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## INTEGRATING ENVIRONMENTAL SUSTAINABILITY INTO HUMAN RESOURCES MANAGEMENT: A COMPREHENSIVE REVIEW ON GREEN HUMAN RESOURCES MANAGEMENT (GREEN HRM) PRACTICES

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### Abstract

*The HR professionals face numerous challenges arising from this volatile business world. One of the contemporary important challenges faced by them is to ensure the proper integration of environmental sustainability into human resources policies. The Green Human Resources Management (Green HRM) has emerged from companies engaging in practices related to protection of environment and maintaining ecological balance. This study aims at analyzing the concepts, importance, practices and implications of Green Human Resource Management (Green HRM). The study was basically conducted based on a thorough analysis of existing literatures. The study has found that the Green Human Resource Management (Green HRM) endeavors result in expanded efficiencies, economical utilization of resources, less wastage, improved job related attitude, improved work/private life, lower costs, improved worker execution and maintenance which help organization to ensure environmentally sensitive, resource efficient and socially responsible workplace. The study identified the key activities of Green Human Resources Management in alignment with the traditional human resources practices.*

**Keywords:** Human Resources Management, Green Human Resources Management, Green Management, Go Green

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### INTRODUCTION

The globally growing concern for environment compels businesses to move towards sustainable operations and formulate green policies. The international standards for environment protection and preservation call for businesses to devise environment-friendly strategies. With everyone, from customers to employees to investors becoming more and more environment-conscious, ‘Green Human Resource Management (referred as green HRM or GHRM)’ is emerging as a significant area in management (Mehta & Chugan, 2015).

The incorporation of environmental objectives and strategies into the overall strategic development goals of a company helps in arriving at an effective environment management system (Haden et al., 2009). Fayyazia et al. (2015) said that there is a requirement for the amalgamation of environmental management in Human Resource Management (HRM) because it is essentially or very important rather than just desirable.

Now-a-days it seems that a considerable number of organizations practice green human resource management practices in the global context (Opatha et al., 2015). There is a need for companies to adopt formal environmental practices due to growing global environmental concern and Development of international environmental standards (Daily and Huang, 2001). Various literatures on Green Marketing (Peattie, 1992), Green accounting (Bebbington, 2001; Owen, 1992), Green Reatiling (Kee-hung, Cheng, and Tang, 2010), and Green management in general (McDonagh

and Prothero, 1997) have fertilized the concept of Green HRM. There is a need of integration of environmental management into Human Resource (HR) called Green HR (Dutta, 2012).

Numerous researchers have their contribution to support and raise the awareness of Green HRM (Muster and Schrader, 2011), (Brio, Farnendiz and Junquera, 2007), (Farnendiz, Junquera and Ordiz, 2003), (Govindarajulu and Daily, 2004), (Jabbour and Santosh, 2008), (Jabbour, Santosh and Nagano, 2010), (Madsen and John P. Ulhoi, 2001), (Massoud, Daily and Bishop, 2008), (Ramus, 2001, 2002), (Renwick, 2008), (Stringer, 2009), (Wehrmeyer, 1996). There is a need for a proactive approach to environmental management across the world (González-Benito & González-Benito, 2006; Daily et al., 2001; Jabbar et al., 2010).

These researchers give importance to adoption of environmental practices as a crucial purpose of organizational functioning to make it significant with the strength of HRM practices (Jackson et al., 2011; Daily and Hung, 2001; Sarkaris et al., 2010). Lee (2009) defined 'green management' as the exercise whereby companies develop an environmental management strategy to manage the environment. So there is a need of proactive environmental management (Gonzalez-Benito and Gonzalez-Benito, 2006). Employee involvement and participation and involvement of employee are critically important for success of the Green HRM concept. There is a need of implementing Green HRM Practices in our daily working as well as private life (Brio, Fernandez and Junquera, 2007; Fernandez, Junquera and Ordiz, 2003; Ramus, 2001, 2002; Renwick, 2008). Rashid, Wahid and Saad (2006) have archived that employee participation in environmental management systems has a positive effect on the character or environmentally responsible attitudes and behavior in an employee's private life.

After a wealth of research into green marketing (Peattie, 1992), accounting (Owen, 1992), and management (McDonagh and Prothero, 1997), gaps still exist in the Human Resource Management (HRM) literature on the HR aspects of environmental management - Green HRM. Such gaps include an informative guide on the emergent literature, its scope and coverage, and a process model and research agenda in this field.

## OBJECTIVES

The main objective of this paper is to explain the concepts, policies and practices of Green Human Resource Management. Accordingly the study focuses on four areas. First, review the existing contemporary literatures on Green HRM. Second, identify the key activities of Green HRM management arising from the review of these literatures. Third, provide improvement points for HR professionals. Finally, identify the research gap in the field of Green HRM so that it will open the doors of further research.

### *Justification of the Study*

Green HRM is an emerging philosophy that focuses on the integration of green management concepts into HR strategies. With the increase of the awareness on environmental management and sustainable development, Green Human Resource Management (Green HRM) gained its unique position in research. This study aims at analyzing the concepts, importance, practices and implications of Green Human Resource Management (Green HRM). This study is supposed to contribute to the field of Green HRM literature. First, the study will help the HR professionals in adopting and implementing Green HR strategies. Second, it will help the unions and employees to adopt Green HRM policies and practices that help safeguard and enhance worker health and well-being. Third, it will help the academics by revealing additional data to add an HRM element to the knowledge base on Green Management in general. Fourth, the study is supposed to open the doors of future research.

