In recent times business organizations have become more conscious about the growing importance of integration of environmental Management and Human Resource Management i.e. Green HRM Practices. Green HRM is the use of HRM policies to promote the sustainable use of resources within business organizations and more generally promotes the cause of environmental sustainability. The objective of this paper is to detail a process model of the HR processes involved in green HRM. The paper also examines the nature and extent of Green HRM initiatives undertaken by HCL Technologies as a case study.

1. Introduction

In recent times the importance of Environmental issues and Sustainable development has increased both in the developed and developing nations. Growing concern for global environment and the development of international standards for Environmental Management has created a need for businesses to adopt ‘green practices’. With these concerns organizations today have become more conscious about the growing importance of the integration of Environmental Management and Human Resource Management i.e. ‘Green HRM’ Practices. Green HRM is the use of HRM policies to promote the sustainable use of resources within business organizations and more generally, promotes the cause of environmental sustainability. It involves human resource initiatives to endorse sustainable practices and increase employee awareness and commitments on the issues of sustainability.

Green HR consists of two essential elements: Environmentally-friendly HR practices and the preservation of knowledge capital. It entails undertaking environment friendly initiatives resulting in greater efficiency, lower costs, and better employee engagement and retention which in turn help organization to reduce carbon footprints. In fact Green HR policies focus on collective and individual capabilities to bring about green behaviour. Such policies are aimed at developing an environmental corporate culture. Green HRM focuses on employees’ environmental behavior in the company, which in turn, could be carried on to consumption pattern in their private life (Muster and Schrader 2011). Researchers in the area of Green Management initiatives argued that Environmental Management System (EMS) can only be effectively implemented if the companies have the right people with the right skills and competencies (Daily and Huang 2001). As the implementation of these initiatives requires a high level of technical and management skills among employees (Callenbach et. al., 1993) therefore Green HR initiatives involves the implementation of recruitment and selection practices, compensation and performance-based appraisal systems, and also the training programmes aimed at increasing the employees’ environmental awareness.

In the environmental literature, the concept of Green management for sustainable development has various definitions; all of which generally, seek to explain the need for balance between industrial growth for wealth creation and safeguarding the natural environment so that the future generations may thrive (Daily and Huang, 2001). Though organizations nowadays have been working on product innovation for environmental sustainability yet the issue of how an individual organization or entire society achieves sustainability from the green management movement is still debatable and unclear. Therefore this research study attempts to detail a process model of the HR practices involved in green HRM on the basis of available literature. The paper also examines the nature and extent of Green HR initiatives undertaken by HCL Technologies as a case study.

2. Theoretical Background of Green HRM

The concept of Green HRM has emerged with the initiation of Green Movement. Green Movement is a political movement which advocates four important principles: Environmentalism, Sustainability, Non-violence and Social Justice. Supporters of the Green Movement are called “Greens”, adhere to Green Ideology and share many ideas with ecology, conservation, environment, feminist and peace movements. With the growing awareness of the Green Movement across the world, management scholars from diverse areas such as accounting, marketing, supply-chain management and HRM also start analyzing that how managerial practices in these areas can contribute to environmental management goals. Already today, the UN Global Compact in collaboration with several educational organizations has developed the (PRME) Principles for Responsible Management Education, encouraging scholars and managers to jointly work on developing new knowledge to promote environmental responsibility (PRME, 2010).

In fact the development and the execution of a corporate environmental initiative, involves several units of the organization as a joint process and by doing so different roles are undertaken. One of the most important contributors for this initiative is the Human Resource Management of the firm. The HRM does not only represent a major internal stakeholder within the company, but it is also a source for competitive advantage (Wright, Dun ford & Snell, 2007). In 2000 Dunphy, Benveniste,
Griffiths and Sutton linked the implementation of ecological sustainability with human sustainability. The authors pointed out that the training and investment in human resources goes ideally along with ecological sustainability. Currently, many corporations are implementing a proactive, strategic tool known as an Environment Management System to gain competitive advantage (Daily and Huang, 2001). This system provides a structure that allows management of the firm's ability to better control the firm's environmental impacts (Barnes, 1996; Florida and Davison, 2001). However it is maintained by many that the role of employee involvement in EMS implementation has one of the most fundamental influences on its effectiveness and success. Sudin (2011) discussed the positive effects of the types of green intellectual capital on corporate environment citizenship, leading to competitive advantage of firms. Thus there is a need redefining HR role from HR executives to environmental executives who achieve employee cooperation in implementing environmental policies (Wehrmeyer and Parker, 1996).

