Оригинальная статья / Original article

The development of a human resource management model in green economy

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Abstract

Aim. The work is aimed to develop a human resource management model to ensure corporate sustainability and improve the efficiency of companies under green economy.

Objectives. The work seeks to study existing approaches and promising fields of green human resource management; to analyze key processes and develop a model of green human resource management; to reveal the advantages of green management and the main related problems in personnel management; to analyze the companies implementing green approaches to human resource management in order to reveal the effect of the activities implemented; to develop recommendations for improving corporate sustainability and the efficiency of green human resource management.

Methods. The authors applied methods of logical analysis and data interpretation. The research algorithm included such stages as analysis of publications within the subject of interest, presented in international and Russian databases, study of key processes of green personnel management; analysis of the advantages, main problems, and models of green management in personnel management; analysis of corporate reporting of companies for 2019–2023 in order to identify the best practices of human resource management in the context of green economy. Recommendations for improving corporate sustainability and the effectiveness of green human resource management have also been developed.

Results. The study established that modern companies actively use green human resource management. Companies solve social and economic problems of personnel management and thereby ensure corporate sustainability and increase operational efficiency in the context of green economy. A model of green human resource management has been developed, that enables to achieve various levels of personnel involvement in the environmental agenda using a number of tools. The key processes of the companies' activities were analyzed, and the results were used to reveal advantages of green management and related problems in personnel management. The limiting factors included employee resistance to changes, financial constraints and lack of experience in human resource management under green economy. A range of new issues was proposed in order to continue the study in the future.

Conclusions. The results obtained contribute to the theoretical development of personnel management issues and future research in the context of the subject under consideration, as well as the practical use of the best practices of green human resource management in modern companies.

О разработке модели управления человеческими ресурсами в «зеленой» экономике

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Аннотация

Цель. Разработать модель управления человеческими ресурсами для обеспечения корпоративной устойчивости и повышения эффективности деятельности компаний в условиях «зеленой» экономики.

Задачи. Исследовать существующие подходы и перспективные направления «зеленого» управления человеческими ресурсами; провести анализ ключевых процессов и разработать модель «зеленого» управления человеческими ресурсами; раскрыть преимущества «зеленого» менеджмента и основные сопутствующие проблемы в управлении персоналом; провести анализ компаний, внедряющих «зеленые» подходы к управлению человеческими ресурсами, с целью выявления эффекта от реализуемых мероприятий; разработать рекомендации для повышения корпоративной устойчивости и эффективности «зеленого» менеджмента человеческих ресурсов.

Методология. Авторами применены методы логического анализа и интерпретации данных. Алгоритм исследования включал в себя такие этапы, как анализ публикаций в контексте интересующей темы, представленных в зарубежных и отечественных базах данных, изучение ключевых процессов «зеленого» управления персоналом; анализ преимуществ, главных проблем и моделей «зеленого» менеджмента в управлении персоналом; анализ корпоративной отчетности компаний за 2019–2023 гг. с целью выявления лучших практик управления человеческими ресурсами в условиях «зеленой» экономики. Разработаны также рекомендации для повышения корпоративной устойчивости и эффективности «зеленого» менеджмента человеческих ресурсов.

Результаты. В ходе исследования установлено, что современные компании активно применяют «зеленое» управление человеческими ресурсами. Решая социальные и экономические задачи управления персоналом, компании обеспечивают корпоративную устойчивость и повышают эффективность деятельности в условиях «зеленой» экономики. Разработана модель «зеленого» управления человеческими ресурсами, позволяющая достигать различных уровней вовлеченности персонала в экологическую повестку с помощью ряда инструментов. Проведен анализ ключевых процессов деятельности компаний, на основе которого выявлены преимущества «зеленого» менеджмента и сопутствующие проблемы в управлении персоналом. Среди сдерживающих факторов выделены следующие: сопротивление работников изменениям, финансовые ограничения и недостаток опыта управления человеческими ресурсами в условиях «зеленой» экономики. Предложен спектр новых вопросов в целях продолжения исследования в дальнейшем.

Выводы. Полученные результаты способствуют теоретическому развитию вопросов управления персоналом и проведению в будущем исследований в контексте рассмотренной темы, а также практическому использованию лучших практик «зеленого» менеджмента человеческих ресурсов в современных компаниях.