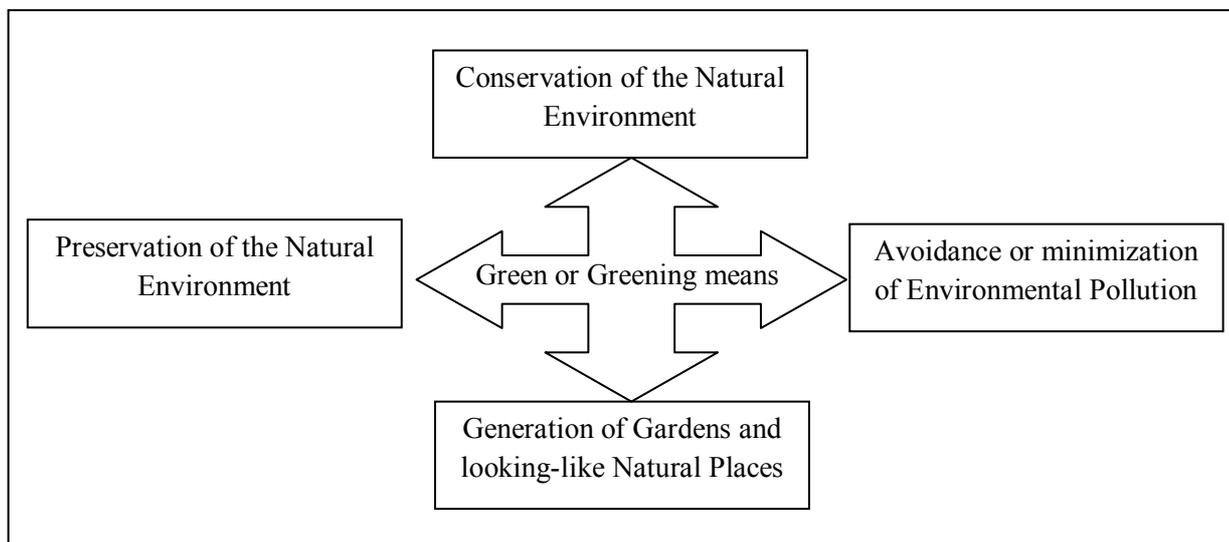
## METHODOLOGY

This is a qualitative research based on the extensive analysis of existing literatures of Green HRM. Literature review is adopted as it enables to structure research and to build a reliable knowledge base in this field (Tranfield et al., 2003). In order to achieve the stated review objective, a systematic review of literature was conducted by using an archival method. This paper employs a methodology to review the articles cited in the databases Sage, Taylor and Francis Online, Springerlink, ScienceDirect, JSTOR, Wiley Online Library, and Emerald. The other sources of data include books, journals, e-papers and websites. Contemporary research papers were given priority in analyzing the existing literatures. Research papers were delimited from the review if they did not have a focus on environmental management as it pertains to management, employees, work organisations, and the wider social arena.

## CONCEPTS

### *Meaning of 'Green'*

The Oxford Paperback Dictionary (1979) defines 'green' as the colour between blue and yellow; the colour of growing grass; covered with grass or with growing leaves; unripe, not seasoned; immature, inexperienced, easily deceived; pale and sickly-looking. Thus, the term 'green' has different meanings. However, mostly it means something relevant to nature or natural environment. Green means environmental. "Green" or "greening" has at least four meanings in the context of managing people at work / human resource management (Deshwal, 2015).



**Figure 1: Four meanings of green or greening in the context of HRM**

**Source: Opatha and Arulrajah (2014)**

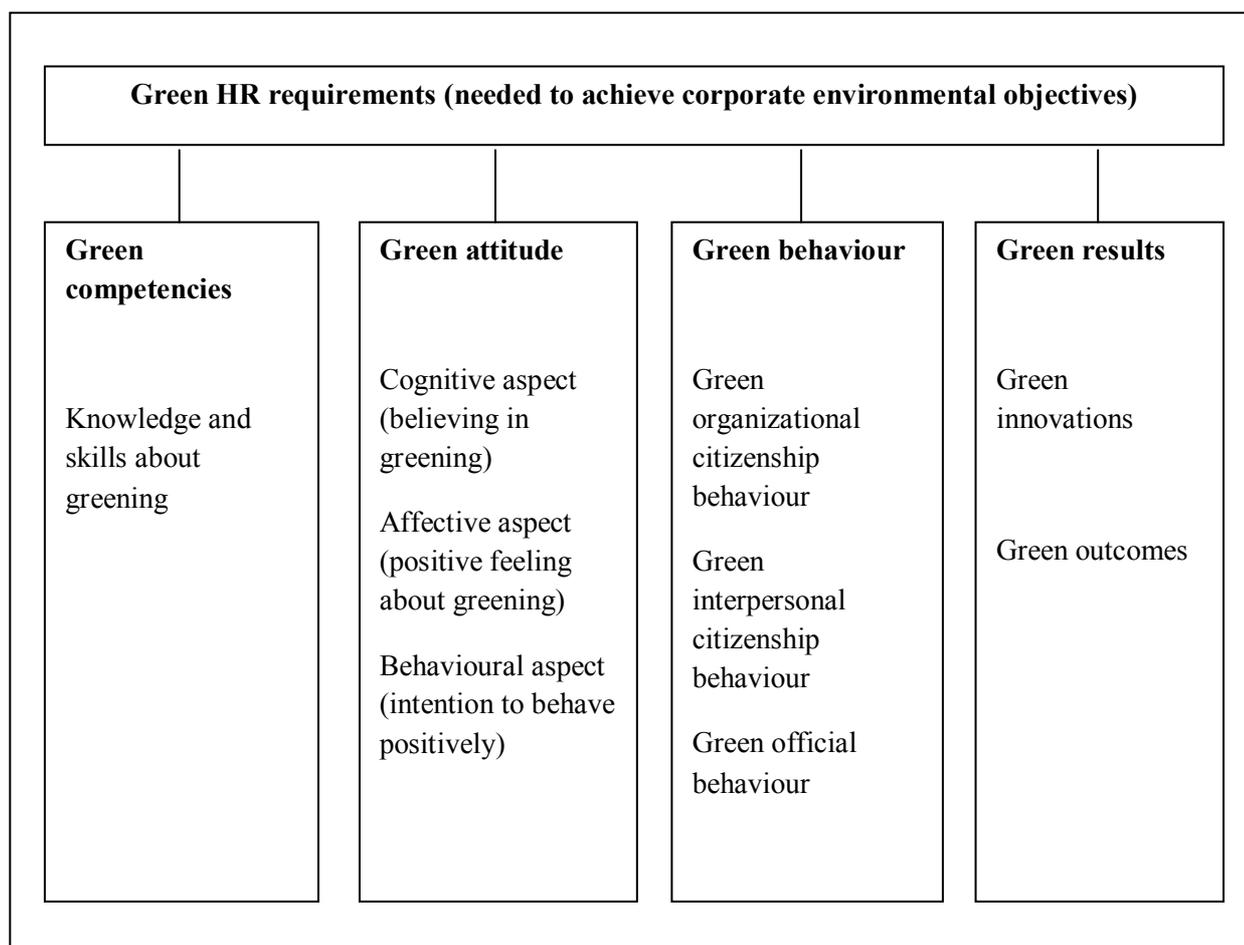
### *Green HRM*

Green Human Resources Management (Green HRM) is the use of HRM policies to support the sustainable use of resources within organizations (Deshwal, 2015). The term "Green HRM" is most regularly used to refer to the concern of people management policies and practices towards the broader corporate environmental schedule. In fact it refers to the policies, practices and systems that make employees of the organization green for the benefit of individual, society, natural environment, and the business (Opatha & Arulrajah, 2014). The purpose of green HRM is to create, enhance and retain greening within each employee of the organization so that he or she gives a maximum

individual contribution on each of the four roles, i.e., preservationist, conservationist, non-polluter, and maker. Thus, Green HRM is seen as a strategy of the green movements of organizations to ensure environment safety (Shaikh, 2012).

Green HRM is directly responsible in creating green workforce that understands, appreciates, and practices green initiative and maintains its green objectives throughout the HRM process of recruiting, hiring, training, compensating, developing, and advancing the firms human capital (Mathapati, 2013, p. 2).

