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## GREEN COMPETENCE MANAGEMENT IN THE LOGISTICS SERVICES INDUSTRY IN POLAND IN THE LIGHT OF QUALITATIVE RESEARCH

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**ABSTRACT:** The aim of the article is to systematize knowledge about green competence management treated as a manifestation of the implementation of the green HRM concept and to diagnose the practice of green competence management in companies from the logistics services industry in Poland. The research is qualitative in nature. It was conducted in three logistics companies (one large and two medium-size). Due to the small sample size, the study is treated as a pilot study. The results will be used to formulate hypotheses for quantitative research. The added value of the article is developing an original tool for diagnosing the level of advancement of green HRM practices in the area of competence management, which can be used in various types of business entities, regardless of the sector or industry. Based on the research, it was concluded that—in the surveyed entities—the most common activities include "showing new employees good examples of environmental behavior promoted in the organization" as part of onboarding and HRM activities that can be identified as belonging to the "shaping and developing green competences" group. The least frequently used ones are positive motivational tools aimed at using green competences within, or outside professional activities. The size of the company had no impact on the variety and frequency of green HRM usage.

**KEYWORDS:** green competence management, green HRM concept, logistics companies

## Introduction

Environmental activities are currently a key element in building the image of every organization, especially business entities. If a company wants its operations to have as little negative impact on the natural environment as possible, and their customers to appreciate products and services for being created with respect for the standards of the green economy, it must have employees with outstanding green competences and pro-environmental commitment (Parsa et al., 2015). Therefore, with the growing environmental awareness of companies and other institutions and their pursuit of sustainable development, there is a growing interest in the so-called green HRM (Mukherjee et al., 2020). Its goal is to create economic, social and ecological values in business processes in relation to HRM policies and practices (Aust et al., 2020). It supports the organizations' sustainable development strategies and increases employee motivation to implement environmentally friendly organizational practices. They are particularly important in logistics companies because, thanks to appropriate people management, it is easier to achieve goals such as reducing gas emissions, waste and pollution as well as protecting ecosystems, increasing the stretch of green areas and resource efficiency (Kozar, 2019; Cabral & Dhar, 2020).

An important element of green HRM is green competence management. This concept is defined either as a set of employee competences important in organizations that implement the principles of sustainable development and strive to increase ecological efficiency (regardless of the sector or industry), or as a group of new professions emerging as a result of green transformation, e.g. the decarbonization process (Rubel et al., 2020; Wardhani & Puspa, 2019). For the purpose of this article, it is assumed that green competences are a combination of three main components: ecological knowledge, skills and pro-environmental attitudes of employees; all built on their environmental awareness and sensitivity (Grigorescu et al., 2023). They are, therefore, crucial in every organization – regardless of the sector or industry – that sets itself the goal of attaining sustainable development.

The aim of the article is to systematize knowledge on green competence management treated as a manifestation of the implementation of the green HRM concept, and to identify and evaluate common practice in this area within the logistics services industry. For the purpose of the article, it was assumed that competence management is a method of developing personnel policy by treating competences as a link that connects activities in the field of personnel needs planning, recruitment and selection, employee appraisals, training, career path shaping, and building motivation systems. Therefore, the study focuses on all activities undertaken in companies as part of the human resource process in relation to green competences. Logistics services were chosen as the research area. In the era of global climate challenges, a sustainable and environmentally friendly approach to logistics is becoming a necessity (Rodrigue et al., 2017). Modern logistics must be ecological, low-emission, and ultimately environmentally sound (Agyabeng-Mensah et al., 2021; Roy & Mohanty, 2024). The article adopts the scientifically proven assumption that achieving this goal is impossible without managing the green competences of employees (Nikseresht et al., 2023), therefore a diagnosis of the current level of advancement of this process among Polish logistics service providers is justified.

The method used was a narrative literature review and qualitative empirical research conducted in three enterprises: a large one and two medium-size ones. The selection of companies results from the fact that – as research shows – the maturity of HRM processes increases with the increase in the size of the organization. The added value of the article is also the author's tool, which is universal and can be used to diagnose the level of advancement of green competence management in companies from other sectors and industries.

