A Special Report:

CORPORATE RESPONSE TOWARDS GREENER ENVIRONMENT

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Grasim Industries, the Aditya Birla group company, has become the first cement company in the world to reimburse the carbon credits it earned through the replacement of fossil fuels like coal with alternative fuels like waste in cement manufacturing. The company has received Rs. 17 crore by selling credits in Europe. The company set up a processing plant for municipal solid waste near Jaipur with an agreement with Municipal Corporation for regular supply of waste. Carbon credits are a concept that finds its origin in the Kyoto Protocol. Under its terms, limits are imposed on countries in terms of greenhouse gases it generates. In turn countries impose limits on businesses. If a company then exceeds the cap, it will have to pay carbon credits from companies in countries that have managed to reduce emissions and stay below the prescribed norms. Cement industry, worldwide, generates 2.2 billion tones of carbon dioxide per annum, which is 5% of all global emissions. In India cement plants, with an installed capacity of 160 million tonnes, emit an estimated 0.83 tonnes of carbon dioxide per ton of finished product. (Singh, 2007) Carbon credits are a tradable permit scheme that provides a way to reduce greenhouse gas emissions by giving them a monetary value. A credit gives the owner the right to emit one tonne of carbon dioxide.

As a specialized branch of marketing, green marketing deals with marketing of a specific category of products, namely the green products, which can comprise of both the green goods (such as fuel-efficient cars) and green ideas (such as bio-fuels). Marketing has been defined as, "All activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants". It includes the protection of the natural environment, by attempting to minimize the detrimental impact this exchange has on the environment. Green marketing looks at how marketing activities utilize these limited resources, while satisfying consumer wants, both of individuals and industry, as well as achieving the organization's objectives.

As a philosophy, the concept of green marketing runs parallel to the societal marketing concept which holds the view that satisfying customers is not enough and business firms should serve interests of society at large including those related to environment protection and conservation. While societal marketing concept is a much broader concept and addresses environmental as well as social and ethical considerations of a business unit, green marketing in a philosophical sense can be conceived as being part of it. Based on the greenness span of a firm's business and marketing operations, green marketing can be classified as product related, process related or corporate related green marketing. While product-related green marketing pertains to marketing of products which have eco-friendly attributes (such as product is fuel-efficient in its use or product is biodegradable or recyclable) process-related green marketing has its focus upon marketing of products which have been made using eco-friendly production process (such as product made from recycled raw materials or fuel efficient production process used in manufacturing the product). Corporate-related green marketing, on the other hand, is much broader concept and impress upon the idea that the entire organization rather than only one product or production process is geared to preservation of environment.

HSBC has a tie-up with 'Earthwatch', an organization which supports various environmental projects. HSBC sends its employees to participate in a project of their choice for a period of three weeks for a lifetime experience and commitment

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to the cause for life.

According to Teri Review, the total generation of waste in India has gone up from 47 million tonnes in 1997 to 60 million tonnes in 2002, representing an annual growth of around 5 per cent. This figure was 6 million tonnes at the time of independence and is likely to increase five times by 2047, when it will require an estimated 1,385 sq. km. of land to dispose off.

Considering the growing problem of waste disposal, corporates are taking healthy initiatives. Cement companies are using increased fly ash content in cement, IFFCO has a small unit of making bricks form fly ash which are being used in construction. Hindalco has as far as allocated Rs.460 crores on various green initiatives viz. effluent treatment, use of fly ash in brick making, dry staking of red mud and environmental friendly disposal of solid waste.

Henry Ford, the father of modern automobile, was an ardent advocate of ethanol as a fuel for motor cars. He was a great believer in recycling. Fossil fuel stocks are falling. Oil prices have broken the $73 per barrel barrier. When crude oil was available at $20 per barrel, nobody bothered about biofuels. But now biofuels like Ethanol are emerging as imperatives. To promote their use, government is giving various incentives. We have started with a 5% ethanol blend with petrol, which can be increased to 10 – 20 per cent progressively. Brazil is already successfully using 50% blend. Ethanol is anhydrous, the purest form of alcohol. It is available as a byproduct in sugar factories. One tonne of sugarcane produces 100 kg. of sugar (worth Rs. 1600) and 50 kg. of ethanol (worth Rs. 900). But the entire one tonne of sugarcane, if fed directly into a distillery, can produce 500 kg. of ethanol (worth Rs. 900).Now, new technology is available to produce ethanol from grain and stem juice of crops like sweet sorghum, barley and maize, which are starchy. Our petrol consumption last year was eight million tonnes. We need only four lakh tonnes of ethanol to get a 5% blend. In this way ethanol can usher in rural prosperity. On the other hand, it will make environment green and clean.

