The overall impact of our daily activities on the environment has increased significantly. So the desire to go green today is not only by individuals but by corporates too. The number of organizations that have pledged to work in a more environmentally responsible way has also increased many folds. Being green is gradually becoming the only way to survive and attain success. Talking about the Indian case, it is the fourth largest greenhouse gas emitter in the world so its contribution to the world global warming level is also significant. Thus its chances of being affected deeply by the greenhouse phenomenon are extremely bright given its vast coastline and the resulting rise in sea levels. It needs to balance the aspirations of its immense poor population who do not have access to proper electricity and so on and at the same time reduce pollution levels.

The paper is an attempt to throw light on the green initiatives undertaken by companies all over the world. The issues like environmental sustainability, reducing carbon footprints and going green have assumed increased importance in the recent times. The growing environmental-consciousness among the educated youth exerts enormous pressure on the HR department. In their endeavour to go green, corporates are experimenting with novel concepts such as Green Marketing, Green IT, Green Production, Green HR, Green Accounting, etc. making their each and every operation environment-friendly. Doing so also improves their profits thus adding significantly to their bottom-line. Through the extensive review of various studies, this paper concludes with a suggestive framework for linking Green HR and Organizational Excellence.

Key Words: Green Business, Green HR, Green Initiatives, Environmental Sustainability, Organizational Excellence
The above text is drawn from the writings of James Allen (1864–1912), a British Philosophical Writer.

The terms green, sustainable, socially responsible are the most talked about aspects of business of modern times. Green Economy is the prime focus of every nation and every organizations operating are undergoing a profound transformation to become a Green Organization. Business leaders are sounding an urgent call to do action against various alarming trends in global warming and climate change like species extinction and bio-diversity loss and fresh water loss.

An important part of moving towards business, that is towards sustainable world is making the business model greener and greener; this process requires the business, not only to meet the challenges that are being posed today but also to meet the requirements of tomorrow’s global business scenario. As sustainability proves key to strategy, HR becomes crucial to execution by seeing that the right people are in the critical and crucial position. The big question now arises: What competencies are needed to be effective in leading a company’s ecologically sustainable initiatives?

Talking about the current world in the arena of business the only words/phrases which tend to catch attention are carbon neutral, global warming. Business of late has been affected by the unusual fluctuations in the prices of natural resources which put it at a considerable amount of risk. The research findings are being continuously proved false by the real time changes in the climate. The global temperature increase by even a meager of 1.5 degree celcius can lead to an impact which would be impossible to revert. It was perceived as the best and the only opportunity to put a break to the prevailing emission trends timely so as to curb the disastrous effects of the phenomenon known as climate change. The heads of various states of the world needed to collaborate and work towards the common mission of protecting the environment and the people. Their aim was to reduce the carbon emission to zero by the middle of the century. Copenhagen Summit was held as a measure to fight the catastrophe of climate change. But the summit on climate change was finally way short of what was expected from it. The two week gathering was tagged as a disappointment by the European leaders and a failure by the environmentalists. The developing world blamed this conference to be an attempt by the rich countries mainly United States and China to shun their responsibility for climate change.

**National Mission for A Green Indian**

The Green India Mission (GIM), one of the missions under NAPCC (National Action Plan on Climate Change) was released by Ministry of Environment and Forest (MoEF). It aims to address climate change by enhancing carbon sinks in sustainably managed forests and adap-
tation of vulnerable ecosystems & forest dependent local communities to changing climate. It recognizes that the phenomenon of climate change will gravely affect the distribution, type, and quality of natural resources of the country, the associated livelihood of the people. GIM puts the greening in the context of climate change adaptation and modification and is meant to enhance the ecosystems. The Mission aims at addressing climate change by addressing the following issues:

1. Enhancing carbon sinks in sustainably managed forests and other ecosystems;
2. Enhancing the resilience and ability of vulnerable species/ecosystems to adapt to the changing climate;
3. Enabling adaptation of forest dependent local communities in the face of climatic variability.