Against this backdrop it can be assumed that Green HRM is all about the holistic application of the concept of sustainability to organization and its workforce. It involves green actions focused on increasing efficiency within processes, reducing and eliminating environmental waste, and revamping HR products, tools, and procedures resulting in greater efficiency and lower costs. The results included: electronic filing, ride sharing, job sharing, teleconferencing and virtual interviews, recycling, telecommuting, online training, and developing more energy efficient office spaces. In fact Green HRM promotes various Green processes and practices in different HR functions. Some of the practices concerning Green management in which HR is actively involved have been described above. Specifically the functional areas where HR can have a green approach have been discussed in the following section.

3. Green HRM Practices

Dechant and Altman (1994) studied the importance of employee perception of a firm’s environmental behavior. The authors pointed out that the employees’ perception is vital as employees are willing to work in a firm only when they feel it adds to their value proposition. In 2009 Hewitt Associates found “a strong correlation between employee engagement and their perception of employer corporate social responsibility initiatives.” The researchers found that eighty six per cent of employees at organizations with high engagement agreed that they worked for an employer that was socially and environmentally responsible. Further the survey reported that the potential benefits of investing in or pursuing socially and environmentally responsible practices are positive organizational reputation; higher or sustained employee engagement and eliminating waste/reducing their impact on the environment. In fact ‘Green’ may be considered as a powerful recruitment and retention tool. According to a recent Ipsos Mori survey eighty percent of respondents across 15 developed nations would prefer working for a company that “has a good reputation for environmental responsibility”. Also (Knox et al) found out that Environment Management/ CSR initiatives have been linked to employee engagement, through reduced costs due to increased employee retention as well as improved reputation in the eyes of employees. The authors reported that CSR programs impact the drivers of employee engagement (e.g. employee behavior and motivation); stakeholder attitudes and behaviors (e.g. potential employees), and the business outcomes (e.g. employee productivity and retention).

Further to promote Green HRM practices organizations could adopt Green Staffing procedures. Green Staffing involves hiring individuals with Environment Management skills, mindsets, and behaviors. In Green Staffing, job analysis procedures generally focus on environmental aspects such as environmental reporting duties and responsibilities; identification and influencing of candidates with EM related experiences; EM-centered testing (e.g., knowledge of risks, harmful substance, potential emissions, etc.), and interviewing techniques that enable managers in identifying candidates that fit environment-centered jobs (Renwick et al., 2008). Such practices ensure that the selected candidates should possess personality and attitudinal attributes that prevent waste, show creativity and innovative ideas vis-à-vis the environment.

Thirdly, it has been found (Daily & Huang, 2001) that a positive relationship between employees and employers facilitate productivity and involves empowerment, participation, and engagement activities. It promotes EM by aligning employees’ goals, capabilities, motivations, and perceptions with EM practices and systems. Individual empowerment positively influences productivity and performance, and facilitates self-control, individual thinking, and problem solving skills (Renwick et al., 2008; Wee and Quazi; 2005). Also for the successful implementation of Environment Management initiatives teamwork is essential in demonstrating the value of HR; it influences EM within organizations (Daily & Hung, 2001). HR managers can use teams to promote EM particularly when environmental problems are group-oriented (Daily, Bishop, & Steiner, 2007). Further, through EM teamwork solutions may be devised to eliminate extant or future environmental problems at their sources (Carter & Dresner, 2001).