## An overview of the literature

### The concept of green HRM

The concept of green HRM was coined by Wehrmeyer (1996). It effectively linked two areas previously considered separate: environmental management and human resource management. Green human resource management is most often defined as a set of principles, practices and systems that stimulate environmentally friendly behavior of employees in order to create a sustainable, resource-

efficient and socially responsible workplace and the entire organization (Bombiak, 2019; Joyce & Vija, 2020). In the face of climate threats, green HRM has become a key business strategy of professionally managed organizations (Mishra, 2017; Sulich & Sołoducho-Pelc, 2022). It is not only the use of HRM policy to promote sustainable use of organizational resources, but also advanced promotion of the idea of sustainable development in the company's immediate surroundings (Bombiak, 2020). Considerations between the semantic differentiation of such concepts as sustainable HRM and green HRM can be reduced to the relationship between sustainable development and the green economy, which is a tool supporting the introduction of the idea of sustainable development in social and economic life (Scholz, 2019; Kozar, 2019). The key element of sustainable HRM is green HRM, the aim of which is to build and develop pro-environmental practices within the organization, while maintaining harmony with equally important economic and social goals. According to some representatives of management and quality sciences, the environmental and economic aspects of activities in a sustainable system must be supplemented with social aspects, such as care for safe working conditions that enable development, work-life balance, employee health protection, equal treatment of women and men, and fair pay policy (Haddock-Millar et al., 2016; Zaleśna & Wyrzykowska, 2017). In the broadest sense, the social aspects of sustainable development include ensuring intergenerational justice, social inclusion, reducing poverty and inequality, and creating new green jobs (Kozar, 2019; Adamowicz, 2022).

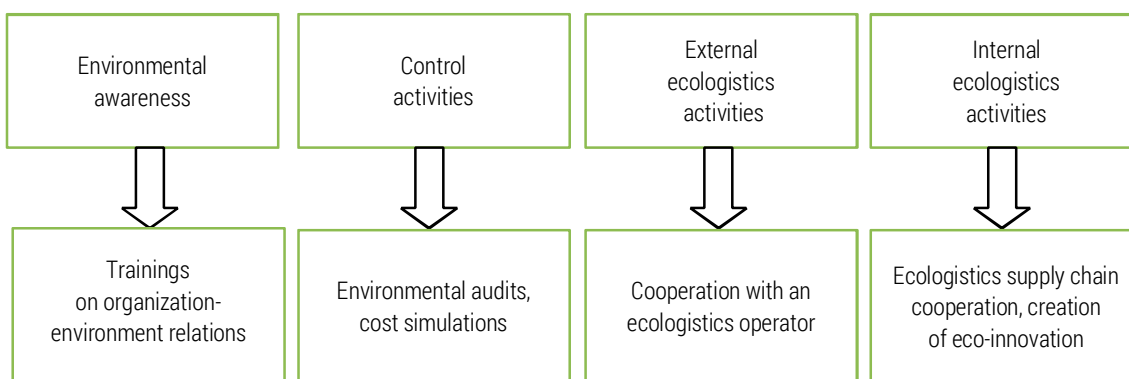
Green HRM refers to the personnel function, which is distinguished by an environmental aspect in harmony with the other two aspects of sustainable development: economic and social (Qu et al., 2022). It links human resource management processes with environmental management, and is part of a broader context of sustainable human resource management (Beck-Krala & Klimkiewicz, 2017). Its practices are activities that concern all elements of the human resource process and are associated with an increase in the value of the organization over time (Matusiak et al., 2020). Due to the pursuit of sustainable development, green HRM pertains to the systemic, planned adaptation of typical human resource management practices to fit within the environmental goals of the organization (Urbaniak, 2022). The aim of green HRM is primarily to build employee identification with the environmental goals of the organization. It also strives to create, strengthen and maintain „greenness” among all of the employees of the organization (Opatha & Arulrajah, 2014) through policies, practices and systems that make employees become „green” for the benefits they provide to individuals, businesses, the environment and the society at large. In this context, one of the key advantages of developing green HRM is the opportunity for employees to engage in the creation of eco-innovations (Järlström et al., 2018). The research also confirms that perceiving the workplace as environmentally friendly strengthens the bond with the organization and loyalty to the employer and minimizes the risk of counterproductive behaviors. At the same time, green HRM is a valuable tool for internal and external employer branding (Nugroho et al., 2023). The research allows for the identification of factors that have the greatest impact on employees' readiness to use green HRM practices. These are: green organizational culture, sustainable development as a strategic goal of the organization, pressure from legal regulations, individual environmental values and the level of remuneration related to the employee's environmental efficiency (Matejun et al., 2020). Although green HRM focuses on a specific way of implementing the personnel strategy, it must be emphasized that „green” employees transfer their knowledge and environmental sensitivity beyond the boundaries of the workplace (Beck-Krala & Klimkiewicz, 2017). Pro-ecological employees are conscious consumers who try to act in their private lives to effectively reduce their negative environmental footprint. They become promoters of the idea of a green economy in their local area.