The latest sector to grow on corporate's radar is wind power. Suzlon Energy Ltd., the pioneer player in the sector enjoys a market cap of Rs, 30,000 crore. Reliance Capital Ltd. (RCL), along with a clutch of private investors, has acquired close to 68% controlling stake in Southern Wind Farms Ltd., a sister company of the South-based NEPC group. RCL paid Rs. 92 crore to acquire 51%, while ace-broker Nimesh Shah acquired 13% for Rs. 15 crore and Sterlite chief financial officer Tarun Jain acquired 4% in the company. Reliane Capital officials refused to comment on the deal. The remaining stake will be held by public shareholders of NEPC Micon with a share swap ratio of 19 shares for every 100 shares held in NEPC Micon. The deal has given a valuation of Rs. 180 crore for Southern Wind Farms Ltd. Reliance Capital will not be limiting its business to just set up wind power farms. It has to break from being a wind mill player to an integrated player with presence in both turbines and gensets which would bring down power costs to as low as Rs. 1.2 per unit (kilo watt) from Rs. 1.8. Suzlon, last month completed its integration plan, by acquiring the world's largest genset maker Hansen Transmission International in Sweden for $565 million (Rs. 2514 crore). The gensets triple the power capacity received from the wind mill. Considering the global demand for wind energy and carbon credits, Reliance Capital's acquisition may pay off once it transforms itself to an integrated player. As per projection made by the Ministry of Non-conventional Energy Sources, 10% of the 240,000 MW installed capacity requirement by the year 2012 will come from renewable. It is envisaged that 50% of this capacity of 12,000 MW may come from wind farms and the total installed capacity is around 1000 MW. The global demand for wind power will be driven by demand in China and India.

AE Rotor Holding BV, a 100% owned subsidiary of Suzlon Energy Ltd. Acquired Belgium-based EVE Holding NV for 465 million euros. This acquisition shows the growing interest of corporates in wind energy and green marketing. In the wind energy space, India is ranked fifth worldwide, with cumulative installations of about 3000 MW. For the year ending March, 2004 Suzlon clocked a turnover of Rs. 800 crore and a post-tax profit of Rs. 130 crore. President A.P.J. Abdul Kalam urged South Asian nations to collaborate in promoting renewable energy via free sharing of technologies and explore setting up a mega power project of several thousand megawatts. Addressing a two-day South Asian Conference on Renewable Energy organized by the Associated Chamber of Commerce and Industry of India, he urged industry representatives to "consider laboratory to laboratory, industry to industry collaboration without geographical barriers for combining crore competencies of multiple nations and lead to (development of) products and systems".

Underlining the need for energy independence, a vision he has outlined earlier too for India, Kalam said there should be a focus on development of more efficient technologies for use of non-conventional energy sources like wind, bio-fuels, biomass and waste to power – an area where India has met with some success.

Corporates have turned green due to constant

pressure on them to deliver products and services that are environmentally compatible. A study on the marketer's response to green movement found that managerial awareness of green issues was uneven among the firms. Only a few high profile environmental symptoms received marketer's attention and most of the causes underlying green movement were overlooked. Moreover, awareness of issues and the importance attached to various environmental concerns were not matched by actions, or by the integration of green issues into business strategy. A study by Kassaye (2001) on the green attitudes, actions and future plans of 290 consumer and industrial goods manufacturers reported that for large firms, the primary reasons for engaging in green tend to be consumer pressure, the desire for better community relations and cost considerations, for smaller companies, the highest priority is given to cost, followed by customer request, fear of governmental intervention and desire to reduce garbage.

In an advertisement of its 'Expressions' range of greeting cards ITC advertised, "Reflecting ITC's concern for the environment and society, Expressions cards are processed from eco-friendly Elemental Chlorine Free Paper". This statement satisfies the growing consumer need of eco-friendly goods as well its social responsibility towards environment. Governments have shown their commitment towards clean environment.