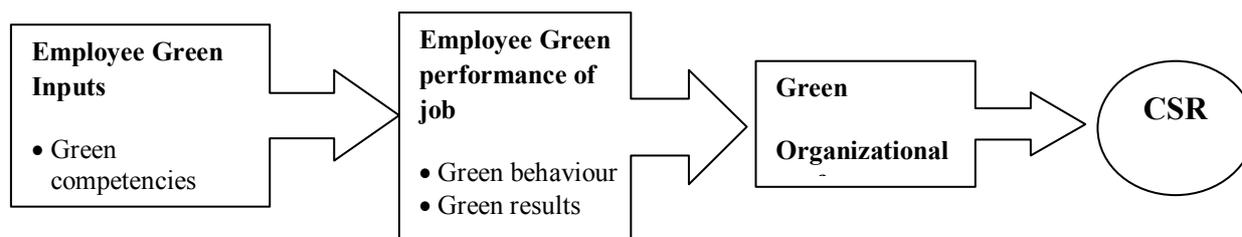
In order to achieve organizational environmental goals or greening, green human resource requirements need to be identified. What are the green human resource requirements for greening or corporate environmental management? There are four categories of green human resource requirements, i.e. green competencies, green attitude, green behaviours and green results. Though these major types of green human requirements are related, they can be distinctly treated. Figure 2 shows these requirements and relevant dimensions.



**Figure 2. Green human resource requirements**

**Source: Opatha and Arulrajah (2014)**

Green competencies and green attitude are viewed as green employee inputs and green behaviour and green results are viewed as employee green performance of job which contributes to green organizational performance meeting the CSR to a significant extent. See Figure 3.



**Figure 3: Employee green inputs and employee green performance of job**

Source: Opatha and Arulrajha (2014)

### *Significance of Green HRM*

In the past, sound economic performance of the firm was expected to guarantee corporate success by companies and its shareholders, but now it is no longer valid; economic and financial outcomes need to be accompanied by minimization of ecological footprints and increased attention to social and environmental aspects (Sudin, 2011). Therefore, the new strategic issue, corporate environmentalism or green management emerged in 1990s and became a popular slogan internationally in 2000s (Lee, 2009).

Daily and Huang (2001) recommended that organizations essentially need to balance the industrial growth and ensuring that the environment where one lives is well preserved and promoted. The adoption of these practices has been presented with a number of different advantages which would ultimately benefit the firm which has led to the emergence of “green and competitive” mantra (Wagner, 2007; Molina-Azorin et al., 2009).

Some of the benefits associated with this adoption include improvements related to firms operational performance (Jackson et al., 2011), promotion of teamwork (Jabbar et al., 2010), improvements in organizational culture (Jabbar et al., 2012) and reduction on overall cost (Hart 1997). It is identified that the management of environmental systems will enable improvements in synchronization with other management strategies of the firm (Wagner, 2007). From the above discussion it is identified that researchers give importance to adoption of environmental practices as a key objective of organizational functioning to support human resource management practices (Jackson et al., 2011; Daily and Hung, 2001; Sarkaris et al., 2010).

Pawar (2016) identified some of the benefits that an employee and organization can attain by implementing green HRM in the organization as follows:

- Improved rate of retention in employee
- Improved public image
- Improvement in attracting better employees
- Improvement in productivity
- Improvement in sustainable use of resources
- Reduction of practices that cause the degradation of the environment
- Reduced Utility Costs
- Save Environmental Impact
- Rebates and Tax Benefits
- Increased Business Opportunities

## LITERATURE REVIEW

The Green HRM literature is largely a western one and, given the importance of Asian economic development for environmental management, this is an important gap for future studies to reduce (Renwick, Redman, & Maguire, 2013, p. 3). Fayyazia et al. (2015) said that there is a requirement for the amalgamation of environmental management in Human Resource Management (HRM) because it is essentially or very important rather than just desirable.

Successful environmental management in an organization needs special efforts of human resource management (Rothenberg, 2003). Similarly Jabbour and Santos (2008) also stated that effective environmental performance results need human resource practices that support the whole execution and preservation of environmental management systems in the organisations.

The extant literature in the HR field on the topic of sustainability suggests that more and more HR executives are keen to modulate their corporation as such to become exclusive environmental champions. A great extent of empirical research highlights the impact of environment management practices on performance of the organization using different parameters (Iraldo, Testa, & Frey, 2009; Yang, Lin, Chan, & Sheu, 2010). Literature has given importance to adoption of environmental practices to identify the human resource management practices (Cherian & Jacob, 2012, p. 25). Haden, Oyler, and Humphrey (2009) comprehend that the integration of environmental objectives and strategies along with the strategic development goals of a company results in an effective environment management system. Daily and Huang (2001) proposed that organizations essentially need to balance the industrial growth as well as preservation of the environment because it has been confirmed that by endorsing green practices, the companies may profit more than before (Murari & Bhandari, 2011).

The Human Resource Department of an organization plays a significant role in the creation of their company's sustainability culture (Harmon, Fairfield, & Wirtenberg, 2010). It is identified that the greater the strength of green human resource policies, the greater is the intensity of adoption of environment management systems (EMS) and policies by the different companies (Bohdanowicz, Zientara, & Novotna, 2011). Various contemporary scholars have augmented the understanding and studies on Green HRM in recent years (Berrone & Gomez-Mejia, 2009; Jabbour, Santos, & Nagano, 2010; Massoud, Daily, & Bishop, 2008; Renwick, 2008; Stringer, 2009). Green HRM depends on the unique and identifiable patterns of green decisions and behaviors of HR managers (green signatures; Jackson, Renwick, Jabbour, & Muller-Camen, 2011).

The incorporation of environmental objectives and strategies into the overall strategic development goals of a company helps in arriving at an effective EMS (Haden et al., 2009). There are various researchers who support the HRM practices to be effective for promotion of human capital and results in providing to contributors of organizational performance and competitive advantage (Boselie, Paauwe, & Jansen, 2001). Distinguished policies in the field of recruitment, performance and appraisal management, training and personnel development, employee relations, and reward systems are considered powerful tools for aligning employees with a company's environmental strategy (Renwick, 2008). Several workers argue that in order to implement an effective corporate green management system, it is important to promote a great deal of technical and management skills among all employees of the organization (Daily et al., 2007; Unnikrishnan & Hegde, 2007), whereas, others propose that organizations look at development of innovative tools and initiatives of environment management (EM) which will significantly impact sustainability of the firm and promote a competitive advantage (Hart, 1997; Lin, Jones, & Hsieh, 2001). Therefore, to expand such a framework, it becomes definitive to have effective human resource management practices including presentation of strict recruitment strategies (Grolleau, Mzoughi, & Pekovic, 2012), appraisal, and reward systems which include environmental awareness and implementation in their evaluation process (Jabbour et al., 2013) and training and empowerment programs

(Unnikrishnan & Hegde, 2007) which will facilitate the evolution of new set of skills and competencies among the employees of “pro green” organizations. It is evident from the mentioned statements that whatever the method of research they apply, all of these researchers promote the ideology that is important for proper alignment of human resource management principles with objectives of green management in an organization.