### Green competences in the logistics services sector

Green logistics, also called ecologistics or reverse logistics, is a sustainable policy undertaken by the logistics industry to minimize the negative environmental impact of transport, warehousing and other operational activities (Prataviera et al., 2023). This policy aims to create sustainable value that balances economic and environmental efficiency. The goal of green logistics is to reduce operating costs and increase profits, while maintaining sustainable development (Zhou et al., 2023; Van Vo & Nguyen, 2023). The basic elements of the modern concept of green logistics are time and costs which interact with each other (Karaman et al., 2020). The main objective is to manufacture products according to the optimal method and distribute them at the lowest cost and in the shortest possible

time. Simultaneously, this approach aims to reduce the rate of product damage and loss, as well as optimize the use of waste. Eco-friendly solutions in logistics cover all its levels (Agyabeng-Mensah et al., 2020). First and foremost, it is the modernisation of the transport fleet. Investing in environmentally friendly vehicles and equipment reduces pollution and increases the efficiency of distribution in the supply chain. This trend also includes the construction or adaptation of warehouses to meet the requirements of BREEAM and LEED environmental certifications, which allow buildings to be technically assessed in terms of their impact on the environment. Other parts of green logistics also encompass zero waste approach, recycling and proper inventory management. These apply not only to changes in production processes, but also to the packaging in which the final product is placed. More and more companies are using biodegradable materials or introducing packaging recycling systems. This solution makes it possible to reduce the need for disposable packaging tenfold (Trivellas et al., 2020).

The advancement of ecologistics can be assessed using a continuum: from environmental awareness to the design and implementation of eco-innovations (see Figure 1) or undertaking the research.



**Figure 1.** Ecologistics maturity - a model approach

Source: authors' work based on Baraniecka and Gwózdź (2021).

The lowest level of ecologistics maturity is environmental awareness. An organization may be aware of the impact of its activities on the environment, but is not improving its current actions to achieve financial and environmental benefits. The next level - control - may be initiated by legal obligations, pressure from conscious customers, as well as by including environmental goals (e.g. reducing residue costs) in the organization's strategy. This stage is characterized by the low priority of pro-environmental activities and the randomness of people involved. The third stage is characterized by the conscious placement of environmental goals in the strategy of a logistics company. There is an ecologistics subsystem created with competent employees appointed to ensure its proper functioning. Activity at this stage reduces operating costs in terms of waste reduction and the possibility of negotiating more favorable prices with sub-suppliers. The most advanced stage in the development of ecologistics is cooperation at the level of the entire supply chain. Ecologistics specialists coordinate ecologistics activities in the supply chain. At this stage, also eco-innovations are designed and implemented (Baraniecka & Gwózdź, 2021).

Achieving the goals of green logistics is not possible without acquiring and developing green competences of employees (Mtembu, 2019). The green transformation of the economy, including logistics services, and the drive to achieve high eco-efficiency are creating an increasing demand for new, specific qualifications and skills (often technical) for green jobs, primarily within the industries where the green transformation is taking place most dynamically (Cabral & Dhar, 2019). At the same time, there is a growing demand for green competences that are horizontal in nature, i.e. they occur in industries or professions that are not directly related to the green transformation which somehow forces their formation. Two research perspectives should therefore be adopted when identifying the nature of green competences. The first is the horizontal perspective, where green competences are defined as a set of employee competences important in organizations that implement the principles of sustainable development and strive to increase environmental efficiency (Abu-Mahfouz et al.,

2023). The other perspective is to identify green competences with new professions that emerge as a result of the green transformation (Anlesinya & Susomrith, 2020; Bohnenberger, 2022; Kouri & Clarke, 2019). From a horizontal perspective, green competences may occur regardless of the industry or a position, and may also relate to specific skills, knowledge or formal qualifications required for a particular job. In this approach, green competences are a set of the following elements (Cabral & Dhar, 2019):

- green knowledge, which includes general knowledge about the natural environment and threats related to the state of the environment,
- green skills, i.e. professional and general skills required in occupations affected by the green transformation,
- green awareness, i.e. awareness of the impact of human activity on the environment,
- green attitudes resulting from perceiving environmental protection as a value,
- green skills that are important for self-development and increasing efficiency in the green economy,
- green behaviors that support environmental sustainability.