Ключевые слова: *«зеленый» менеджмент, управление человеческими ресурсами, корпоративная устойчивость, «зеленая» экономика, устойчивое развитие*

Introduction

Green HRM — Green Human Resources has been an increasingly important approach for corporate sustainability, thereby incorporating eco-friendly HR practices including performance management, training, and green recruitment [1]. Companies across the globe have been incorporating the Green HRM due to the extensive demand by the global industries to minimize carbon footprints thereby using various special instruments [2]

and effectively aligning the employment policies with the sustainability goals [3]. As per the ILO — International Labour Organization report published in 2023, it has been revealed that 72 % of organizations have deployed Green HRM practices which in turn helpe the businesses to minimize their operational wastes and carbon emissions [4]. For example, Google and Unilever have effectively implemented sustainability-oriented HR policies, thereby significantly contributing to its long-term financial and environmental performance [5].

Besides the benefits, the incorporation of Green HRM creates several challenges. Inadequate expertise, cultural resistance, and financial constraints disrupt the prevalent implementation of sustainable HRM practices [6]. According to a study by McKinsey, it has been disclosed that 80% of executives understand the significance of sustainability, while 35% of them only stated that their organizations have essential HR policies to support it [7]. Moreover, SMEs frequently experience challenges in incorporating green initiatives due to high initial investment [1]. Thus, this current research study focuses on identifying the impact of Green HRM on corporate sustainability, investigating its advantages, exploring its major challenges, and developing strategic recommendations to improve its adoption across the globe.

Methods

The current study focuses on accumulating the descriptive and numeric insights pertinent to the current research problem. As a result, a mixed investigation strategy aims to be implemented in this study where the focus is on using the qualitative and quantitative investigation strategies. The qualitative data analysis method is preferable in studies where descriptive information is collected, whereas the quantitative data analysis is useful when numeric data is accumulated to address the research gaps [8]. The researchers further determine to gather the existing information to address the present research problem. As a result, the convenient data type is the secondary data instead of the primary data. The researchers accumulate the secondary data as it is time-saving, and requires no financial charges to gather it. Also, the researchers aim to gather secondary data because it has already been authenticated or validated by other scholars in the past. The secondary data is considered in this study instead of primary data because the former data cannot be manipulated, unlike the latter data form.

The current study focuses on generating the secondary data from annual reports and organizational websites of various Multinational Corporations — MNC companies that are concerned with Green HRM in corporate sustainability across the globe, industrial reports, government-published reports, peer-reviewed research articles, books, audio-visual content, blog posts, Google Scholar, ResearchGate, and ScienceDirect. A thematic analysis emphasizes to be leveraged to conduct the secondary data analysis by using the last 5 years' information. Graphs, figures, tables, and charts are further to be used to demonstrate the quantitative data effectively.

Results

The results of the study demonstrate the tendency of companies, introducing Green HRM, to build up their work with staff using the following approaches:
- Increase the level of awareness;
- Increase the level of interest;
- Increase the level of "green" engagement.

The model demonstrating Green HRM utilized by modern companies in depicted in Figure 1.

Training and development, forming the required "green" competences and developing professional skills, is the basis for "green" achievements and reaching the expected social, economic, ecological and other results. Companies use various approaches to increase the level of interest and "green" engagement of personnel, taking into account corporate culture, ecological rating, company's "green" image, personal motivation of leadership and staff, division of responsibility for ecological projects, overall company's strategy and potential etc.

The core HRM processes including staff selection and recruitment, training and development, performance management and reward and others in diverse businesses across the world were analysed to find out economic and social incentives for Green HRM. They are presented in Figure 2.