Ethanol production is now a growing business worldwide MG Technologies AG (LURGI), Euro 6.4 billion company, is involved in the construction of industrial plants that produce alternative fuel such as bio-diesel and bio-ethanol across the world. Delta-T, Virgina has provided solutions to more than 50 clients in Asia, Africa, Europe and South America. Vogelbush, Vienna built the largest bio-ethanol plants in three continents. PRAJ Industries, Pune, the Rs. 245 crore company (FY-2005) provides biotechnology solutions including wastewater treatment to distilleries and breweries. It also provides specialized engineering/fabrication solutions to its customers located in 20 countries.

The growing concept of green market shows that consumers are not overly committed to improving their environment and may be looking to lay too much responsibility on industry and government. Ultimately green marketing requires that consumers want a cleaner environment and are willing to "pay" for it, possibly through highly priced goods, modified individual lifestyle, or even governmental intervention.

British rock band Coldplay paid Rs. 10,000 per tree, besides an annual supply of marketable mangoes for 30 years. About 4 years old, the mango trees represent the new face of a global trade that has sprung up around controlling emission of greenhouse gases (GHG). The trees were planted by local farmers but paid for by the Coldplay in 2002. A remarkable example of how innovative business ideas are not just helping save the environment but also enriches a weaker section of the world. From being individual acts of guilt ablution, emission control has turned into a booming and well-organized global trade. Thanks, of course, is due to the Kyoto Protocol on Climate Control, which makes it mandatory for signatory countries to meet their emission control targets. Those that are unable to do so can simply buy carbon credits from countries that help lower CO_2 emissions to meet their targets. Some of the global buyers include energy companies such as Shell Group, EDF, Solvay Fluor, banks such as Barclays and specialized carbon funds of the World Bank and European governments.

This has resulted in a spate of Indian companies wanting to set up environment-friendly projects with an eye on earning carbon credits. The list includes just about every sort of organization: private sector, public sector, cooperatives, and even self-help groups. For instance, ONGC became the first PSU to get an approval for carbon trading. Meili who runs Carbon India and Women for Social Development, herself, even got FIFA interested in a Green Goal Initiative in the run up to the World Cup Games in Germany, is helping 5,500 families in Kolar to build individual biogas plants of 2 cubic metres each; and Shree Pandurang Sahkari Sakhar Karkhuna, a cooperative sugar mill, has also sought approval for carbon trading. Private sector companies are, of course, way ahead in the game. Pioneering companies such as Gujarat Fluorochemicals Ltd. (GFL) and SRF have been joined by big guns like Reliance Industries, Gujarat Ambuja Cement, and JSW Steel. Their collective sight is set on at least $7.5-10 billion (Rs. 33,750 crore – 45,000 crore) opportunity that emission trading may throw up globally by 2012.

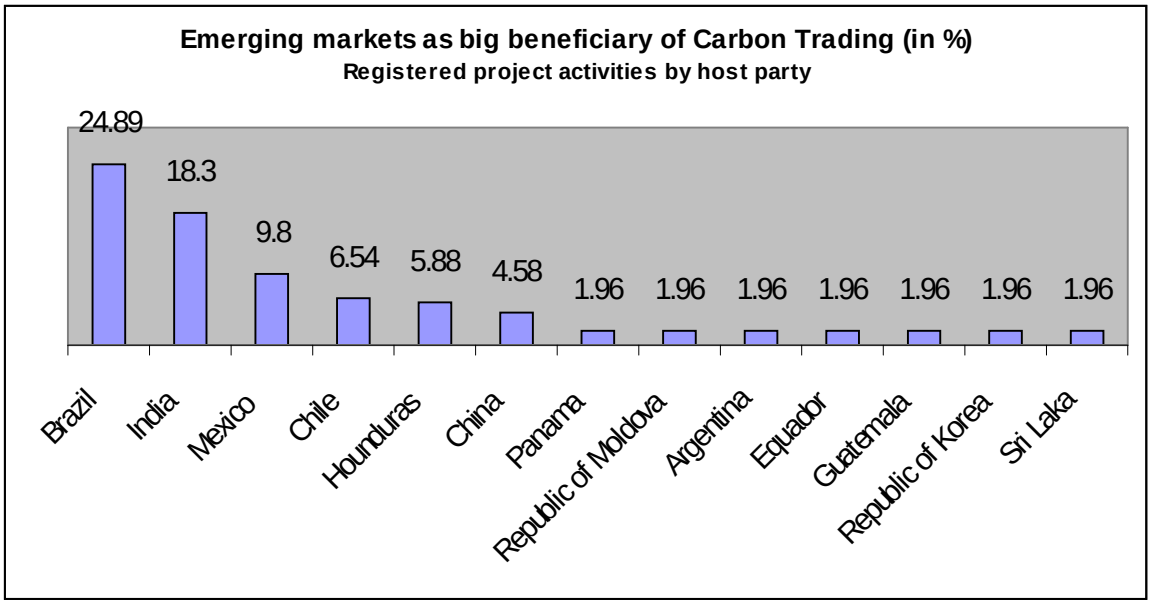
Under the Kyoto Protocol, first adopted in 1997, there are three broad methods of tackling greenhouse gas (GHG) emissions: A joint implementation mechanism is aimed at encouraging joint projects among developed countries; carbon emissions trading allows countries with surplus credits to sell the same to countries with quantified reduction commitments, while clean development mechanism (CDM) is about setting up projects that reduce GHG emissions in developing countries. The CDM can either be in collaboration with project promoters or done unilaterally by entities in the developing world.