The European competence framework for sustainable development distinguishes 12 competences within four competence areas, the development of which is necessary for the green transformation (see Figure 2).

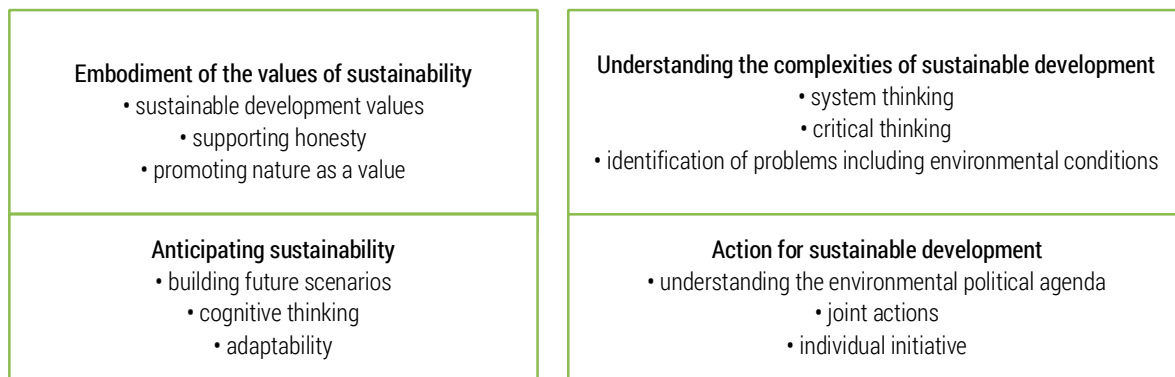


Figure 2. Competences for sustainable development

The development of green competences must be comprehensive and include both broad cognitive competences and specific attitudes manifested in commitment to environmental goals (Dzhengiz & Niesten, 2019). From the point of view of the labor market, the green transformation affects both the total number of jobs in the economy, and the employment structure (in terms of industries, professions and competences). As defined by the International Labor Organization (ILO, 2016), green jobs are those that contribute to maintaining or restoring the environment, regardless of whether they occur in traditional or new „green” sectors. They are professions which help reduce energy and resource consumption, decarbonize the economy, protect and restore ecosystems and biodiversity, and minimize waste and pollution production (Martawardaya et al., 2021). The concept of „green jobs” applies to any new job that leaves a smaller than average environmental footprint and contributes - even marginally - to improving overall productivity. Similarly, green jobs are defined by the European Commission as workplaces and professions or specialties performed within them, which ultimately reduce the impact of companies or industries on the environment to a level that is considered sustainable. When assessing how „green” a workplace is, the following indicators should be taken into account (Bohnenberger, 2022):

- the outcome of the business – whether the product or service produced is „green”,
- profession – to what extent the tasks and activities performed by the employee have sustainable development features,
- work style – whether working conditions promote a balanced lifestyle of the employee,
- outcome efficiency – how resource-efficient the production process and supply chain are.

The demand for professionals ready to enter the logistics profession is very high in Poland (Kwiatkowska-Ciotucha et al., 2021). Surveys conducted among employers and managers of logistics companies on the competences sought show that those employed generally lack „accuracy, initiative and commitment to seek improvements and optimisation at their workplace, an attitude to their own development”, which is associated with deficits in the association of knowledge and ideas, creativity (Kwiatkowska-Ciotucha et al., 2021). The logistics services industry is increasingly aware that achieving green logistics goals is not possible without environmentally sensitive employees equipped with green competences (Agyabeng-Mensah & Tang, 2021; Can Sağlam, 2023). This is indirectly evidenced by activities in the area of Employer Branding which consist in highlighting environmental values in job advertisements (see Table 1). Unfortunately, these initiatives are still too rare. Out of 100 companies from the logistics services industry whose recruitment advertisements on the Pracuj.pl portal were analyzed by the author, only 23% of companies referred to green values.