As the results of the research, the following major practices and cases in corporate sustainability were figured out:
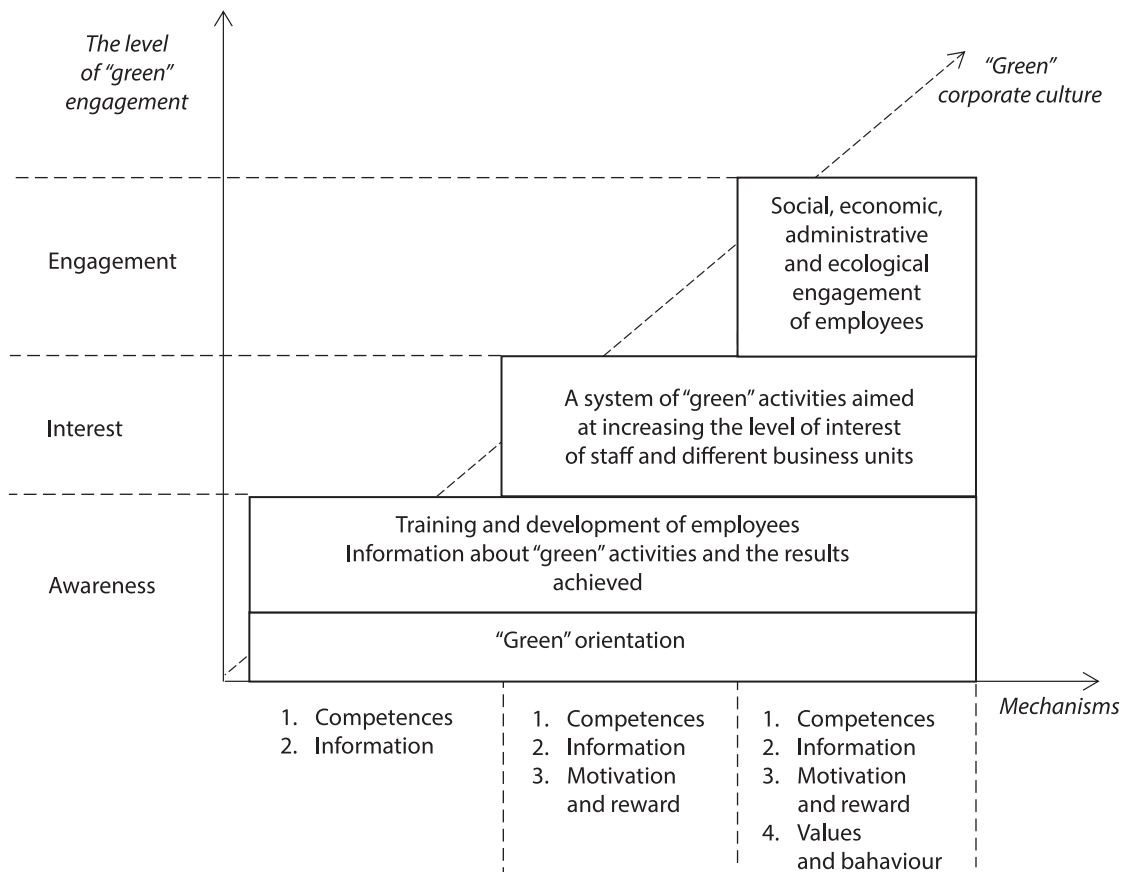
Fig. 1. The model of Green HRM

Рис. 1. Модель «зеленого» управления человеческими ресурсами

Sources: created by authors using [9].

Green Training and Development

As highlighted in the current study, the practices of Green HRM consider training employees on the major sustainability practices as the fundamental parameter. To incorporate the concept of sustainability among the employees, corporate companies implement awareness programs, workshops, and e-learning modules and invest in them. A significant decrease of 61 % in the greenhouse gas emission of IBM has been achieved since 2005 by incorporating a compulsory sustainability training program for their workforce [10]. The picture demonstrating the reduction in Greenhouse Gases achieved by IBM is depicted in Figure 3.

Similarly, a reduction of 20 % in energy consumption by each store has been achieved by Walmart after implementing a sustainability-centered training initiative for their employees [11].

Employee Engagement in Green Initiatives

The authors observed that a corporate culture highlighting responsibility towards the environment is developed by encouraging employees to proactively participate in sustainability initiatives organized by companies. To allow such engagement by the employees, companies have been organizing green projects for their workforce to actively engage in them. Apple has been reducing the carbon footprint of the company significantly by encouraging eco-friendly commuting among its workforce [12]. This initiative has helped Apple to reduce its carbon emissions by 50,000 metric tons per year [12]. Similarly, green projects to proactively reduce waste by using biodegradable packaging and conserving water have been implemented by Starbucks in every store [13].