Objectives of the Mission

The objectives of the mission are three-fold:

- Double the area to be taken up for afforestation/eco-restoration in India in the next 10 years, taking the total area to be afforested or eco-restored to 20 million ha.
- Increase the GHG removals by India’s forests to 6.35% of India’s annual total GHG emissions by the year 2020
- Enhance the resilience of forests/ecosystems being treated under the Mission.

Highlights of the Mission Strategy

The mission proposed to approach greening from an all-inclusive perspective which would be broader than mere plantations. Here the onus would be on refurbishing the ecosystems and diversity of the environment, for example, grassland and pastures, mangroves, wetlands and other critical ecosystems. It would not just attempt to reestablish the tainted forests but would also aid in safeguarding the forests with comparatively thick vegetation. The mission would also implement an integrated Cross-Sectoral approach which would rectify forests and non-forest area, both public and private at the same time. GIM laid emphasis on the crucial role that the local communities can play and thereby advocated decentralization. Institutes like Gram Sabha and its various committees/groups including JFMCs, CFM groups, Van Panchayats, etc. would be strengthened as institutions of decentralized forest governance. Along with the above stated steps it would support and overhaul the Forest Development Agencies. The next crucial point would be criteria for selection of projects which would entirely depend on the dimensions of vulnerability and potential. Lastly, a robust and efficient frame was put forward which included four levels. There would be on-ground self-monitoring by multiple agencies and modern technology like remote sensing would be used so as to get
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A comprehensive picture. This will aid in assessing the present status on parameters like soil cover, erosion, level of ground water and also in devising solutions for the problem areas.

**Green Economy**

Some countries are rich, some countries are poor and yet some others are in between. How do we measure the performance of an economy? The performance of an economy is related to the level of production of goods and services which are perishable and non-perishable. This production of goods and services takes place generally by means of agriculture and factory production. Now in the present scenario, being a service focused economic conditions, services are also regarded for calculating the performance of an economy. Measures of national income and output are used in economics to estimate the total value of production in an economy. The standard measures are GNP (Gross National Product), GDP (Gross Domestic Product), NNP (Net National Product), and NNI (Net National Income).

SNA (System of National Accounts) is a set of accounts which national governments compile to track their activities. But some of its major drawbacks are that it overlooked the scarcity of natural resource, which endangers the capability of sustainable economic productivity; over looked the environmental pollution caused by the degradation of the environment and the man-made capital (factors, machines, etc.) should draw the depreciation to compensate the loss incurred by the natural resources such as forest, land, water, underground mineral resources which can be completely consumed without depreciation. Thus depreciation or depletion of natural resources are not shown in GDP.

**Green Business**

Business is associated with its various stakeholders internally and externally. One of such stakeholders is the natural environment. The accountability of the business states that a firm has to fulfill its obligation towards the natural environment also from where it gets the various resources to sustain. At the same time it preserves the resources for future generations too. Green business helps build operating margins by eliminating the waste – whether it is of energy, water, material, or opportunity because it cuts the environmental impact and hence helps save money. It reduces risk by eradicating threats to workers and customers by anticipating customer expectations for better, safer, and more benign products and services.
**Stages of Making Business Green**

Stage I: Conservation: the origins of the environmental movement focused on virtue of preservation of resources.

Stage II: The first generation Green Business leaders: these leaders worked to build viable business.

Stage III: Green goes mainstream: Green breaks out of the niche and many to appeal more broadly to consumers for whom the environment is not their prime concern.

Stage IV: Everything is Green: The future world where there is no green business because all business is green business, making money without harming the natural system.
Green Production
Green production is a business strategy that focuses on profitability through environmentally friendly operating processes. Green production processes seek to minimize the impact of the manufacturing process on the environment at every stage. “Green production focuses upon three fundamental goals: 1) minimize emissions, effluents, and accidents; 2) minimize the use of virgin materials and non-renewable forms of energy; and 3) minimize the life-cycle cost (cradle to grave) of products or services.