**Table 1.** Examples of promoting green values in recruitment advertisements

DHL Express	„As well as looking after our customers, we also care about the environment - we aim to achieve zero carbon emissions by 2050. Our eco vans and units using solar energy will contribute to this.”
Geis PL Sp. z o.o	„We have held ISO 9001 and 14001 certificates for many years, and we regularly and successfully defend them before an independent auditor. This demonstrates our consistent quality of service and compliance with environmental management principles.”
GLS Poland	„We take care of our surroundings globally and locally, we reduce the negative impact on the environment: we introduce electric cars to our fleet.”
Logwin Polska	“We take responsibility for our employees and the natural environment.”
LPS Group	“We are a leader in sustainable transport, investing in eco-driving topics and training to minimize our carbon footprint.”
MAKO TLS	„We place great emphasis on the environment and climate - on a macro scale, maintaining the highest standards in the fleet and offices (Green Carrier and LEED certificates) and on a micro scale, reducing plastic consumption by giving up bottles, or encouraging people to commute to the office by bike.”

Source: authors' work based on <https://www.pracuj.pl/> [10-03-2024].

## Research methods

The research was conducted in March 2023 using an original survey questionnaire. The respondents (people working in human resource departments as directors) representing the surveyed companies determined the frequency of management practices used in their company. The following research questions were formulated:

1. Which green competence management practices are most commonly used in logistics service providers in Poland?
2. Is there a correlation between the size of the company and the frequency of using green competence management practices for employees?

The activities in the area of green competence management were related to the stages of the HR process implemented as part of green HRM. The list of management practices was created on the basis of a literature review (Matejun et al., 2020; Różańska-Bińczyk et al., 2020) and then evaluated by a team of 6 competent judges (3 experienced HRM practitioners, 3 people with scientific achievements covering the issues of green HRM), which allowed the adoption of the final version of the questionnaire.

The research was of a qualitative nature. The results obtained can be used to formulate hypotheses for quantitative research. The research was conducted in three companies located in the Masovian Voivodeship. Their names were anonymized at the request of the participants. The research included one large company (employment of more than 250 persons) and two medium-size companies (170 employees in the first, 110 employees in the other one).

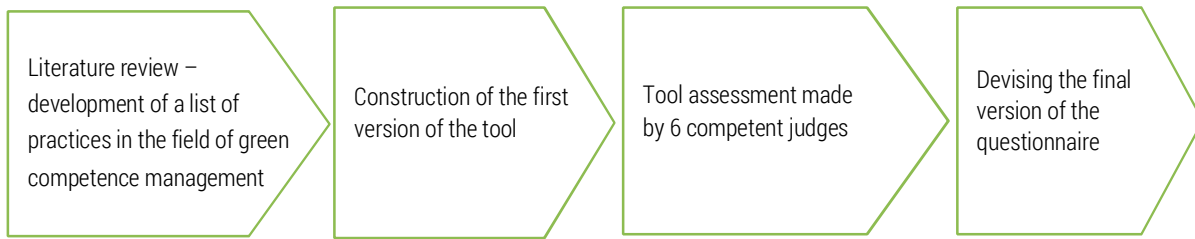


Figure 3. The process of constructing a questionnaire

### Green competence management in the logistics services sector – research findings

Practices referred to as green competence management occur in logistics companies in Poland, but they are not of a systemic nature and the degree of intensity expressed in terms of the frequency of activities is unsatisfactory (see Table 2.). Regardless of the size of the company, the answer „very often” was chosen only by the HR director of the large company, clearly emphasizing that both the development of green competences and green motivation apply only to the drivers and are exclusively intended to encourage fuel saving.

