

# THE INFLUENCE OF GREEN HUMAN RESOURCE MANAGEMENT AND DIGITAL TECHNOLOGY ON SUSTAINABLE PERFORMANCE IN COMPANIES ANIMAL FEED PROCESSING IN NORTH SUMATRA

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**Abstract:** *This study aims to analyze the influence of Green Human Resource Management (GHRM) and the use of digital technology on the sustainability performance of companies in the food industry sector. The background of this study is based on the importance of the business world's role in maintaining environmental sustainability, particularly through environmentally friendly human resource management and digital-based process efficiency. GHRM practices such as green recruitment, environmentally friendly training, and environmentally-based assessment and reward systems are believed to be able to increase employee awareness and support the implementation of corporate CSR programs. This study uses a descriptive approach, namely a quantitative method to measure the relationship between variables through surveys, interviews, and case studies. The study population includes food industry companies in Medan and Deliserdang that have implemented CSR or digitalization of work processes, with a purposive sampling technique. Expected results include the development of an integrative model of GHRM and digital technology, identification of supporting and inhibiting factors for implementation, and strategic recommendations for companies in improving economic, social, and environmental sustainability. This study is also expected to enrich the academic literature on sustainable human resource management and contribute to the achievement of the SDGs (Sustainable Development Goals) targets in Indonesia .*

**Keywords:** *Green Human Resources; Management; Digital Technology; Sustainable Performance*

## **Introduction**

The habit of people who are less concerned about the environment or do not understand what should be done to establish a sustainable relationship in order to maintain it and maintain it to achieve a friendly environment so as to reduce the negative effects of activities that can reduce green environmental space. Many things can encourage achieving a green environment, starting from the habits of society in general, the business community, organizational communities, government communities and even the world community which globally can play a role in making the environment green. Companies in the food industry, aviation and manufacturing industries where the activities carried out can have negative effects that can endanger the sustainability of the green environment in this case Green Human Resource Management.

The problem formulation in this research is as follows:

1. How does the implementation of Green Human Resource Management in the CSR-based food industry affect the company's sustainability performance?
2. What is the role of digital technology in improving the sustainability performance of companies in the food industry?
3. Is there a synergistic relationship between GHRM and digital technology in supporting corporate sustainability in the food sector?
4. What factors inhibit or support the implementation of GHRM and digital technology towards sustainability performance?

### Literature review

Green Human Resource Management is part of the company's environmental changes in sustainable human resource management by making the environmental dimension to protect the sustainability of nature in the company's arrangement. To explore the impact of Green Human Resource Management practices (i.e., green recruitment and selection, green salaries and rewards, and green employee engagement) on corporate sustainability practices (Ciocirlan, 2018). Moving from GHRM practices to the environment, it is necessary to know what can provide positive changes to social life to be used as a source of benefits for developing sustainable practices. Social relations with GHRM provide benefits both internally and to the surrounding community where the benefits are in the form of a healthy work environment, increased employee creativity in conducting waste management education by involving local communities starting from customers, partners, and the surrounding community. In order to build awareness and encourage the achievement of CSR (corporate social responsibility) programs based on a sustainable environment. Social responsibility towards GHRM is found in a published journal stating that Green Human Resource Management (GHRM) has a positive and significant effect on Environmental Performance (Kurniawan et al., 2024). In addition to the social environment that supports the success of GHRM, its economic side is no less important, providing a positive influence and building changes that have very beneficial values both internally and externally. From the company's perspective, reducing material use, reducing recycled waste by utilizing digital technology and reducing administrative costs such as paperless, thus becoming an attraction for investors for company development, while consumers choose products that implement environmentally friendly or go-green policies, especially those with sustainable certifications that can encourage increased sales and expansion of market share and are ready to face global challenges. Thus, the goal of GHRM practices in the workplace and organizational staff who voluntarily implement Environmentally Friendly Work Behavior is to help organizations reduce factory and office emissions and increase recycling, so that organizations can help reduce the impact of global climate change through reducing pollution and waste (Gitaya & Waskito, 2024). The increasingly worrying climate change that can threaten the safety and survival of creatures has occurred throughout the archipelago. Among the causes of climate change, apart from the will of God Almighty, there is also an element of negligence on the part of His creatures, namely humans. Humans are caliphs on earth who are given power by the creator to be managed and utilized as best as possible for the needs and sustainability of life in the future (Samsiah, 2021). Human resource management is a process of planning, organizing, staffing, mobilizing, and supervising, towards procurement, development, compensation, integration, maintenance and separation of labor to achieve organizational goals (Bangun; 2018). Human resource management is something related to the utilization of humans in carrying out a job to achieve a maximum level or effectively and efficiently in realizing the