Green Selection and Recruitment

The present study demonstrates that selecting candidates having a vision and values aligning with the sustainable nature of the organization is considered green selection and recruitment. Furthermore, to uphold environmental sustainability responsibility, corporate companies employ eco-friendly recruitment procedures such as remote interviews
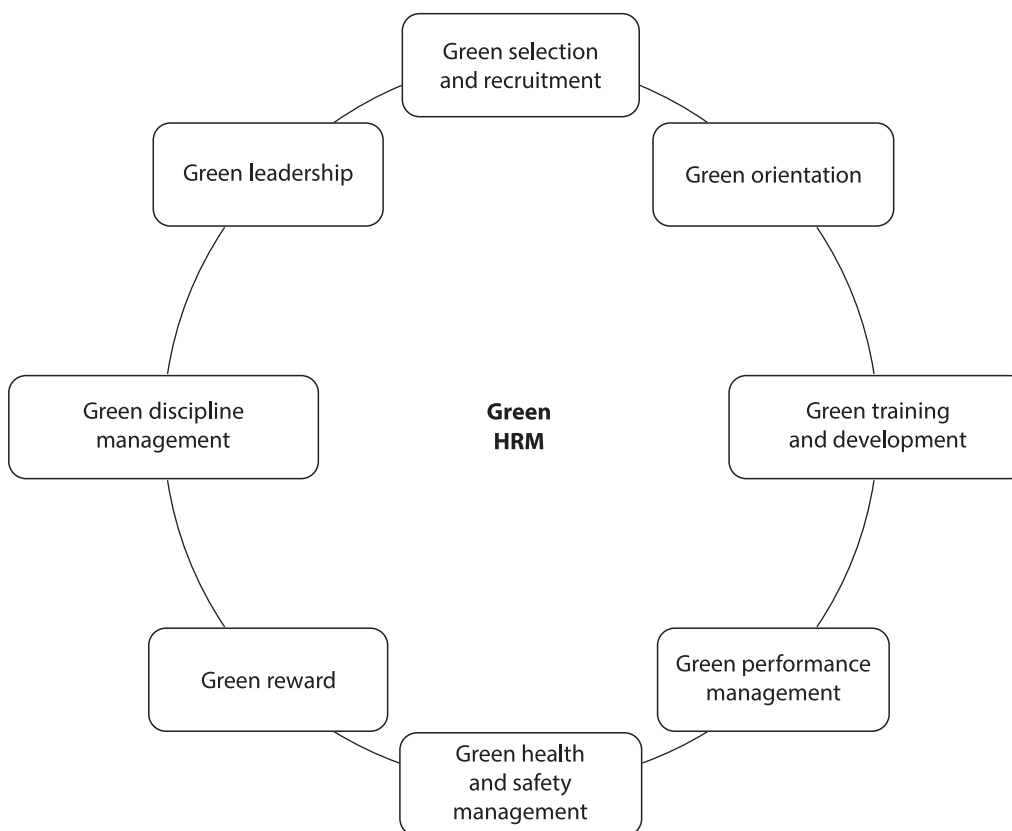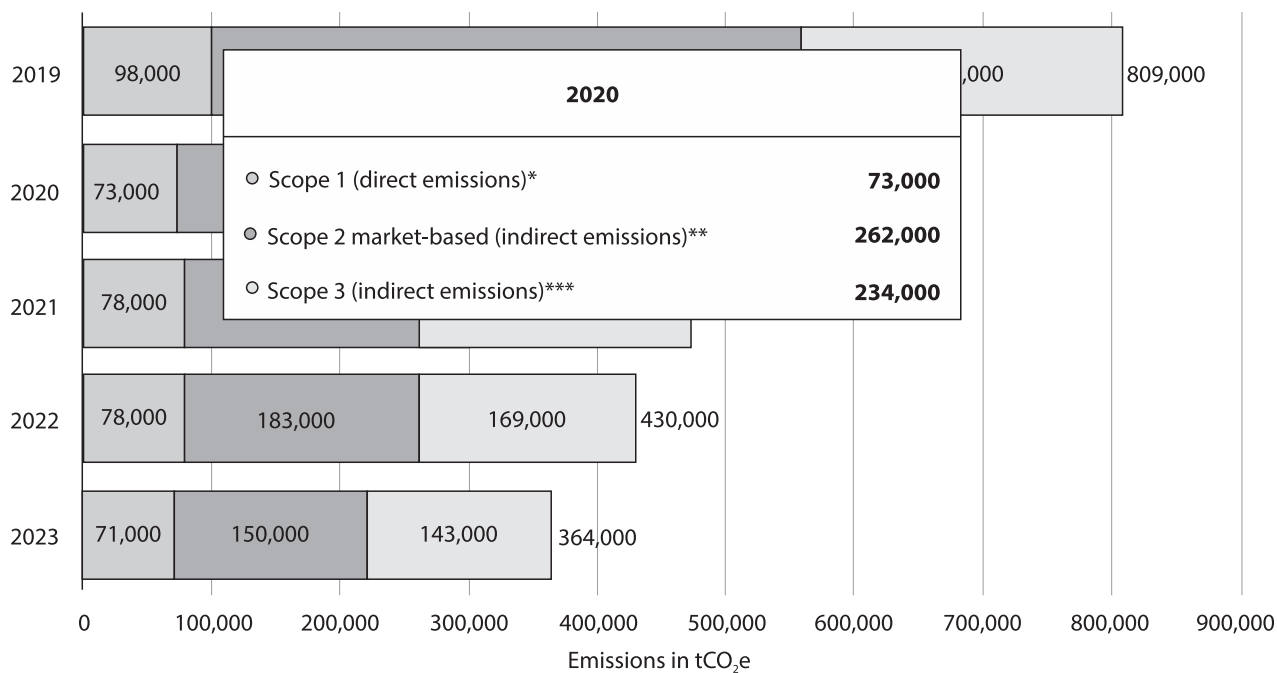
Fig. 2. The core Green HRM processes

Рис. 2. Ключевые процессы «зеленого» управления человеческими ресурсами

Sources: created by authors.