Table 2. Green competence management at different stages of the HR process

Green competence management at different stages of the HR process	Actions taken by the organization	1	2	3	4	5
		never	very rarely	average	often	very often
		L M1 M2	L M1 M2	L M1 M2	L M1 M2	L M1 M2
Green competence planning	taking into account environmental aspects in the human resource management strategy	L M1 M2	L M1 M2	L M1 M2		
	taking into account environmental aspects in human resource management procedures	L M1 M2		L M1 M2		
	planning the employment of a certain number of employees with appropriate environmental competences	L M1 M2		L M1 M2		
	analysis of the labor market in terms of the availability of candidates with environmental competences	L M1 M2			L M1 M2	
Green recruitment and selection of employees	including environmental tasks for employees in job descriptions	L M1 M2			L M1 M2	
	including environmental requirements in recruitment advertisements	L M1 M2		L M1 M2		
	recruitment preference for candidates with experience in environmental activities	L M1 M2			L M1 M2	
	assessing job applicants in terms of their motivation for environmental activities in the organization	L M1 M2		L M1 M2		
	showing new employees good examples of environmental behavior promoted in the organization		L M1 M2	L M1 M2		
	familiarizing new employees with activities and environmental successes of the organization	L M1 M2		L M1 M2		
Shaping and developing green competences	activities raising awareness/environmental knowledge among employees (e.g. trainings, meetings)		L M1 M2	L M1 M2	L M1 M2	
	development of environmental knowledge (e.g. workshops on energy efficiency, waste management, resource protection/ consumption, recycling)		L M1 M2		L M1 M2	L M1 M2
	promotion of environmental attitudes among employees (e.g. involvement in environmental campaigns)		L M1 M2	L M1 M2		L M1 M2
	development of employees' environmental awareness understood as the level of concern for the environment	L M1 M2		L M1 M2		L M1 M2

Green competence management at different stages of the HR process	Actions taken by the organization	1	2	3	4	5
		never	very rarely	average	often	very often
		L M1 M2	L M1 M2	L M1 M2	L M1 M2	L M1 M2
Motivation	salary increases based on employees' environmental performance	L M1 M2	L M1 M2			
	financial awards for environmental achievements	L M1 M2	L M1 M2			
	co-financing of conferences/trainings supporting ecological activities	L M1 M2	L M1 M2			
	non-monetary rewards for environmental performance	L M1 M2				L M1 M2
	fringe benefits (green benefits) to support environmental protection	L M1 M2				
	flexible working hours to undertake green activities	L M1 M2				
	disciplinary tools for employees for environmental offenses	L M1 M2			L M1 M2	
	linking career development to employees' environmental performance	L M1 M2		L M1 M2		
	rewarding employee initiatives for environmental improvements in the organization	L M1 M2	L M1 M2			
Green appraisal	setting environmental objectives for employees	L M1 M2	L M1 M2			
	integrating environmental criteria into staff appraisal	L M1 M2				
	providing feedback to employees on their environmental performance	L M1 M2	L M1 M2	L M1 M2		
Green departures of employees	analysis of whether environmental issues are the reason for resigning from work	L M1 M2				
	using interviews with departing employees to assess their pro-environmental practices in the organization	L M1 M2	L M1 M2			
	collecting ideas from departing employees on how to improve the organization's pro-environmental activities	L M1 M2				

Legend: L – large company, M1 – medium company 1, M2 – medium company 2.

The most common activities relate to ‚showing new employees good examples of green behavior promoted in the organization’ as part of onboarding, as well as ‚shaping and developing green competences’. Positive motivation tools aimed at the use of green competences within, or outside the professional activity are used least frequently (the answers “never” or “very rarely” concerned, for example, green benefits, financial rewards for green performance, flexible working hours to undertake green activities). Employees of the surveyed entities are not, or very rarely are financially rewarded for eco-innovations. The surveyed entities do not use green HRM tools in the area of employee departures, e.g. it is not practiced to collect ideas from departing employees to improve the company’s environmental activities.

The research did not confirm the thesis exposed in the literature that large companies have a higher level of HRM process maturity compared to medium-size companies (Zare et al., 2018). Although, for a small number of green competence management activities, the HR director of the large company declared that they are used „very often”, they are used to a very narrow extent (see Table 3). More diverse practices covering almost all green HRM tools were identified in one of the medium-size companies.

In the large company, green competence management activities are carried out in a narrow scope. Very often, only activities in the area of shaping and developing green competences and motivating green behaviors are undertaken, however, they are limited to rewards for green performance in the occupational group of drivers. The company does not undertake green competence planning activities, does not include environmental elements in the appraisal process or apply green departures of employees.

The two medium-size companies surveyed differ greatly in their use of green HRM tools (see Table 4 and Table 5), which, again, confirms the thesis that company size is not a variable that significantly influences green competence management in logistics companies.