Primarily this study concentrates on GHRM, which according to Dutta (2012) includes two major elements namely, environmental-friendly HR practices and the preservation of the knowledge capital. Green human resources refer to using every employee touch point/interface to promote sustainable practices and increase employee awareness and commitments on the issues of sustainability (Mandip, 2012). HR department of an organization plays a major role in making environmental responsibility a part of the corporate mission statement. Green HRM focuses on employee’s environmental behavior in the company, which in turn, employees can carry on such pattern of consumption in their private life (Muster & Schrader, 2011).

The main objective of green HRM is to make the employees aware of the intricacies of environment management i.e. what action is needed, how it functions, and how does it help the environment. The exercise really motivates the employees and develops a sense of pride in them for being a part of the going green program.

Cherian and Jacob (2012) published a comprehensive list in respect of studies on Green HRM. Based on their reviewed studies, very recent studies done in 2010 and 2012 are given in Table 1:

**Table 1: Summary of Very recent research studies on Green HRM**

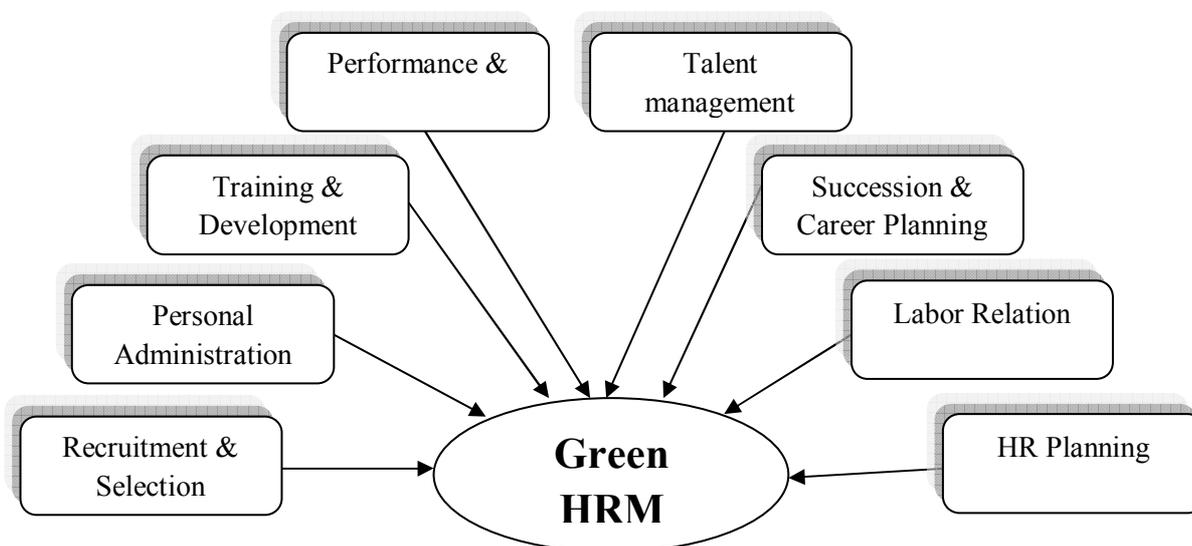
<i>Author</i>	<i>HRM Functions</i>	<i>Objective</i>	<i>Data Type</i>	<i>Findings</i>
Sarkaris et al., (2010)	Training and development	Impact of stakeholder pressure on environmental management principles	Primary-Survey approach	Employees presented with better training have better perception of environmental management systems.
Jabbar et al., (2010)	Training, recruitment, rewards	Impact of HRM on Environmental Management System	Primary-Case study	Human dimensions impact Implementation of Green management principles.
Teixeira et al., (2012)	Training and development	Impact of green HRM practices on teamwork, organizational culture	Primary-Case study	Employees with better training are vital to promote a good environmental management system in any organization and build an effective organizational Culture.
Grolleau et al.,(2012)	Recruitment	Impact of environmental principles on recruitment	Primary-Survey	Professionals were concerned with the environmental stance of a company.
Jabbar et al., (2012)	Employee empowerment, rewards and recognition and feedback	Impact of HRM and environmental management on organizational performance of the company	Primary-Survey	Human dimension impacts organizational performance as well as mediates environmental management system implementation.
Daily et al., (2012)	Training and development	Impact of training and development related to environmental management on performance of employees	Primary-Survey	All other facets of HRM related to implementation of Green management principles are directly associated with good training.
Ji et al., (2011)	Employee Training	Employee training influence on firm’s performance in sustainable development	Primary-Survey approach (Empirical Study)	This study predicts both direct and moderating effects of employee training on the firm’s performance in sustainable development.

**Source: Cherian and Jacob (2012).**

### GREEN HRM PRACTICES

Human resource department plays very crucial role in translating green policy into practice (Renwick, 2008) and the creation of sustainable culture within the company (Harmon et al., 2010), therefore such green practices help in fulfillment of green objectives throughout the HRM process from recruitment to exist (Dutta, 2012). Cherian and Jacob (2012) identified in their study that there are certain factors which contribute specific role in employee implementation of green principles. These factors are recruitment, training, motivation and green pay/rewards. These factors help the organization to get right employee green input and right employee green performance of job. In this part of the paper, we briefly describe the green HRM process i.e. Green recruitment, performance management and appraisal, training and development, employee relation, pay and reward and employee exit.

There are functions of HRM which are generally considered as traditional and there can be a variety of green practices under each function. The following section presents summaries of the existing and certain new green HRM practices under each function of green HRM.



**Figure 4: Process of Green HRM**

Source: Deshwal, P. (2015)

#### *Green HR Planning*

At present, some companies engage in forecasting number of employees and types of employees, needed to implement corporate environmental management initiatives/programs/activities (e.g. ISO 14001, cleaner production, responsible care etc.).

**Table 2: Green human resource planning**

<i>Practices: Green human resource planning</i>	
1.	Engaging in forecasting number of employees and types of employees, needed to implement the corporate environmental management initiatives/programs/activities (e.g. ISO 14001, cleaner production, responsible care etc).
2.	Engaging in deciding strategies to meet the forecasted demand for environmental works (e.g. appointing consultants/experts to perform energy or environmental audit etc).

Source: Arulrajah, Opatha & Nawaratne (2015).

In general, job descriptions can be used to specify a number of environmental protection related task, duties and responsibilities (Wehrmeyer, 1996; Renwick et al, 2008 and 2013). Job descriptions and person (job) specifications may include environmental, social, personal, and technical requirements of the organizations as far as possible. For example, environmental protection duties should be included, along with the allocation of environmental reporting roles and health and safety tasks (Crosbie and Knight, 1995; Wehrmeyer, 1996; North, 1997; Revill, 2000). In addition, some companies use teamwork and cross-functional teams as job design techniques to successfully manage the environmental issues of the company (May and Flannery, 1995; Florida, 1996; Clement, 1997; Palmer and Andrews, 1997; Beard and Rees, 2000; Griffiths and Petrick, 2001; Daily and Huang, 2001; Govindarajulu and Daily, 2004; Jabbour, Santos, and Nagano, 2010).