Green packaging includes the use of recycled content in packaging materials, source reduction, and refill alternatives. Whatever form the packaging takes, it should clearly state whether green claims pertain to the product or to its package. Companies that operate in geographical regions that are very supportive of environmental protection may well publicize their use of green production methods and philosophies.

Green Marketing
Green Marketing, also known as environmental marketing, or sustainable marketing, ecological marketing refers to an organization’s effort at designing, promoting, pricing and distributing products that will not harm the natural environment. Almost all the governments across the globe have concerned about green marketing activities that they have attempted to regulate them. Green marketing is the marketing of products that are environmentally safe. Green marketing incorporates a broad range of activities, including product modification, changes to the production process, packaging changes, as well as modifying advertising.

Green IT
Green IT is an organization’s ability to systematically apply environmental sustainability criteria (such as pollution prevention, product stewardship, use of clean technologies) to the design, production, sourcing, use and disposal of the IT technical infrastructure as well as within the human and managerial components of the IT infrastructure.

Green IT, also called green computing describes the study and use of computer resources in an efficient way. It mainly focuses on 3 Rs - Reduce, Reuse, Recycle. Green IT starts with manufacturers producing environmentally friendly products and encouraging IT departments to consider more friendly options like virtualization, power management, and proper recycling habits. The government has also recently proposed new compliance regulations which would work towards certifying data centers as green. Some criteria include using low-emission building materials, recycling, using alternative energy technologies, and other green technologies.
Green IT provides a holistic agenda to create a healthy balance with supply and demand for IT. In today’s world, demand is growing faster than the efficiency of the underlying technology, leaving supply as a one-sided solution. The balance can be created when demand is better managed.

**Green HR : Conceptual Framework**

Green issues have been the concern of HR lately. Policies and practices are being devised which have environmental sensitivity in them. HR has a major role to play in the organizations’ initiatives to go green. These initiatives require a lot of decision making which is environmentally friendly and HR is the apt discipline to craft such policies. The role of HR due to its sheer closeness to the human sphere is undoubtedly the best to put greener work practices into place and transform behaviors which are averse to the environment. HR has a very crucial role to play in connecting such policies and modifying the traditional workplace environment. It has the tools to influence the employees and make them committed and engaged in the green strategies proposed by the organization. Green HR has the focus on eliminating environmental waste and enhancing the productivity along with lowering the cost. HR can promote and help implement green initiatives at many levels, for example: HR could in collaboration with the IT Dept. work to frame policies on the efficient usage of computer power management systems. Another way could be to endorse the significance of turning off equipment like printers, lights and computers while leaving the workplace. Job descriptions should also include green responsibilities which could prove to be useful in two ways: firstly, it will confirm that the employee is directly accountable for following green guidelines; secondly, it would provide routes to attain feedback from employees on green concepts which in turn will enrich the environment. Other suggestions from HR could be to arrange offsite meetings or video or web conferencing as a better and greener alternative.

The work of HR in adopting the Green route is not an easy task. It requires a change of mindset of the people working for the organization. The role of HR in managing the behavior of people can’t be undermined. So the onus of introducing the green aspects into the company and making it a behavior of the employees is something which falls strictly into the domain of this business function. HR could serve as a guiding platform for the employees so as to adopt the environmentally sustainable ways at the workplace. The impact of HR on the culture of the organization does not need any evidence. It is here that HR could promote culture which is eco-friendly. For this the policies and initiatives in this regard need to be communicated clearly and comprehensively throughout the organization externally and internally.
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Green Recruiting: Green Recruiting is a novel concept which is emerging in a slow but steady manner. In today's competitive environment, companies are trying to woo the top-notch talent by all means. The growing environmental-consciousness among the educated youth exerts enormous pressure on the HR department to strongly focus on their green efforts and this has paved the way for the evolution of what is known as ‘green recruiting’. Green Recruiting may be rightly called as the next big wave in recruiting. A growing number of companies now-a-days have started presenting their environmental records to not only the general public but also to the potential hires.