Finally other HR practices such as Training and Development, Performance and Compensation Management, Reward Systems are also concerned with protection, safety, and responsibility for Environment Management. As a component of Green HRM, training and development practices should focus on development of employees’ skills, knowledge, and attitudes about Environment conversation and EM initiatives. These activities include training employees in working methods that conserve energy, reduce waste, diffuse environmental awareness within the organization, and provide opportunity to engage employees in environmental problem solving. It also increases employees’ ability to adapt to change, and develop proactive attitudes toward environmental issues (Carter & Dresner, 2001).

Another HR practice which is focused on aligning employees work efforts in contributing and achieving the organization’s objectives is Performance Appraisal System. So as the Green wave is affecting the overall corporate strategy it also has an impact on Performance Management System (PMS). HR managers prevent harm to EM when they integrate environmental performance into performance management systems by setting EM objectives, monitoring EM behaviors, and evaluating
achievement of environmental objectives (Epstein & Roy, 1997). As a basis for incorporating Environment Management initiatives in HRM, currently two major underlying frameworks are available (Länsiluoto & Järvenpää, 2010). These are ISO 14000 standards and Global Reporting Initiative (GRI). ISO 14000 family incorporates several standards for environmental management and reporting (ISO, 2009). The ISO 14001 provides the key performance indicators (KPIs) for the environmental PMS. The standard 14004 provides additional guidelines for implementing and reporting the standard. Furthermore, the ISO 14000 family includes standards for measuring the environmental performance, greenhouse gas accounting and verification and environmental communication.

Also the compensation and reward systems in an organization could contribute to Environment Management, if it focuses on avoidance of negative behaviors. Rewards motivate and increase commitment from workers to be environmentally responsible (Daily & Huang, 2001). Furthermore, rewards sensitize employees to environmental consciousness; and discourage undesired behaviors while reinforcing preferred ones. Specific incentives that prevent environmental degradation can be implemented. To the extent that managers use reward systems (e.g., bonuses) systematically to regulate employees toward avoidance of negative EM behaviors, they can prevent harm to the company and themselves. Many organizations in U.S., Europe and Britain have adopted the Greening of Performance-Related Pay (PRP). In the United States, companies such as Du Pont base their executive compensation and bonus system for middle managers and senior officers in part on environmental stewardship practices, where bonuses can be over 10 per cent if they develop an environmentally benign pesticide for agriculture or a non-polluting product (May and Flannery, 1995; Snyder, 1992). In Europe, companies like NesteOy in Finland include environmental performance goals as a standard part of their bonus system (Ramus 2001). In Britain, at ICI ‘environmental targets would form part of senior managers’ PRP assessment’ (Snape, Redman and Bamber, 1994).

Finally, top executive support is also a key component to successful organizational performance and implementation of organization-wide EM programs (Daily & Huang, 2001). Executive support entails endorsement of change, promotion of employee empowerment, institutionalizing of punishment systems, and communication of EM-information throughout the organization (Emerson, Meima, Tansley, & Welford, 1997). Ramus and Steger (2000) examined the relationships of environmental policy and direct supervisor support behaviors in promoting employee-led environmental initiatives. The authors revealed that factors associated with organizational and supervisory encouragement are seen to be important to employee environmental creativity, but that if supportive management behaviors and/or company communication of a corporate vision of sustainable activity were absent, fewer environmental initiatives from employees were found. Other ways in which employees can be encouraged to pursue green commuting habits like allowing flexible work weeks, establishing a car pool-program, offering free or discounted free transportation passes, adding car sharing as an employee benefit and setting up transportation savings account.

On the basis of the studies examined above a theoretical model of Green HRM has been developed Fig. 1. The model summarizes the HR practices involved in Green HRM. The Green HRM practices basically contain the processes, tasks, models and concepts of managing human resources with a vision to safeguard Environment Sustainability.

![Model of Green HRM](image)

**Figure 1 Model of Green HRM**

### 4. Case Study : HCL Technologies

HCL Technologies Limited is an Indian global IT services company. It offers services including Software Consulting, Enterprise Transformation, Remote Infrastructure Management, Engineering and R&D services, and Business Process Outsourcing. HCL has offices in 31 countries to provide services across industry verticals, including aerospace & defense, energy & utilities, independent software vendors, manufacturing, professional services, servers & storage, automotive, financial services, industrial manufacturing, media & entertainment, retail & consumer, telecom, consumer electronics, government, life sciences & healthcare, medical devices, semiconductors, and travel, transportation & logistics.