goals to be achieved in the company, an employee and also the community (Susan, 2019). As a form of management of existing resources, there needs to be sustainability as the continuity of existing resources to be utilized in the future. The sustainability in resource management mentioned here is Green Human Resource Management (GHRM) by utilizing environmentally friendly digitalization to reduce the development value of greenhouse emissions in this case carbon emissions. The success of GHRM implementation is reflected in achievements that exceed targets in various environmental indicators. This study highlights WIKA's positive achievements in implementing GHRM, while emphasizing the need for continuous improvement and higher targets for resource conservation (Yusuf, 2024). The implementation of GHRM cannot be separated from company management in this case leaders who make policies and decisions for green company sustainability. as an effort to accelerate the implementation and achievement of a green environment through the use of digital technology as a tool in implementing GHRM effectively and efficiently so that it has an impact on the company in particular and on sustainable economic, social and environmental values. to achieve sustainability and sustainability in facing increasingly stringent global challenges especially in developing countries such as Indonesia. The delivery of ideas or thoughts, criticism and input, complaining and comparing bias through an electronic digitalization system in this case called digital technology, it is hoped that with a system like this, a leader can easily make changes and improvements to the results obtained from using this system if this can build and contribute to accelerating sustainability and reducing the use of administration that can cut costs and also reduce the value of the greenhouse effect as a source of global warming. Another function of the digitalization system of digital technology to carry out leadership transformation can also be used in human resource management implementing an approach through elements such as green recruitment, green training, green performance, and green awards in addressing environmental problems with the use of digital technology (Ciocirlan, 2018). The use of digital technology is expected to provide encouragement or speed to the achievement of company performance that can have a positive impact on the sustainability and sustainability of company value in the future. The transformation of digital technology has penetrated all corners of the country, starting with the social distancing during the Covid-19 pandemic, which forced a sudden change from face-to-face interactions to analog digitalization (Faraj et al., 2021).

## Method

The material in this study uses quantitative and descriptive materials, as follows:

1. The quantitative material in this study is related to the data on the independent variables Green Human Resource Management ( $X_1$ ), Digital Technology ( $X_2$ ), while the dependent variable ( $Y$ ) is Company Performance.
2. The descriptive material in this study is Capability, namely making a descriptive study of the capability of the campus's structural authority in carrying out tasks in leadership authority Research Procedure The research was conducted in several stages, namely the preliminary stage, data analysis, data interpretation and drawing conclusions, with the following stages:
  - 1). In the initial stage, the research was carried out by conducting observations, with the findings of problem phenomena and providing initial problem identification in the research and making proposals.
  - 2). In the next stage, data analysis was carried out through descriptive and quantitative approaches.
  - 3). At this stage, what was done was to interpret the data from the predicted values of each variable by comparing them with the theory and the results of previous research. The results of the interpretation can prove the theory, challenge the theory and develop a new theory as a basis for the research results.
  - 5). At this final stage, what was

done was to draw conclusions from the results achieved by recommending to certain parties involved. Observed Parameters The observed parameters were: 1). The recruitment process by considering environmental values (for example, including environmental commitments in job vacancies) 2). A work assessment system that assesses contributions to environmental goals. 3). The level of employee participation in environmental programs (waste banks, waste education, green CSR activities). 4). The use of technology in HR processes such as e-recruitment, e-training, and e-assessment. 5). The use of technology in HR processes such as e-recruitment, e-training, and e-assessment. 6). The effectiveness of digital internal communication in socializing sustainability values. 7). Cost efficiency, increased productivity, increased company value 8). Employee satisfaction, community relations, CSR participation. 9). Carbon emission reduction, energy efficiency, waste management. Place and Time of Research The research was conducted at an Animal Feed Processing Company in North Sumatra, especially Medan City, Deli Serdang The research period was from 2025 to 2026. Type and Scope of Research 1. Green Human Resource Management (GHRM): green recruitment, green training, environmentally friendly performance evaluation, and green reward systems. 2. Digital Technology: the role of HR information systems, digitalization of work processes, the use of green IT, and digital communication. 3. Sustainability Performance: economic aspects (efficiency & profitability), social (CSR & stakeholder relations), and environmental (emissions, waste, energy efficiency) Data Collection Techniques Primary data can be collected through distributing questionnaires, interviews and direct observation. Secondary data is done by searching for related data needed by looking at documents related to the research. Population and Sample The population in this study is the Animal Feed Production Management Company in the cities of Medan and Deliserdang Data Analysis Method The Data Analysis Method in this study uses Descriptive Analysis Method and Quantitative Analysis. Descriptive Analysis in this study by describing Green Human Resource Management and the Use of Digital Technology on Company Performance.