Fig. 3. Reduction in greenhouse gases by IBM, tCO_2e

Рис. 3. Сокращение выбросов парниковых газов компанией IBM, $тCO_2e$
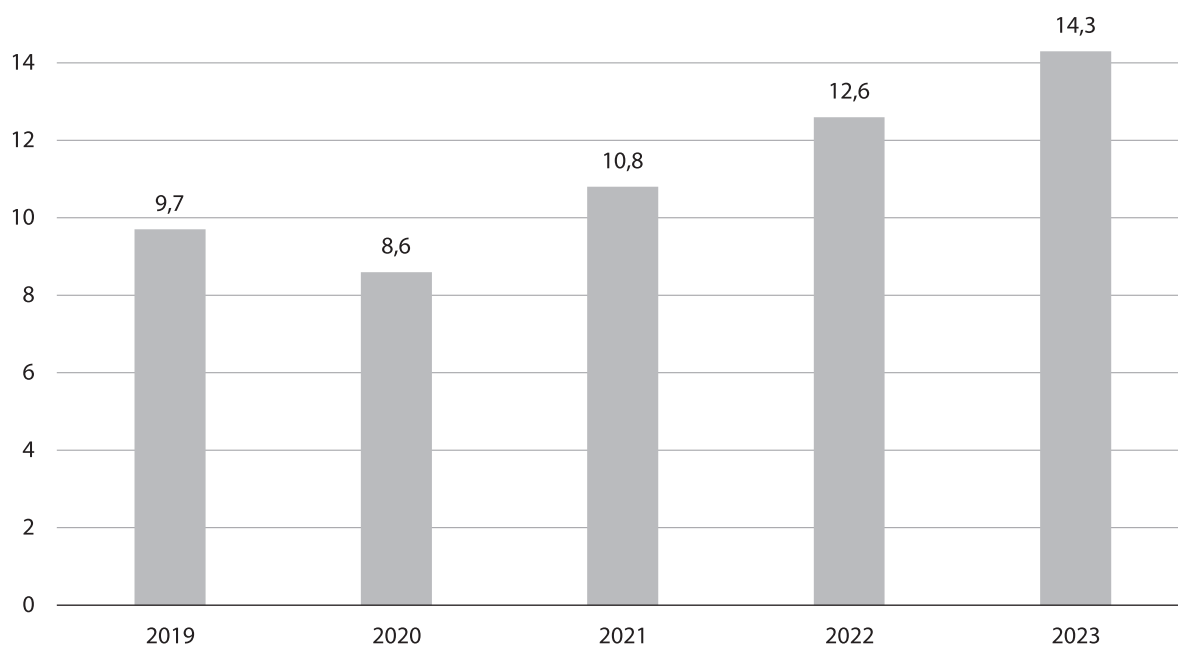
Source: [10].

Fig. 4. Reduction in Greenhouse Gases by Google, MtCO₂e
Рис. 4. Сокращение выбросов парниковых газов компанией Google, млн тCO₂e

Source: [14].

to reduce carbon emissions by vehicles, competency-based recruitment criteria focused on ecological responsibility, and digital applications fostering less use of paper. For instance, the utilization of integrated AI to streamline hiring procedures, reduce paperwork, and cut down carbon footprint is employed by Google [14]. The overall company's aim is to empower individuals, cities, and partners to collectively reduce 1 gigaton of their carbon equivalent emissions annually by 2030 [14]. The graph showing the reduction in Greenhouse Gases by Google in presented in Figure 4.

Similarly, Unilever has incorporated sustainability-related interview questions while hiring employees to make sure that candidates are well aware of their goal of achieving a net zero mission by 2039 [5].

Green Performance Management and Rewards

The analysis conducted in the paper reveals that rewarding for incorporating sustainability practices after performance assessment of employees acts as a catalyst towards adopting environmentally friendly practices among the workforce. Corporate organizations that incorporate incentives for sustainable behaviour in their framework actively contribute to sustainable goals. Siemens makes sure that their employees con-

tribute to green initiatives by incorporating sustainability goals into their performance management system [1]. Significant amounts of incentives and rewards are also organized for employees who achieve the sustainability targets in the company. Similarly, Patagonia, a leading sustainability corporation, grants up to two months of paid leave to employees to be involved in environmental conservation projects [15].