CDM, which is the only mechanism available to developing countries, has evoked a tremendous amount

of interest in India. In fact, the first project to seek the mandatory registration with the United Nations Framework Convention on Climate Change (UNFCCC) under CDM in 2004 was an Indian project – GFL's project for thermal oxidation of HFC23, a key waste produced in the manufacture of refrigerant gas. Since then, several other Indian companies have followed suit. So much so that of the 153 projects registered with the UNFCCC as on April 13, 2006, 28 are from India (Dagar, 2006).

Unlike that elsewhere, companies in India were forced to keep their capacities small due to licensing and restrictions. But when industry was deregulated in the early 90s and companies scrambled to add capacities, they found that shifting to newer and cleaner-technologies was not just easier but more viable. And now, high-energy prices have ensured that energy efficiency becomes the No. 1 concern across boardrooms in India. But most of Kyoto Protocol was ratified) to invest Rs. 12 crore in building a plant to reduce emissions of HFC23. Its oxidation plant was commissioned in the end of August 2005 and started generating CERs . In March this year, SRF booked a business income of Rs. 95 crore from the sale of 1.4 million CERs – that's 144 per cent of SRF's annualized net profit for 2005-06. And SRF has an annual capacity to generate a maximum of 3.8 million CERs. For companies like SRF and GFL, which have refrigeration gas business, CDM projects make even more sense. HFC23, a byproduct, is one of the most potent greenhouse gases and destruction of one tonne of HFC23 is equivalent to reduction in emission by 11,700 tonnes of CO_2.

A green mission statement of the companies needs to be set not only from the point of view of consumers but other stakeholders also. The stakeholder theory



Source: UNFCCC – Quoted in Business Today, May 7, 2006.

all, companies have discovered that going green and being able to trade in carbon credits can actually boost profitability of their new projects.

Triveni Engineering and Industries has set up two bagasse-based power plants that will get UNFCCC approval anytime now. The company estimates that these plants will generate 16,000 – 200,000 certified emission reductions (CERs), or carbon credits, annually. Even assuming a sale price of Î15, or Rs. 825, per CER (every one tonne of CO_2 reduced fetches one CER), the plants will fetch at least Î2.4 million annually. Chemicals company SRF took a call in July 2004 (seven months before the

requires that all those who are affected by the activities of a business should be considered while setting objectives and policies. A company adopting a follower strategy confines itself to complying with legal requirements and does not go being that. In the case of market oriented strategy, company's strategies are primarily driven by market conditions. Companies adopting environment – oriented strategy, view environment as a key factor and fully integrate it into their business strategy.

No matter why a firm uses green marketing there are a number of potential problems that they must overcome. One of the main problems is that firms using

green marketing must ensure that their activities are not misleading to consumers or industry, and do not breach any of the regulations or laws dealing with environmental marketing. Green marketing claims must-

- Clearly state environmental benefits;
- Explain environmental characteristics;
- Explain how benefits are achieved;
- Ensure comparative differences are justified;
- Ensure negative factors are taken into consideration;
- And only use meaningful terms and pictures.