With regard to Human Resource Management HCL Technologies has "Employees First, Customers Second" strategy. At HCL, employees are given the room to think freely, create innovative solutions, and participate and contribute to HCL’s revenues. Through its inverted organizational structure HCL has maintained transparency and accountability within the
organization and encourages a value-driven culture since its conception in 2005. The company has also won international recognition for its ground-breaking “Employees First” management philosophy, designed to empower and energize employees in the service of customers by making management as accountable to employees as employees are to management. HCL Business Services follows industry best practices and metric-based quality norms for all its processes. This is supported by robust technology infrastructure, strong human resources and a customized training program and transition framework. HCL Business Services is the first BPO Company in the world to be appraised at Maturity Level 5 of People Capability Maturity Model (CMM).

4.1 Sustainable Initiatives at HCL
In the year 2013 HCL won the Asia-Pacific Enterprise Leadership Award (APELA). This award recognizes and honors the achievements of companies in the areas of sustainable development and corporate responsibility. HCL runs a multi-layered corporate program “Go Green” to drive its sustainability initiatives. It has green processes across facilities & in the areas of travel, IT and events. The company commits to compliance with ISO 14001 standards. It runs campaigns to initiate individual action towards environmental issues. HCL views Green initiatives enterprise wide and understands that Green goals can be set at an organization strategy level and then top down approach could be adopted for its implementation, which would create green business processes and Green workplace for employees. Recently HCL has been honored with the ‘Global Sustainability Leadership Awards 2014’ under the category ‘Best Community Action’ at the World CSR Congress. The award recognizes Best Practices & Outstanding Individuals engaged in Corporate & Social Responsibility.

4.2 Green Data Center at HCL
HCL follows a three phased methodology to provide Green DC solutions that are cost effective, lend sustainability to business operations, and ensure a healthy bottom-line. The first phase is the Assessment Phase. In this phase a baseline of energy usage and carbon footprint of the current environment using HCL’s assessment framework (Green IT Scorecard) is developed. This baseline is used to audit the existing environment. This is followed by Gap analysis and Feasibility study to identify transformational activities, perform impact analysis and assess cost structure. The second phase is Planning and Design Phase. In this phase a detailed roadmap for specific Green IT initiatives like procurement, DC optimization, recycling, financial and resource planning is developed. Finally in the Implementation Phase, specific technologies for Datacenter consolidation, virtualization, power and cooling management, IT infrastructure management are implemented. This phase would also involve initiatives that would enable an enterprise to get LEED certificate. The LEED certification endorses the Green Data center of HCL Info-systems, having demonstrated performance in site sustainability, water and energy efficiency, material and resource reuse, Indoor Environmental Quality, Design Innovation and many other parameters. The detailed Green Data center framework is shown in Fig 2.

![Figure 2 Green Data Center Methodology at HCL](image)

4.3 HCL’s E-Waste Management Initiatives
HCL has adopted diverse initiatives to reduce operational impact on the environment. These include various energy saving initiatives at their offices, IT infrastructure, efficiency improvement, environmental practices at manufacturing plants and green products and services for customers. HCL has also started the “Green Bag Campaign”. Under this campaign various collection centers spread across India. At these collection centers HCL is collecting e waste from customers and clients. Under this campaign HCL Info-systems have taken the following initiatives:

- In all the products shipped, HCL includes the e-waste related FAQs and contact details of all its e-waste collection centers
- In all its user meets, HCL shares the e-waste management details with its customers.
Apart from corporate customers, HCL has extended its e-waste collection program to retail customers also, through its HCL Collection Centers spread across the country.

**4.4 Internal Waste Management at HCL**

HCL Eco-Safe programme emphasizes on reuse and recycling internal waste - ‘Internal Waste Management’. The internal waste management system focus on recovery, reuse and recycling of waste generated from within the organization. All by-products generated during manufacturing are recycled by authorized recyclers in an environmentally friendly manner and all WEEE (Waste Electrical and Electronics Equipment) generated in the organization is forwarded to these recyclers for disposal. As far as energy conservation is considered, HCL’s all PC products have incorporated Green PC features and ACPI (Advanced Configuration and Power Interface) mode for power saving. Also at HCL a monthly e-waste report for the amount of e-waste generated and recycled in the organization is maintained.