### ***Green Recruitment***

Green recruitment is the process of recruiting new talent who are aware of sustainable process, environmental system and familiar with the words of conservation and sustainable environment. Green recruitment makes it sure that new talents are familiar with the green practices and environmental system that will support the effective environmental management within the organization (Wehrmeyer, 1996). In the race of attracting most creative and innovative employees, increasing recruiting potential and hiring quality staffs are very crucial challenges in the war of talent (Renwick et al., 2013). Companies must also know the effective way to attract new talent (Phillips, 2007; Stringer, 2009).

### ***Green Induction***

Employee orientation programmes should be designed in such a way as to facilitate the integration of new employees into a culture of green consciousness. Induction programmes should highlight an organization's concern for green issues of employees like their health, safety and green working conditions (Deshwal, 2015).

**Table 3: Green induction**

<b><i>Authors</i></b>	<b><i>Practices</i></b>
Crosbie and Knight, 1995; Wehrmeyer, 1996; North, 1997; Revill, 2000; Renwick et al, 2008; Renwick et al, 2013; Opatha, 2013	1. Providing general green induction.
Crosbie and Knight, 1995; Wehrmeyer, 1996; North, 1997; Revill, 2000; Renwick et al, 2008; Renwick et al, 2013; Opatha, 2013	2. Providing job specific green induction.
Opatha, 2013	3. Making new employees familiar with greening efforts of the organization and encourage them to engage in green interpersonal citizenship behaviour.
Opatha, 2013	4. Developing induction programs showing green citizenship behaviour of current employees.

**Source: Arulrajah, Opatha & Nawaratne (2015)**

### ***Green Training and Development***

Green training and development consist of employee working methods that reduce waste, proper utilization of resources, conservation of energy and reduces the causes of environmental degradation. It provides opportunity to engage employees in environmental problem solving (Zoogah 2011). Perron et al. (2006) has done a study by taking multiple case study approach and identified the role of Green training and development in promoting business value.

Similarly Daily et al. (2007) conducted a survey among 437 employees and the result of the survey shows that the formation of effective green management system was directly dependent on environmental training.

### ***Green Performance Appraisal***

Green human resource management ensures that the environmental targets set by the organizations are met. Performance management is an ongoing process of communication between supervisor and an employee that occurs throughout the year in support of accomplishing the strategic objectives of the organization. Green performance management includes the issues related to policies of the organization and environmental responsibilities. Integration of environmental management into performance management system improves the quality and value of environmental performances (e.g. Jackson et al., 2012; Renwick et al., 2013).

It acts as a safeguard to protect environmental management against any damage. Green performance management plays a very important role in the effectiveness of green management work over passage of time because they guide employee performance to the environmental performances needed by the organization (Jabbour and Santos, 2008).

Mandip (2012) identified that effective way of successful implementation of Green performance management is the linkage between performance management and green job description.

**Table 4: Green performance evaluation**

<b><i>Authors</i></b>	<b><i>Practices</i></b>
Wells et al, 1993; Carpenter, 1994; Schwalm,1994; Milliman and Clair,1996	1. Establishing environmental management information system (EMIS) and environmental audits.
Wehrmeyer, 1996	2. Incorporating corporate environmental management objectives and targets with the performance evaluation system of the organisation.
Milliman and Clair, 1996; Renwick et al, 2008; Renwick et al, 2013	3. Installing corporate-wide environmental performance standards.
Renwick et al, 2008; Renwick et al, 2013; Opatha, 2013	4. Integrating green criteria in appraisals or evaluating employee's job performance according to green-related criteria.
Opatha, 2013	5. Including a separate component for progress on greening in the performance feedback interview.
Renwick et al, 2008; Renwick et al, 2013	6. Setting green targets, goals and responsibilities. 7. Providing regular feedback to the employees or teams to achieve environmental goals or improve their environmental performance. 8. Introducing or formally evaluating <i>all employees'</i> green job performance (as far as possible).

**Source: Arulrajah, Opatha & Nawaratne (2015)**

### ***Green Learning and Development***

Training, development and learning plans should include programmes, workshops and sessions to enable employees to develop and acquire knowledge in environment management, green skills and attitude. Job rotation in green assignments should become an essential part of career development plans of talented green managers of the future. Training contents should be developed to increase employee competencies and knowledge in Environment Management. Extensive use should be made of online and web-based training modules and interactive media as training tools for not only for environment management training but also for other functional areas. Environment-related aspects of safety, energy efficiency, waste management and recycling can become the focal points of green training. Training managers should rely more on online course material and case studies rather than on printed handouts, thus further reducing use of paper.

### ***Green Compensation and Reward Management***

Compensation and reward management should recognize contributions in green management. Compensation packages should be customized to reward green skills acquisition and achievements by employees (Deshwal, 2015). Monetary- based, non monetary based and recognition- based rewards can be used for green achievements of employees. Monetary-based rewards for contributions in environment management can be allocated in the forms of salary increase, cash incentives and bonuses while non-monetary rewards may include sabbaticals, special leave and gifts to employees and their family members. Recognition-based awards can highlight green contributions of employees through wide publicity and public praise and appreciation of green efforts by CEO or top management executives.

**Table 5: Green reward management**

<i>Authors</i>	<i>Practices</i>
Crosbie and Knight, 1995; Renwick et al, 2008 and 2013	1. Rewarding employee environmental performance (good/excellent and extraordinary).
Crosbie and Knight, 1995; Renwick et al, 2008 and 2013; Opatha, 2013	2. Financially rewarding for employee good environmental performance.
Whitenight, 1992; Bhushan, and Mackenzie, 1994; Renwick et al, 2008 and 2013; Opatha, 2013	3. Non-financially rewarding for employee good environmental performance.
Bhushan and Mackenzie, 1994	4. Team excellence awards for better environmental performance.
Bhushan and Mackenzie, 1994	5. Introducing rewards for innovative environmental initiative/performance.
Woods, 1993	6. Communicating employee environmental excellence.
Berry and Randinelli, 1999; Jackson et al, 2011	7. Providing incentives to encourage environmentally friendly activities and behaviours (e.g. recycling and waste management).
Renwick et al, 2008 and 2013	8. Rewarding for green skills acquisition.

**Source: Arulrajah, Opatha & Nawaratne (2015)**

### ***Green Employee Relations***

Employee participation in Green initiatives increases the chances of better green management as it aligns employees' goals, capabilities, motivations, and perceptions with green management practices and systems. Involving employees in EM has been reported as improving EM systems such as efficient resource usage (Florida & Davison, 2001); reducing waste (May & Flannery, 1995); and reducing pollution from workplaces (Kitazawa & Sarkis, 2000). Several workers in their study concluded that individual empowerment positively influences productivity and performance, and facilitates self-control, individual thinking, and problem-solving skills (Renwick, 2008; Wee & Quazi, 2005). An important way in which employee involvement and participation can be encouraged within the organization is to seek entrepreneurs within the company who are socially or ecologically oriented known as eco-entrepreneurs (Mandip, 2012, p. 246). Eco-friendly ideas should be welcomed from all employees irrespective of their designation which will encourage their interest in environmental issues and make best use of applying their skills.