The results of the research demonstrate the following major benefits for corporate sustainability; therefore, some of the findings and best practices can be recommended for companies implementing Green HRM:

1. *Enhanced Employee Productivity and Commitment*

The observations of the authors imply that those corporate organizations that give significant importance to sustainability have employees who are more engaged and committed. Enhanced job satisfaction and employee retention rates are the benefits these corporate organizations achieve due to incorporating well-established Green HRM policies [3]. As per the data of the CSI — Corporate Sustainability Index (2022), a 30 % enhancement in employee engagement has been identified among corporate companies that focus on environmentally sustainable responsibility [16]. For instance, the employees of Nestlé

NIKE reduces emissions by 69 %, diverts 100 % of footwear waste

Can the brand's latest impact report reset the narrative on sustainability?

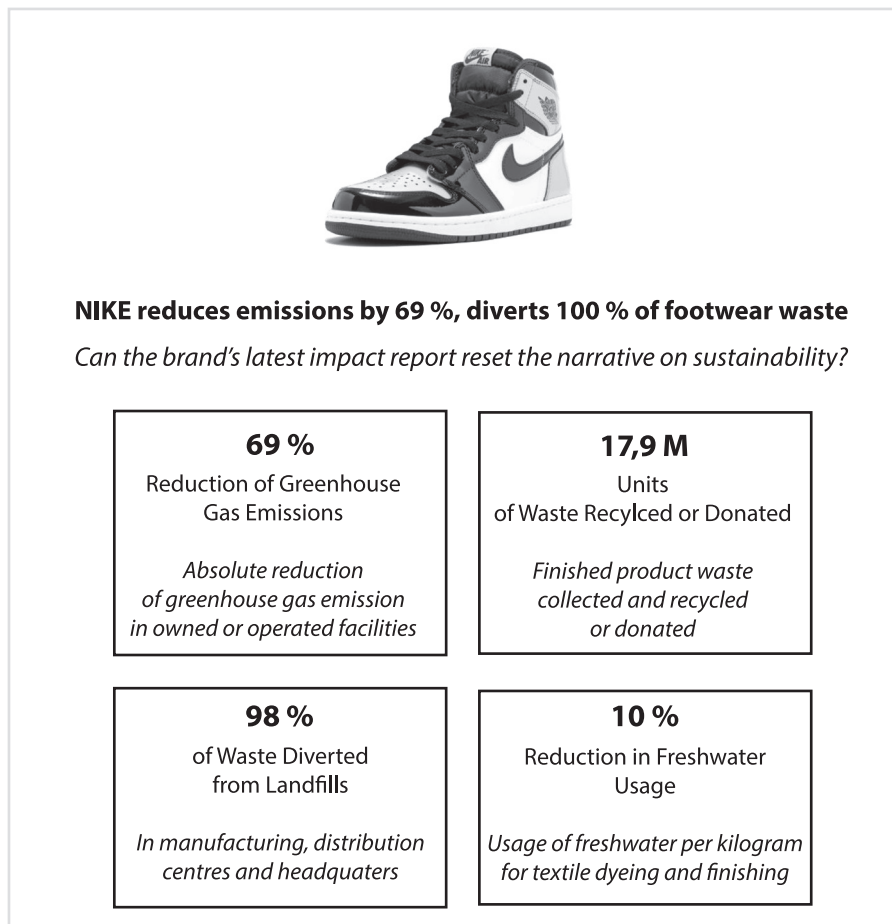|	
69 % Reduction of Greenhouse Gas Emissions *Absolute reduction of greenhouse gas emission in owned or operated facilities*	**17,9 M** Units of Waste Recylced or Donated *Finished product waste collected and recycled or donated*
98 % of Waste Diverted from Landfills *In manufacturing, distribution centres and headquaters*	**10 %** Reduction in Freshwater Usage *Usage of freshwater per kilogram for textile dyeing and finishing*

Fig. 5. Nike's carbon footprint reduction
Рис. 5. Снижение углеродного следа компанией Nike

Source: created by authors using [19].

who focus on sustainability are 25 % more inclined towards working in the company for the long term, demonstrating enhanced productivity and lower turnover rates [17].

2. *Enhanced Customer Loyalty and Corporate Image*

The authors of the current study highlighted that a strong relationship between investors and environmentally responsible consumers is developed improving the reputation of a company that has an established Green HRM. According to a 2023 Nielsen study, 81 % of consumers globally are inclined toward purchasing products from sustainable companies [18].