Green Movements

1. At Cognizant a few green enthusiasts have become a part of the group called ‘Green Brigadiers’. This group organizes many events under the green theme in their premises like road shows, speeches by experts in the field, brainstorming on new activities, etc. They act as go green ambassadors and support the environment cause. The role of HR in such activities is vital since it evangelizes such initiatives and organizes events like cycle rally, community tree planting, as a part of the green initiatives.

2. At Steria there is a network of green champions who work together to reduce the influence that the organization’s activities are having on the environment. In their office at Pune the use of natural light is done to maximum extent, harvesting of rain water is another activity which is undertaken as is the use of in-house effluent plants which are used to semi-clean the water from the toilets and water is used for landscaping.

3. The HR department at Prestige is actively participating in the process of recycling. They have a double side printing policy and employees are also encouraged to re-use envelopes. Teleconferences are preferred to traveling on business calls. The company aims at transforming itself into a paperless organization by communicating policies and so on over the intranet.

Environmental Sustainability and Ecological Intelligence

“Greening Organizations,” companies that wish to embrace green production philosophies and processes after years of indifference usually have to redesign significant aspects of the business, including its mission and vision, competitive strategies, core technological systems, performance measurement and reward systems, and organizational processes and culture (of course, this task is more formidable for larger companies than it is for small and mid-sized firms). Of the above elements of a business, perhaps the most important is “mission and
vision,” for all the other aspects of the organization are fundamentally shaped by those values. But while the process of establishing a green organization can be quite daunting, proponents argue that cost savings associated with pollution prevention efforts, coupled with marketplace benefits in the realms of reputation and consumer loyalty, can make the shift a beneficial one not only for the environment, but also for the organization itself.

Sustainability has become a key driver of business growth and innovation. As sustainability proves as a key to strategy, HR becomes crucial to execution by seeing that right people are in the crucial position to take eco-friendly decision without hampering the economic objective of an organization. The sustainability index (SI) is meant to set an industry wide standard for ecological transparency. The drawing of ecological transparency in adopting disruptive technologies in manufacturing and production will make the ecological impacts of the products with stronger element of their marketability, along with ecological price and value.

The best way to achieve organizational excellence is to integrate and execute environmental sustainability with process, systems and practices. It can be accomplished by

- Including sustainability in planning process: Make sustainability plan and goals.
- Educate employees on strategy and issues: Train employees on environmental issues
- Increasing accountability: Plant manager can be designated as Environmental Managers and integrate sustainability into compensation.
- Track and report metrics: Linking environmental initiatives with business metrics, such as cost savings or revenue growth.

**Green Initiatives by Corporates**

**Green initiatives at Infosys:** Nandan Nilekani, co-founder of Infosys has started a drive to help the company become a carbon neural company by the year 2012. While intriguing what contributes to a carbon footprint in an IT company, it was found that almost every activity that is part of company’s normal business operations including air travel, vehicle usage, air conditioning and even using a desktop or laptop computer is a contributor and considering the scale of operations in a company, like Infosys, the impact of such activities is huge. Thus, realizing the strategic impact of this initiative, the entire company is marching towards matching the deadline set by Nilekani. Working towards this end, Infosys has managed to reduce its carbon emissions by a significant margin. For example, in the area of electricity, which contributes to 72 per cent of its emissions, Infosys has managed to achieve a 10 per cent reduction in per capita electricity consumption for the fiscal year 2008-2009. The employees at Infosys consider that the aim of green initiatives is not just to be a good corporate citizen but also to cut down operating costs. Therefore, every activity which results into saving costs along with reducing carbon emission is appreciated.
**Making a difference with Green Buildings** - As a part of yet another innovative greening effort of the company, detailed and serious planning is put in to make its buildings ‘energy efficient’ as buildings are the largest consumers of energy. By making use of reverse engineering, performance goals are given to every entity that plays a role in the construction of buildings. For example, in order to reduce the office space required within the facilities, carpenters are asked to make such designs which cut down the length/breadth of office furniture. Also, designs that enable maximum usage of natural light are used and artificial lights have also been replaced by luminescent lighting that consumes less energy. Similarly, the building design and alignment have also been so aptly put in place that it helped reduce ambient heating by sunlight and led to a substantial reduction in cooling requirements.