**Table 3.** Most common green competence management practices in the large company

Activities indicated as undertaken “very often” (rating of 5 on a 5-point scale) by the large company
<b>Shaping and developing green competences</b>
<ul style="list-style-type: none"> <li>• development of environmental knowledge (e.g. workshops on energy efficiency, waste management, resource protection/ consumption, recycling)</li> <li>• promoting environmental attitudes among employees (e.g. involvement in environmental campaigns)</li> <li>• developing employees’ environmental awareness understood as a level of concern for the environment</li> </ul>
<b>Motivating</b>
<ul style="list-style-type: none"> <li>• non-monetary rewards for environmental performance</li> </ul>
Activities indicated as undertaken “moderately often” (score 3 on a 5-point scale) by the large company
<b>Green recruitment and employee selection</b>
<ul style="list-style-type: none"> <li>• showing new employees good examples of environmental behaviors promoted in the organization</li> <li>• familiarizing new employees with activities and environmental successes of the organization</li> </ul>

**Table 4.** Most common green competence management practices in the medium-size company B

Activities indicated as undertaken “often” (rating of 4 on a 5-point scale) by the medium-size company B
<b>Green competence planning</b>
<ul style="list-style-type: none"> <li>• analysis of the labor market with regard to the availability of candidates with green skills</li> </ul>
<b>Green recruitment and employee selection</b>
<ul style="list-style-type: none"> <li>• including environmental tasks for employees in job descriptions</li> <li>• recruitment preference for candidates with experience in environmental activities</li> </ul>
<b>Shaping and developing green competences</b>
<ul style="list-style-type: none"> <li>• activities raising awareness/environmental knowledge among employees (e.g. trainings, meetings)</li> <li>• development of environmental knowledge (e.g. workshops on energy efficiency, waste management, resource protection/ consumption, recycling)</li> </ul>
Activities indicated as undertaken “moderately often” (score 3 on a 5-point scale) by the medium-size company B
<b>Green competence planning</b>
<ul style="list-style-type: none"> <li>• taking into account environmental aspects in human resource management procedures</li> <li>• planning the employment of a certain number of employees with appropriate environmental competences</li> </ul>
<b>Green recruitment and employee selection</b>
<ul style="list-style-type: none"> <li>• including environmental requirements in recruitment advertisements</li> <li>• familiarizing new employees with activities and environmental successes of the organization</li> </ul>
<b>Motivating</b>
<ul style="list-style-type: none"> <li>• linking career development to employee environmental performance</li> </ul>
<b>Green appraisal</b>
<ul style="list-style-type: none"> <li>• providing feedback to employees on their environmental performance</li> </ul>

**Table 5.** Most common green competence management practices in the medium-size company C

Activities indicated as undertaken “often” (rating of 4 on a 5-point scale) by the medium-size company C
<b>Motivating</b>
<ul style="list-style-type: none"> <li>disciplinary tools for employees for environmental offenses</li> </ul>
Activities indicated as moderately often (rating of 3 on a 5-point scale) undertaken by the medium-size company C
<b>Green competence planning</b>
<ul style="list-style-type: none"> <li>taking into account environmental aspects in human resource management procedures</li> <li>taking into account environmental aspects in the human resource management strategy</li> </ul>
<b>Green recruitment and employee selection</b>
<ul style="list-style-type: none"> <li>assessment of job candidates in terms of motivation for environmental activities in the organization</li> </ul>
<b>Shaping and developing green competences</b>
<ul style="list-style-type: none"> <li>activities raising awareness/environmental knowledge among employees (e.g. trainings, meetings)</li> <li>promoting environmental attitudes among employees (e.g. involvement in environmental campaigns)</li> <li>developing employees' environmental awareness understood as the level of concern for the environment</li> </ul>

The medium-size logistics companies mainly use activities in the field of green competence planning, green recruitment and selection of employees, design and development of green competences and motivation. However, the tools used in the above-mentioned elements of the HR process are very different, e.g. in the field of green motivation, one of the companies uses positive incentives (linking career development to the employee's environmental results), and the other one uses negative incentives (disciplinary tools for employees for environmental offenses). One of the surveyed medium-size companies often analyzes the labor market in terms of the availability of candidates with environmental skills, while the other one generally does not apply such practices.

## Conclusions, discussion of results

Green logistics is becoming a requirement that will give the most environmentally conscious organizations a significant competitive advantage on the market. The e-commerce industry offers convenient solutions to consumers, however, its intensive development is associated with ecological threats that logistics companies must counteract. Corporate responsibility and the search for solutions that optimize and reduce the negative impact on the environment are not only desirable, but necessary.