The HR staff needs to pressurize the management to create a participative work environment where the employees are free to put up their ideas on green issues since they are the ones who in reality are responsible for implementing ethical corporate behavior in the day-to-day life of the organization. This means the achievement of green outcomes will largely depend on employees' willingness to collaborate (Collier & Esteban, 2007), as often, the best ideas come from the employees who work in that particular area (Casler, Gundlach, Persons, & Zivnuska, 2010).

**Table 6: Green employee relations**

<i>Authors</i>	<i>Practices</i>
Renwick et al, 2008 and 2013	1. Providing opportunities to the employee to involve and participate in green suggestion schemes.
Renwick et al, 2008 and 2013	2. Introducing green whistle-blowing and help-lines.
Renwick et al, 2008 and 2013	3. Providing training to the union representatives in environmental management.
	4. Joint consultations in solving environmental issues of the organisation.
	5. Gain sharing in relation to environmental initiatives or programs.
	6. Recognizing union as a key stakeholder in environmental management.
	7. Providing opportunities to the unions to negotiate with management about green workplace agreement.

Source: Arulrajah, Opatha & Nawaratne (2015)

## CONCLUSION

Green HRM is new phenomenon in the field of HRM. It creates some new challenges for HR professionals. The study tried to explore the concepts, importance, processes, requirements and challenges of Green HRM based on the analysis of existing literatures. Efforts were made to make the study as complete as possible. HR Professionals must address the environmental needs in crafting HR strategies and implementing the HR policies and practices in alignment with environment management.

Although Green HRM creates some new challenges for HR professionals, a well study and careful consideration of HR practices in alignment with environment management will increase the chance of adopting better HR policies. This study is supposed to help the researcher to identify the areas like training and development, performance appraisal system and some regular activities where non implementation of this concept of Green HRM takes place.

## Research Gap & Scope for Further Research

This study was conducted based on the extensive analysis of existing literature. The author has tried to organize the concepts, process, requirements and challenges of Green HRM in a constructive manner so that it can help the interested readers, researchers and academicians. However Green HRM is an emerging philosophy. Indeed, there are many gaps to be filled in respect of green HRM. Such gaps include an informative guide on the emergent literature, its scope and coverage, and a process model and research agenda in this field. Theoretical and empirical studies are needed to enhance the body of knowledge of Green HRM. The interested contributors/researchers can do extensive quantitative and/or qualitative research on Green HRM.

## REFERENCES

- Arunrajah, A. Anton, Opatha, H.H.D.N.P., & Nawaratne, N.N.J. (2015). Green Human Resource Management Practices: A Review. *Sri Lankan Journal of Human Resource Management*, 5(1), 1-16
- Bamberg, S. (2003). How does environmental concern influence specific environmentally related behaviors? A new answer to an old question. *Journal of Environmental Psychology*, 23, 21–32. [doi:10.1016/S0272-4944\(02\)00078-6](https://doi.org/10.1016/S0272-4944(02)00078-6)
- Bamberg, S., & Möser, G. (2007). Twenty years after Hines, Hungerford, and Tomera: A new meta-analysis of psycho-social determinants of pro-environmental behaviour. *Journal of Environmental Psychology*, 27, 14–25. [Doi:10.1016/j.jenvp.2006.12.002](https://doi.org/10.1016/j.jenvp.2006.12.002)

- Barrett, S., & Murphy, D. (1996). Managing Corporate Environmental Policy. In W. Wehrmeyer (Ed.), *Greening People*, 75–98.
- Beard, C. and Rees, S. (2000), Green Teams and the Management of Environmental Change in UK Country Council, *Environmental Management and Health*, Vol.11, No.1, pp. 27-38.
- Bebbington, J. (2001). Sustainable development: A review of the international development, business and accounting literature. *Accounting Forum*, 25, 128–157.
- Berrone, P., & Gomez-Mejia, L. R. (2009). Environmental performance and executive compensation: An integrated agency-institutional perspective. *Academy of Management Journal*, 52, 103–126. Doi: 10.5465/AMJ.2009.36461950
- Bhattacharya, C.B., & Sen, S. (2004). Doing Better at Doing Good: When, Why and How Consumers Respond to Corporate Social Initiatives. *California Management Review*, 47(1), 9–25. Doi: 10.2307/41166284
- Bissing-Olson, M. J., Iyer, A., Fielding, K. S., & Zacher, H. (2013). Relationships between daily affect and pro-environmental behavior at work: The moderating role of pro-environmental attitude. *Journal of Organizational Behavior*, 34, 156–175. Doi: 10.1002/job.1788
- Bohdanowicz, P., Zientara, P., & Novotna, E. (2011). International hotel chains and environmental protection: An analysis of Hilton's we care! programme (Europe, 2006–2008). *Journal of Sustainable Tourism*, 19, 797–816. Doi: 10.1080/09669582.2010.549566
- Boselie, P., Paauwe, J., & Jansen, P. G. W. (2001). Human resource management and performance: Lessons from the Netherlands. *The International Journal of Human Resource Management*, 12, 1107–1125. Doi: 10.1080/09585190110068331
- Brio, J. A., Fernandez, E., & Junquera, B. (2007). Management and employee involvement in achieving an environmental action based competitive advantage: an empirical study. *International Journal of Human Resource Management*, 18, 491-522.
- Busck, O. (2005). Employee Participation in Environmental Work in Companies. In L. H. Kørnø, & A. Remmen (Eds.), *Tools for a Sustainable Development*. Aalborg University.
- Callenbach, E., Capra, F., Goldman, L., Lutz, R., & Marburg, S. (1993). *Eco-Management: The Elmwood Guide to Ecological Auditing and Sustainable Business*. Berrett-Koehler, San Francisco, CA.
- Casler, A., Gundlach, M. J., Persons, B., & Zivnuska, S. (2010). Sierra Nevada Brewing Company's thirty-year journey toward sustainability. *People & Strategy*, 33, 44–51.
- Cherian, J., & Jacob, J. (2012). A study of Green HR practices and its effective implementation in the organization: A review. *International Journal of Business and Management*, 7, 25–33.
- Clement, K. (1997), Multi-disciplinary Teams and Environmental Integration: European Programmes, *Team Performance Management*, 3, 261-269.
- Collier, J., & Esteban, R. (2007). Corporate Social Responsibility and Employee Commitment. *Business Ethics: A European Review*, 16(1), 19–33. Doi: 10.1111/j.1467-8608.2006.00466.x
- Crosbie, L. and Knight, K. (1995), *Strategy for Sustainable Business: Environmental Opportunity and Strategic Choice*, McGraw-Hill, Maidenhead: England.
- Cordano, M., & Frieze, I.H. (2000). Pollution reduction preferences of U.S. environmental managers: applying Ajzen's theory of planned behaviour. *Academy of Management Journal*, 43(4), 627–641. Doi: 10.2307/1556358
- Daily, B., & Huang, S. (2001). Achieving sustainability through attention to human resource factors in environmental management International. *Journal of Operations & Production Management*, 21(12), 1539-1552. [Doi: 10.1108/01443570110410892](https://doi.org/10.1108/01443570110410892)
- Daily, B. F., Bishop, J., & Steiner, R. (2007). The mediating role of EMS teamwork as it pertains to HR factors and perceived environmental performance. *Journal of Applied Business Research*, 23, 95–109.
- Daily, B.F., Bishop, J. W., & Govindarajulu, N. (2009). Conceptual model for organizational citizenship behavior directed toward the environment. *Business & Society*, 48(2), 243–256. Doi: 10.1177/0007650308315439