**4.5 HCL-Green Belt Creation**

HCL has organized a Go-green campaign across the country where HCL employees across India have planted trees. The HCL’s e-waste policy begins from the very beginning of the manufacturing process. HCL designs its products in a way that they can easily be dismantled later on. The environment actions at HCL are guided by the following day-to-day operational challenges/ aspects:

- Educating and empower the supply-chain community including security, housekeeping, cafeteria, transport and other support staff in managing the environment goals.
- Participation in benchmarking efforts of various agencies and understand the required environmental targets for the Information and Communications (ICT) industry.
- The efforts to educate various stakeholders across the globe have helped HCL to monitor and report data pertaining to ‘Responsible Operations’, from the 4 Global Development centers (GDCs) to 14 GDCs in 2013.
- The data includes environment and employee health aspects: energy, water, waste, incident/accident rates, and disaster/emergency response and best practices.

**4.6 Employee Involvement in Green Management Initiatives at HCL**

HCL’s Responsible Operations Strategy provides safe and comfortable work-environment for employees, water and indoor air quality, waste disposal from the facilities, reduction in employee travel and preventive health-care for employees. At HCL employees are empowered to provide ideas, run campaigns and implement actions to conserve natural resources. An example of employee-managed annual campaign for environment protection is the annual ‘Earth Hour’. On this day, all employees resort to minimal lighting both, in the offices and at their homes. They provide various ideas to reduce energy consumption. The environmental actions are jointly implemented by the Eco Councils formed by the employees along with the functional departments. HCL also provides numerous avenues for self-empowerment to employees as a first step towards creating an engaged workforce. There are various employee resource groups which are led and driven by employees themselves. These resource groups use a multi-dimensional approach and act as platforms for employees to anchor organizational change and development. Some of the resource groups are discussed below:

**Chargers:** Chargers, as the name suggests, aim to engage employees and provide them with access to opportunities to live their passion. The intent of this group is to enable individuals to pursue their interests in sports, health and wellness, photography, dance and music, knowledge and problem solving, and specific hobbies. Chargers support these interest groups by creating virtual networks as well as physical platforms for nurturing talent and connecting employees across locations within organization.

**Employees First Council (EFC):** The Employees First Council is anchored by members who represent the voice of HCL and contribute in shaping change and anchoring transformation of organizational capabilities. This council works closely with the HR teams in their locations to co-create people practices that are distinctive and aligned to the Employees First strategic model. The EFC focuses on key transformational initiatives around the workplace culture, people policies and operational aspects in the region.

**Community Champions:** This employee network is the largest and continues to grow every day. These are a group of community service volunteers, who lead the HCL Technologies’ Foundation activities.

**Women Connect:** Women Connect group aims to connect and advance women through development programs, advocate gender neutral work environment by suggesting appropriate policies and position. HCL is considered as ‘employer of choice’ by women across the globe. There are over 130 Women Connect office members across the globe who lead “Café coffee” sessions and “Rebalance” events, covering over 1200 employees, to promote a gender sensitive and inclusive work place. This group also coaches and counsels aspiring young women professionals, and shares experiences on work life priorities.

**5. Conclusion**

From the case study presented above it could be concluded that HCL Technologies has been leading the green revolution in the Indian IT industry. HCL has put together a holistic strategy to involve its suppliers/vendors, senior management, academia,
industry connects and civil bodies to understand priorities in relation to the environment, and this engagement framework have helped HCL to earn LEED certification and prestigious Golden Peacock Eco Innovation Award in 2013. Also this research study has offered a research agenda forward in Green HRM. Building on existing research this research study advocates that the future of Green HRM as an innovative process appears promising for all the stakeholders. The employers and practitioners can establish the usefulness of linking employee involvement and participation in environmental management programmes to improved organizational environmental performance

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