## Results and Discussion

The approach taken is by:

1. Conducting surveys on GHRM practices such as green recruitment, environmental training, sustainable performance appraisal, and environmental-based compensation.
2. Identifying the use of digital technology in HR management and operational processes (such as HRIS, digital training, monitoring of environmentally friendly production systems)
3. Assess the interaction of the two variables in one statistical model (e.g. multiple regression interaction or SEM if possible)
4. Assess internal factors (human resources, organizational culture, IT infrastructure) and external factors (regulatory support, investment costs, market awareness).

Troubleshooting using:

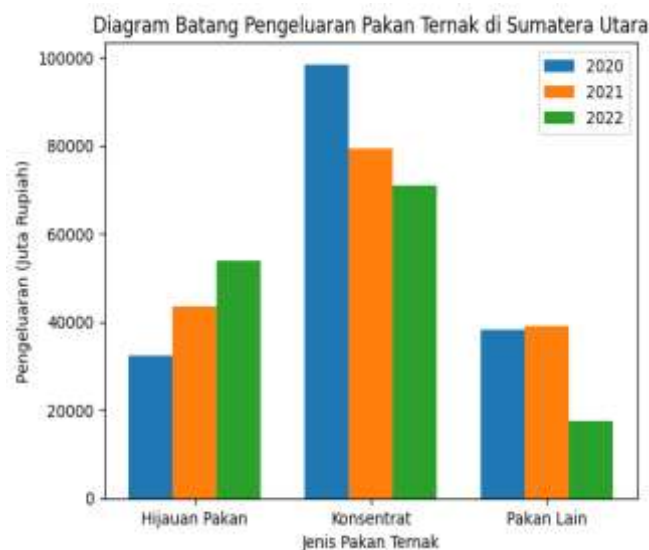
1. Analyzing the relationship between the level of digitalization and sustainable performance with a quantitative approach
2. Testing whether the combination of GHRM and digitalization has a stronger effect on sustainable performance than if each is implemented separately.
3. Develop recommendations for implementation strategies to increase the effectiveness of GHRM and digital technology implementation.

The aim of GHRM is to reduce emissions through digitalization of work processes in the Animal Feed Industry in North Sumatra.

**Table 1: Types of Animal Feed Used**

Variables	Indicator	Mark (%)	Information
Use Feed Local	Greens	37%	Increase
Feed Industry	Concentrate	50%	Dominant
Feed Alternative	Waste Agriculture	13%	Supporters

Source: Research Observation



**Figure 1: Feed usage diagram**

Source: Research Observation

### Conclusion

In this conclusion, the results achieved will be seen so that they can be followed up to achieve good results, so the conclusions are as follows:

1. The Development of an Integrative Model of GHRM and Digital Technology “A conceptual and applicative model is produced that shows the synergistic relationship between GHRM and digitalization in driving corporate sustainability performance (economic, social, environmental)”.
2. Identification of Effective GHRM Practices This research is expected to identify the GHRM elements that have the most positive impact on company sustainability, such as:
  - a. Green recruitment
  - b. Environmentally aware training and development
  - c. Environmentally friendly behavior based awards
3. Mapping the Role of Digital Technology in GHRM Implementation Finding the strategic role of digital technology in facilitating GHRM implementation, such as:
  - a. Emission reduction through digitalization of work processes
  - b. Administrative efficiency (paperless)
  - c. Real-time environmental performance monitoring and evaluation

4. Strategic Recommendations for Companies Providing practical recommendations to the food industry regarding the integration of GHRM and digital technology to improve company competitiveness and sustainability.
5. Preparation of Initial Guidelines / Prototype of Digital GHRM Program. Preparation of initial concepts or blueprints for digital-based GHRM policies to be used by companies as a form of measurable and structured environmental CSR development.
6. Scientific Contribution:
  - a. Enhancing the literature on GHRM and digitalization in Indonesia.
  - b. Encourage further research in other sectors (e.g.: MSMEs, agriculture, education).
7. Increasing Social Awareness and Involvement This research is also expected to:
  - a. Increase public awareness (including employees and organizational leaders) of the importance of sustainability.
  - b. Encourage active community participation in corporate environmental programs.

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