- Deshwal, P. (2015). Green HRM: An organizational strategy of greening people. *International Journal of Applied Research*, 1(13), 176-181.
- Dunlap, R.E., Van Liere, K.D., Mertig, A.G., & Jones, R.E. (2000). Measuring Endorsement of the New Ecological Paradigm: A Revised NEP Scale. *Journal of Social Issues*, 56(3), 425–442. Doi: 10.1111/0022-4537.00176
- Dutta, S. (2012). Greening people: A strategic dimension. *ZENITH: International Journal of Business Economics & Management Research*, 2, 143–148.
- Fayyazia, M., Shahbazmoradib, S., Afsharc, Z., & Shahbazmoradic, M.R. (2015). Investigating the barriers of the green human resource management implementation in oil industry, *Management Science Letters*, 5, 101–108.
- Fernández, E., Junquera, B., & Ordiz, M. (2003). Organizational culture and human resources in the environmental issue: A review of the literature. *The International Journal of Human Resource Management*, 14, 634–656.
- Florida, R. (1996), *Lean and Green: The Move to Environmentally Conscious Manufacturing*, *California Management Review*, 39 (1), 80-105.
- Florida, R., & Davison, D. (2001). Gaining from Green Management: Environmental management systems inside and outside the factory. *California Management Review*, 43, 64–84. doi 10.2307/41166089
- Garavan, T.N., Heraty, N., Rock, A., & Dalton, E. (2010). Conceptualizing the Behavioral Barriers to CSR and CS in Organizations: A Typology of HRD Interventions. *Advances in Developing Human Resources*, 12(5), 587–613. Doi: 10.1177/1523422310394779
- Govindarajulu, N., & Daily, B. F. (2004). Motivating employees for environmental improvement. *Industrial Management & Data Systems*, 104, 364 – 372.
- González-Benito, J. (2006). Environmental pro-activity and business performance: an empirical analysis Omega. *The International Journal of Management Science*, 33, 1-15. Doi: 10.1016/j.omega.2004.03.002
- González-Benito, J., & González-Benito, O. (2006). A review of determinant factors of environmental proactivity. *Business Strategy and the Environment*, 15, 87–102.
- Griffiths, A. and Petrick, J. A. (2001), Corporate Architecture for Sustainability, *International Journal of Operations and Production Management*, 21(12), 1573-1585.
- Grolleau, G., Mzoughi, N., & Pekovic, S. (2012). Green not (only) for profit: An empirical examination of the effect of environmental-related standards on employees recruitment. *Resource and Energy Economics*, 34, 74–92. Doi: 10.1016/j.reseneeco.2011.10.002
- Gupta, M., & Sharma, K. (1996). Environmental operations management: an opportunity for improvement. *Production and Inventory Management Journal*, 37(3), 40–46.
- Haden, S. S. P., Oyler, J. D., & Humphrey, J. H. (2009). Historical, practical, and theoretical perspectives on green management. An exploratory analysis *Management Decision*, 47(7), 1041-1055. Doi: [10.1108/00251740910978287](https://doi.org/10.1108/00251740910978287)
- Harmon, J., Fairfield, K. D., & Wirttenberg, J. (2010). Missing an opportunity: HR leadership and sustainability. *People & Strategy*, 33, 16–21.
- Harris, C., & Tregidga, H. (2012). HR managers and environmental sustainability: strategic leaders or passive observers? *The International Journal of Human Resource Management*, 23(2), 236–254. Doi: 10.1080/09585192.2011.561221
- Hart, S. (1997). Beyond greening: Strategies for a sustainable world. *Harvard Business Review*, 75, 66–76.
- Iraldo, F., Testa, F., & Frey, M. (2009). Is an environmental management system able to influence environmental and competitive performance? The case of the eco-management and audit scheme (EMAS) in the European Union. *Journal of Cleaner Production*, 17, 1444–1452. Doi: 10.1016/j.jclepro.2009.05.013

- Jabbour, C. J. C., & Santos, A. C. F. (2008). Relationships between human resource dimensions and environmental management in companies: proposal of a model. *Journal of Cleaner Production*, 16, 51-58.
- Jabbour, C. J. C., Santos, F. C. A., Nagano, M. S. (2010). Contributions of HRM throughout the stages of environmental management: methodological triangulation applied to companies in Brazil. *International Journal of Human Resource Management*, 21(7), 1049-1089. Doi: 10.1080/09585191003783512
- Jabbour, C. J., Jabbour, L. S., Govindan, K., Teixeira, A. A., & Freitas, W. R. (2013). Environmental management and operational performance in automotive companies in Brazil: The role of human resource management and lean manufacturing. *Journal of Cleaner Production*, 47, 129–140. Doi: 10.1016/j.jclepro.2012.07.010
- Jackson, S., Renwick, D., Jabbour, C. J. C., & Muller-Camen, M. (2011). State-of-the-Art and Future Directions for Green Human Resource Management *Zeitschrift für Personal für schung. German Journal of Research in Human Resource Management*, 25, 99-116.
- Kee-hung, L., Cheng, T., & Tang, A. (2010). Green retailing: Factors for success". *California Management Review*, 52, 6–31.
- Lee, K. H. (2009). Why and how to adopt green management into business organizations: The case study of Korean SMEs in manufacturing industry. *Management Decision*, 47(7), 1101-1121.
- Madsen, H., & Ulhøi, J. P. (1996). *Corporate Environmental and Resource Management: Overview of Results from a Survey of the Present Greening Situation in Danish Companies*. Working paper, No.4, The Aarhus School of Business, Aarhus.
- Madsen, H. & Ulhøi, J. P. (2001). Greening of human resources: environmental awareness and training interests within the workforce. *Industrial Management and Data Systems*, 101, 57-63.
- Mandip, G. (2012). Green HRM: People management commitment to environmental sustainability. *Research Journal of Recent Sciences*, 1, 244–252.
- Massoud, J. A., Daily, B. F., & Bishop, J. W. (2008). Reward for environmental performance: Using the Scanlon Plan as catalyst to green organisations. *International Journal of Environment, Workplace and Employment*, 4, 15–31.
- Mathapati, C. M. (2013). Green HRM: A strategic facet. *Tactful Management Research Journal*, 2(2), 1–6.
- May, D. R., and Flannery, L.B. (1995), Cutting waste with employee involvement teams, *Business Horizon*, 38(5), 28-38.
- McDonagh, P., & Prothero, A. (1997). *Green management: A reader*. London: Dryden Press.
- Mehta, K. & Chugan, K. P. (2015). Green HRM in Pursuit of Environmentally Sustainable Business. *Universal Journal of Industrial and Business Management*, 3(3), 74-81. DOI: 10.13189/ujibm.2015.030302
- Milfont, T. L., & Duckitt, J. (2010). The environmental attitudes inventory: A valid and reliable measure to assess the structure of environmental attitudes. *Journal of Environmental Psychology*, 30(1), 80–94. Doi: 10.1016/j.jenvp.2009.09.001
- Molina-Azorin, J. F., Claver-Cortés, E., López-Gamero, M. D., & Tarí, J. J. (2009). Green management and financial performance. A literature review *Management Decision*, 47(7), 1080-1100. Doi: 10.1108/00251740910978313
- Murari, K., & Bhandari, M. (2011). Green HR: Going green with pride. *Journal of Social Welfare and Management*, 3, 107–110.
- Muster, V., & Schrader, U. (2011). Green work-life balance: A new perspective for Green HRM. *Zeitschrift Fur Personalforschung*, 25, 140–156.
- M. W. Shaikh, —Green HRM, a requirement of 21st century,|| *Journal of Research in Commerce and Management*, vol. 1, no. 10, pp. 122-127, 2012.
- Naffziger, D.W., & Montagno, R.V. (2003). Perceptions of Environmental Consciousness in US Small Businesses: An Empirical Study. *SAM, Advanced Management Journal*, 68(2), 23–32.