**Leveraging technology for efficient usage of electricity, air conditioning and power** - To achieve this end, sensors are deployed to automatically turn off lights, monitors, and IP phones when employees are not at their desks. Similarly, a conference room management solution automatically turns off all electrical appliances and lights when not in use. This has resulted in 30 per cent savings in terms of energy consumption. Also an optimized power management configuration has been rolled out so as to cover around 50 per cent of desktops in its network. As a result, desktops enter sleep mode after one hour of inactivity which will help reduce power consumption by desktops by 20 per cent. Similarly, ‘Smart Data Center’ initiative of Infosys minimizes the use of air conditioning units that are required to cool down the servers. In addition, to derive the benefits of virtualization the IT team is also encouraging employees to meet and collaborate on virtual platforms. This approach has led to significant jump in number of video conferences leading to a reduction in travel, and hence carbon footprint.

**Encouraging Carpooling** - A software solution has been developed that manages the carpooling system at Infosys, through personalized information and alerts. Employees in its Bangalore campus are also given incentives for traveling during off-peak hours. The firm has also developed green applications such as a desktop-based personal carbon calculator, an enterprise level Carbon Emission Management System and an organization level Environment Resource Management System.

In contrast to other Indian firms which remain content with confining their ‘Green IT’ initiatives to virtualization or consolidation initiatives, Infosys has taken a leap forward designing a complete integrated green initiative.
Wipro’s Eco Eye Initiative: To achieve ecological sustainability, Wipro has started a pilot project to harness wind energy. Such projects fetch carbon credits, which in turn fetch a good price in secondary markets. A part of this project is the aero wind generator in the company’s Electronic City campus which can power 10 street lights fitted with its LED or CFL lamps of 18 watts each for 10 hours every day resulting in reduction of the electricity bill costs and total carbon savings of 2.89 tonnes a year. The company also uses food-waste from the cafeterias in its campus to generate bio-gas, which is used for cooking. The plant converts about 1,000 kg of food waste daily into gas comparable to four to six commercial cylinders of LPG.

Nokia Siemens Networks in its green drive puts a lot of focus on making its employees more environmentally aware through internal training programs, information sharing sessions and stakeholder events. The company has also signed a collaboration agreement with WWF to work together to promote environmental awareness. In addition, the company is also undertaking trials with a leading Indian GSM operator in the development and implementation of cell sites power from renewable alternative energy sources, such as, solar, wind, hybrid, etc.

Establishing Green Organization – A Suggestive Framework

(Source: Developed by Narula Swati, Malhotra Shewta, Pyngavil S Rajesh, 2010)
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**Conclusion**

Considering that in the long term, the cost of energy using clean technologies will become more competitive compared to traditional sources, thereby creating the commercial imperative to invest in clean technologies, the businesses should take a lead to develop greener solutions. Every organization must find its own way forward as it faces highly dynamic and competitive market place. Recognizing the need of a strategic (long term) rather than a piece-meal (temporary) approach, business excellence is going to lead the organization to become the champion. We don’t think now that the traditional management practices or models will work in building a green economy and green organizations. The vision, strategy and alignment of every organization in this globe should focus on operational excellence and financial strength by stressing the importance of aligning business activities for people providing safe, reliable, economic and green products.

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