vital strategy that aligns human capital management with ecological responsibility and business excellence.

This framework offers actionable insights for practitioners and policymakers aiming to foster environmental sustainability through HRM, emphasizing the importance of a holistic, engaged, and strategically driven implementation process.

## 8. STUDY IMPLICATIONS AND LIMITATIONS

The study has several important implications. It provides empirical evidence that successful Green HRM implementation in the Indian oil and gas sector requires strong leadership commitment, dedicated green HR units, and active employee involvement, highlighting the multi-level nature of sustainability integration in HR practices. The findings offer a practical framework that managers and practitioners can adopt to align HR functions with environmental objectives, ultimately enhancing organizational sustainability and competitive advantage. Moreover, by demonstrating the operationalization of green recruitment, training, performance management, and reward systems, the study informs policymakers about the critical elements necessary for fostering a green organizational culture in energy-intensive industries.

However, the study also has limitations. The qualitative case study approach, while providing deep contextual insights, limits the generalizability of the findings across the broader oil and gas sector or other industries. The sample consisted of 11 HR professionals from three public-listed companies, which may not capture the full diversity of practices in smaller or private firms. Additionally, the reliance on self-reported data from HR personnel could introduce bias or limit perspectives from other organizational stakeholders, such as operations managers or frontline employees. Future research could expand the sample size, use mixed methods, and include multiple stakeholder viewpoints to build a more comprehensive understanding of Green HRM implementation and its effects.

These implications and limitations frame the study as a foundational and insightful contribution to the emerging body of knowledge on Green HRM in India's oil and gas sector, with scope for further empirical validation and broader application.

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