- North, K. (1997), *Environmental Business Management – An Introduction*, 2nd ed, International Labour Office: Geneva.
- Opatha, H.H.D.N.P., & Arunrajah, A. Anton. (2014), Green Human Resource Management: Simplified General Reflections, *International Business Research*, 7(8), 101-112.
- Opatha, H.H.D.N.P., & Arunrajah, A. Anton, & Nawaratne, N.N.J. (2015), Green Human Resource Management Practices: A Review, *Sri Lankan Journal of Human Resource Management*, 5(1), 1-16
- Owen, D. (1992). Green reporting: Accountancy and the challenge of the nineties. London: Chapman Hall, 3-33.
- Palmer, J. and Andrews, L. (1997), Team-work to Green Small and Medium-Size Enterprise?, *Team Performance Management*, 3 (3), 193-205.
- Park, J. (2009). *The Relationship Between Top Managers' Environmental Attitudes and Environmental Management in Hotel Companies* (Unpublished M.Sc. dissertation). State University in Blacksburg, Virginia, Faculty of the Virginia Polytechnic Institute, U.S.
- Pawar, A. (2016). Review on Implications of Green Human Resource Management in Business. *International Journal in Management and Social Science*, 4(4), 284-291.
- Peattie, K. (1992). Green Marketing. London: Pitman.
- Perron, G.M., Cote, R.P., & Duffy, J.F. (2006). Improving environmental awareness training in business.
- Peterson, R. B.(2004). A Call for Testing our Assumptions: Human Resource Management Today. *Journal of Management Inquiry*, 13(3), 192–202. Doi: 10.1177/1056492604268201
- Phillips, L. (2007). Go green to gain the edge over rivals. *People Management*, 13, 9.
- Ramus, C. A. (2001). Organisational support for employees: Encouraging creative ideas for environmental sustainability. *California Management Review*, 43, 85–105.
- Ramus, C. A. (2002). Encouraging innovative environmental actions: What companies and managers must do? *Journal of World Business*, 37, 151–164.
- Revill, C. (2000), The „Greening“ of Personnel/Human Resource Management an Assessment, *International Journal of Applied HRM*, 1 (3), 1-30.
- Renwick, D., Redman, T. & Maquire, S. (2008). Green HRM: A Review, Process Model, and Research Agenda, Discussion Paper Series, University of Sheffield Management School, The University of Sheffield.
- Renwick, D.W.S. Redman, T. and Maguire, S. (2013), Green Human Resource Management: A Review, and Research Agenda, *International Journal of Management Review*, Vol. 15, pp. 1-14.
- Rashid, N. R. N. A., Wahid, N. A., & Saad, N. M. (2006). Employees Involvement in EMS, ISO 14001 and its Spillover Effects in Consumer Environmentally Responsible Behaviour. *International Conference on Environment Proceedings*.
- Rothenberg, S. (2003). Knowledge content and worker participation in environmental management at NUMMI. *Journal of Management Studies*, 40, 1783-1802.
- Sarkis, J., Gonzalez-Torre, P., & Adenso-Diaz, B. (2010). Stakeholder pressure and the adoption of environmental practices, the mediating effect of training. *Journal of Operations Management*, 28, 163-176.
- Schultz, P.W., Shriver, C., Tabanico, J. J., & Khanzian, A. M.(2004). Implicit connections with nature. *Journal of Environmental Psychology*, 24, 31–42. Doi: 10.1016/S0272-4944(03)00022-7
- Stern, P.C., & Dietz, T. (1994). The Value Basis of Environmental Concern. *Journal of Social Issues*, 50(3), 65–84. Doi: 10.1111/j.1540-4560.1994.tb02420.x
- Stringer, L. (2009). The Green workplace. Sustainable strategies that benefit employees, the environment, and the bottom line. New York, NY: Macmillan.

- Sudin, S. (2011). Strategic Green HRM: A proposed model that supports Corporate Environmental Citizenship. International Conference on Sociality and Economics Development IPEDR vol.10 (2011) © (2011) IACSIT Press, Singapore
- Tallon, P.P. (2008). Inside the Adaptive Enterprise: An Information Technology Capabilities Perspective on Business Process Agility. *Information Technology and Management*, 9(1), 21–36. Doi: 10.1007/s10799-007-0024-8
- Tranfield, D., Denyer, D., Smart, P. (2003) ‘Towards a methodology for developing evidence-informed management knowledge by means of systematic review’, *British Journal of Management*, 14(3), 207-222.
- The Oxford Paperback Dictionary. (1979). Oxford: Oxford University Press.
- Unnikrishnan, S., & Hegde, D. S. (2007). Environmental training and cleaner production in Indian industry—A micro-level study. *Resources Conservation and Recycling*, 50, 427–441. Doi: 10.1016/j.resconrec.2006.07.003
- Wagner, M. (2007). Integration of environmental management with other managerial functions of the firm. Empirical effects on drivers of economic performance *Long Range Planning*, 40(6), 611-628. [Doi: 10.1016/j.lrp.2007.08.001](https://doi.org/10.1016/j.lrp.2007.08.001)
- Wee, Y. S., & Quazi, H. A. (2005). Development and validation of critical factors of environmental management. *Industrial Management & Data Systems*, 105, 96–114.
- Wehrmeyer, W. (1996). Greening people: Human resources and environmental management.
- Yang, C., Lin, S., Chan, Y., & Sheu, C. (2010). Mediated effect of environmental management on manufacturing competitiveness: An empirical study. *International Journal of Production Economics*, 123, 210–220. Doi: 10.1016/j.ijpe.2009.08.017
- Zoogah, D. (2011). The dynamics of Green HRM behaviors: A cognitive social information processing approach. *Zeitschrift fur Personalforschung*, 25, 117–139.