After implementing the initiative "Move to Zero", Nike has proactively improved its brand image as a sustainable company that implements sustainable HR policies [19]. Furthermore, the company has set goals to reduce environmental impact by 70 % by 2025 [19]. Nike's Carbon Footprint Reduction strategy is presented in Figure 5.

3. *Improved Environmental Performance*

The observation of the current research paper implies that enhancement in environmental performance is one of the most important benefits of Green HRM. Corporate organizations have been achieving significant reductions in pollution emissions, energy consumption, and waste production after incorporating sustainable Green HRM practices in their ecosystem. According to the data of a 2023 study by the International Labor Organization (ILO), a significant number of environmental improvements, such as low production waste, and carbon emissions, has been achieved by 72 % of corporate firms that adopted Green HRM policies [4]. For instance, a 15 % reduction in water consumption has been achieved by Microsoft after incorporating green workplace policies [20].

4. *Profitability and Cost Savings*

As evident in the current study, sustainable Green HRM practices result in optimizing resource consumption, enhancing operational
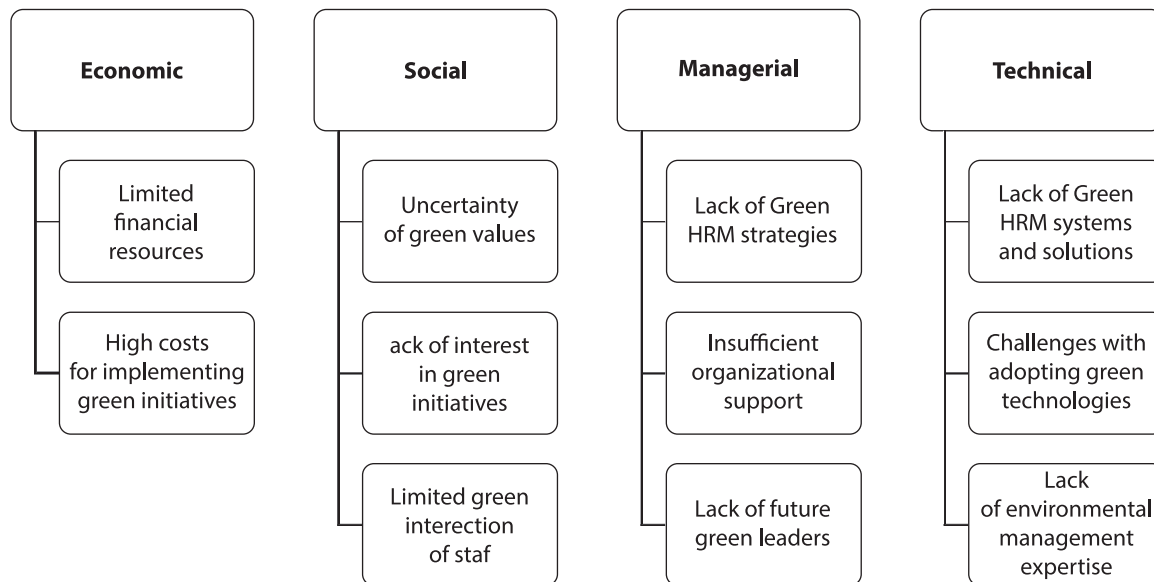
Fig. 6. Challenges faced by companies in implementing Green HRM

Рис. 6. Проблемы компаний в реализации «зеленого» подхода к управлению человеческими ресурсами

Source: created by authors.

efficacy, and improving cost savings. As per the data of McKinsey report, an average of $1.5 million per year in operation cost is saved by corporate organizations that implant Green HRM practices [8]. For instance, a significant amount of $20 million per year has been cut down from their operational cost budget by Tesla after successfully cutting down on material waste production from their manufacturing processes [21].

At the same time, it is worth noting key challenges of implementing the Green HRM for corporate sustainability which were figured out in the research. These challenges are depicted in Figure 6.

Some of the most important challenges the companies face today are further described below:

1. *Cultural Resistance and Employee Adaptation*

As identified in the current research paper, the implementation of sustainable work methods is objected to by employees due to the fear of disrupted work routines. Lack of awareness or education regarding sustainable practices and associated benefits acts as a major reason behind the reluctance of employees to adopt green standards of behaviour. For instance, employee resistance has been faced in Toyota while shifting to a paperless office environment as employees working for more than 10 years preferred documentation and similar traditional procedures [22].