Based on the literature review, it was confirmed that there is a clear relationship between green HRM and green competence management. This is due to the fact that the essence of green HRM is to select, train, develop, appraise and motivate employees to develop their green competences and help the organization to achieve its environmental goals while respecting economic and social objectives.

The research concludes that practices referred to as green competence management occur in logistics companies in Poland, but they are not of a systemic nature and the degree of their use is unsatisfactory. When answering the question: “which practices in the field of green competence management are most often used in companies providing logistics services”, it was established that it is the development of employees' environmental knowledge. This means that the surveyed entities are at a low level of maturity in terms of green HRM processes. The relationship between the size of the company and the management of employees' green competences has not been confirmed. Although the large company was the only one to confirm the high level of use of certain tools, such as rewarding employees' environmental attitudes and shaping and developing green competences, they are used only to reduce fuel consumption costs. At the same time, the large company does not use any tools appropriate for green assessment or green departures of employees. It does not take into account

environmental aspects in the human resource management strategy or HRM procedures. It does not conduct conscious green recruitment and selection of staff. Medium-size companies vary in terms of managing employees' green competences. Differences in the frequency and diversity of practices in this area were identified.

The low level of maturity of green HRM in logistics companies creates an urgent need for change in the way HR policy is conducted in this group of companies. The implementation of changes resulting, among other things, from the implementation of the green deal concept will not be possible if companies do not take care of employees with the desired competence profile and do not manage these competences professionally.

## Limitations and directions for further research

The limitations of the research mainly stem from the fact that it is qualitative in nature. There is, therefore, a need to confirm the hypotheses set out in this article in quantitative research on a representative sample of logistics enterprises in Poland. A valuable direction for further research appears to be an attempt to establish attitudes towards green HRM of both employees and managers. Cultural determinants of green competence management are an interesting thread for further research. This requires comparative research in different European countries.

## The contribution of the authors

Conceptualization, J.M.M., Z.S.M. and L.J.U.; literature review, J.M.M., Z.S.M. and L.J.U.; methodology, J.M.M. and Z.S.M.; formal analysis, J.M.M. and Z.S.M.; writing, J.M.M., Z.S.M. and L.J.U.; conclusions and discussion, J.M.M., Z.S.M. and L.J.U.

The authors have read and agreed to the published version of the manuscript.

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## ZARZĄDZANIE ZIELONYMI KOMPETENCJAMI W BRANŻY USŁUG LOGISTYCZNYCH W POLSCE W ŚWIETLE BADAŃ JAKOŚCIOWYCH

**STRESZCZENIE:** Celem artykułu jest usystematyzowanie wiedzy na temat zielonego zarządzania kompetencjami na tle koncepcji zielonego HRM oraz diagnoza praktyki zielonego zarządzania kompetencjami w przedsiębiorstwach z branży usług logistycznych w Polsce. Badanie ma charakter jakościowy. Przeprowadzono je w trzech firmach logistycznych (jednej dużej i dwóch średnich). Ze względu na małą liczebność próby badanie traktowane jest jako pilotażowe. Wyniki posłużą do sformułowania hipotez do badań ilościowych. Wartością dodaną artykułu jest autorskie narzędzie do diagnozy poziomu zaawansowania praktyk zielonego HRM w obszarze zarządzania kompetencjami, które może być wykorzystane w różnego rodzaju podmiotach gospodarczych, niezależnie od sektora czy branży. Na podstawie przeprowadzonych badań stwierdzono, że w badanych podmiotach najczęściej stosowanymi działaniami są „pokazywanie nowym pracownikom dobrych przykładów zachowań proekologicznych promowanych w organizacji” w ramach onboardingu oraz działania HRM z grupy „kształtowanie i rozwijanie zielonych kompetencji”. Najczęściej stosowane są pozytywne narzędzia motywacyjne ukierunkowane na wykorzystywanie zielonych kompetencji w ramach aktywności zawodowej lub poza nią. Wielkość firmy nie miała wpływu na różnorodność i częstotliwość stosowania zielonego HRM.

**SŁOWA KLUCZOWE:** zielone zarządzanie kompetencjami, koncepcja zielonego HRM, firmy logistyczne