2. *Financial Difficulties*

The present dissertation demonstrates that the significant obstacle faced by several corporations is the high investment required for the implementation of sustainable procedures. Organizations have to incur costs while employing sustainable workplace infrastructure, green training modules, and renewable energy adoption. For instance, PepsiCo had to invest $50 million in training programs on the importance of sustainability for employees [23]. A similar kind of significant investment is difficult for SMEs, which ultimately fail to incorporate sustainable practices [16].

3. *Lack of Expertise in Green HRM*

As observed by the researchers of the current study, one of the most significant obstacles faced by organizations while implementing Green HRM is the lack of expertise in this field. Several HR professionals lack proficient knowledge regarding sustainability principal integration in performance management systems, training, and recruitment [1]. For instance, General Electric had to face this challenge while implementing upscaling and training programs for HR professionals on sustainable HR practices [4].

Discussion

Based on the findings of this research, it has been revealed that the incorporation of Green HRM has become important for corporate

sustainability where companies implement environmentally friendly HR practices into their business operations. For example, IBM, Google, and Unilever have deployed green performance management, green training, and green recruitment, thereby minimizing the adverse environmental effects and developing employee engagement [24]. Therefore, these strategies show that sustainability-oriented HR policies reduce carbon footprints and develop a dedicated employment base. Given an example, since 2005, the sustainability training program at IBM has effectively provided a minimization of 61 % in greenhouse gas emissions, thereby outlining the efficiency of employee education in corporate sustainability [10].

Besides the advantages, incorporating Green HRM demonstrates operational and financial intricacies. The study has disclosed that one of the key challenges associated with Green HRM such as the investment needed to implement sustainability-supported HR policies. For instance, $50 million has been invested by PepsiCo in sustainability-oriented training and development programs which might not be possible to invest by SMEs due to unaffordability [23]. The present research observed that larger companies have the financial capacity to incorporate Green HRM tactics. However, the research further demonstrated that smaller companies frequently experience challenges because of competing priorities and inadequate budgets. Conversely, the current paper recommends that sustainability investments produce long-term cost savings. As per the report of McKinsey in 2023, organizations already deploying Green HRM practices save $1.5 million on an average per annum in operational expenses, thereby depicting those financial issues need to be calculated against the long-term benefits [7].

In addition, the study further observed that cultural resistance from employees is another key challenge of implementing Green HRM in corporate sustainability. Employees have been resistant to accepting the new sustainability strategies, especially when it has been hindering the already developed work schedules and routines [3]. For example, Toyota experienced pushback while transforming the business into a paperless office. This happened because the workforce of the organization has been prioritizing conventional documentation techniques over green technologies [22]. Therefore, addressing this resistance needs efficient change management techniques that foster workforce buy-in. For instance, Siemens and Patagonia effectively incorporate Green HRM by aligning sustainability strategies effectively with employee incentives [15]. The study revealed that rewarding and recognizing sustainable attitudes motivates the workforce to engage in green initiatives, thereby developing a culture of environmental responsibility.

On the other hand, based on the findings, the study identified that inadequate expertise in sustainability-emphasized HRM practices has been a key challenge. It has been further explored that several HR professionals are unaware of the fact related to the incorporation of sustainability principles into performance management, training, and recruitment. For example, General Electric has overcome this issue by introducing internal training and development programs to enhance the skills of HR professionals regarding sustainable techniques [5]. Nevertheless, several organizations have already been facing challenges in identifying HR experts with the required skills and expertise. As a result, to overcome this intricacy, companies need to spend more on sustainability training and development programs for HR experts and partner with industry experts and educational institutes to develop the necessary knowledge base.

Therefore, to optimize the advantages of Green HRM, the following recommendations, based on the findings, might be given:

1. Companies are required to incorporate sustainability in their key organizational strategies instead of considering it as an individual strategy. Integrating business performance metrics with sustainability goals assures long-term dedication toward environmental responsibility.

2. Companies should focus more on developing an employee-engaged workforce culture, sustainability-oriented training and development programs, and providing financial incentives can support companies address resistance and effectively meet objectives of corporate sustainability. While expertise, cultural, and financial issues persist, organizations that effectively deploy Green HRM can experience a competitive edge in an extremely sustainability-influenced global market.

3. Corporate sustainability is enhanced significantly by Green HRM through em-

ployee performance evaluation procedures, eco-friendly recruitment, and sustainability training which, in their turn, lead to significant reductions in their carbon footprint emission, enhancement in company performance, and increase in employee engagement after employing Green HRM policies.

4. Companies need to implement training investments in sustainability, allowing green projects with corporate sustainable goals, and incorporating change management. Corporate businesses can achieve a competitive edge in the global market and obtain corporate sustainability by addressing Green HRM issues properly.

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