Another problem firms face is that those who modify their products due to increased consumer concern must contend with the fact that consumer's perceptions are sometimes not correct. Take, for example, the McDonald's case where it has replaced its clam shells with plastic coated paper. There is ongoing scientific debate, which is more environmentally friendly. Some scientific evidence suggests that when taking a cradle-to-grave approach, polystyrene is less environmentally harmful. If this is the case McDonald's bowed to consumer pressure, yet has chosen the more environmentally harmful option. When firms attempt to become socially responsible, they may face the risk that the environmentally responsible action of today will be found to be harmful in the future. Take for example the aerosol industry, which has switched from CFCs (chlorofluorocarbons) to HFCs (hydrofluorocarbons) only to be told HFCs are also a greenhouse gas. Some firms now use DME (dimethyl ether) as an aerosol propellant, which may also harm the ozone layer (Debets, 1989). Given the limited scientific knowledge at any point in time, it may be impossible for a firm to be certain they have made the correct environmental decision. This much explains why some firms, like Coca-Cola and Walt Disney World are becoming socially responsible without publicizing the point. They may be protecting themselves from potential future negative backlash; if it is determined they made the wrong decision in the past. While governmental regulation is designed to give consumers the opportunity to make better decisions or to motivate them to be more environmentally responsible, there is difficulty in establishing policies that will address all environmental issues. For example, guidelines developed to control environmental marketing address only a very narrow set of issues, *i.e.*, the truthfulness of environmental marketing claims (Schlossberg, 1993). If governments want to modify consumer behaviour they need to establish a different set of regulations. Thus government's attempt to protect the environment may result in a proliferation of regulations and guidelines, with no one central controlling body.

Reacting to competitive pressures can cause all "followers" to make the same mistake as the "leader". A costly example of this was the Mobil Corporation who followed the competition and introduced "bio-degradable" plastic garbage bags. While technically these bags were biodegradable, the conditions under which they were disposed did not allow biodegradation to occur. Mobil was sued by several US states for using misleading advertising claims. Thus blindly following the competition can have costly ramifications (Polansky, 1994).

In a green company, not only marketing department is green, but even the finance and other departments show equally concern and have involvement with eco-friendly practices such as green financing. ICICI Bank provided finance to projects, which are environment friendly.

Many firms are beginning to realize that they are members of the wider community and therefore must behave in an environmentally responsible fashion. This translates into firms that believe they must achieve environmental objectives as well as profit related objectives. This results in environmental issues being integrated into the firm's corporate culture. Firms in this situation can take two perspectives; (i) they can use the fact that they are environmentally responsible as a marketing tool; or (ii) they can become responsible without promoting this fact.

Governments establish regulations designed to control the amount of hazardous wastes produced by firms. Many by-products of production are controlled through the issuing of various environmental licenses, thus modifying organizational behaviour. In some cases governments try to "induce" final consumers to become more responsible. For example, some governments have introduced voluntary curb-side recycling programmes, making it easier for consumers to act responsibly. In other cases, governments tax individuals who act in an irresponsible fashion. For example in Australia there is a higher tax associated with leaded petrol.

Another major force in environmental marketing area has been firms' desire to maintain their competitive position. In many cases firms observe competitors promoting their environmental behaviour and attempt to emulate this behavior. In some instances, this competitive pressure has caused an entire industry to modify and thus reduce its detrimental environmental behaviour. For example, it could be argued that other manufacturers introduced Xerox's "Revive 100% Recycled Paper" a few years ago, in an attempt, to address the introduction of recycled photocopier paper. In another example, when

one tuna manufacture stopped using driftnets the others followed suit.

An environment-committed organization may not only produce goods that have reduced their detrimental impact on the environment, they may also be able to pressure their suppliers to behave in a more environmentally 'responsible' fashion. Final consumers and industrial buyers also have the ability to pressure organizations to integrate the environment into their corporate culture and thus ensure all organizations minimize the detrimental environmental impact of their activities.

Considering the nature of human behaviour, all consumers are not equally green; a company needs to segment the market on the basis of consumer's environmental awareness and attitudes. Having identified and selected green segments a firm needs to develop green positioning strategies for each of the chosen green segments. The company should select a positioning plank, which it can use on a sustained basis as a competitive tool to differentiate itself from the competitors. Ecologically oriented differentiation and cost leadership strategy postures are possible. Ecologically oriented differentiation aims at outdoing the competitors in satisfying consumer's demands regarding environmental compatibility of the products and manufacturing processes. The green philosophy needs to be embraced throughout the entire cycle of production, utilization and disposal of the products. A company following the cost leadership strategy tries to gain competitive advantage by lowering costs and/or charging lower prices. The emphasis is on pricing aspect of the marketing charging lower prices.

Many companies have been certified with ISO-14000 and Indian Eco-mark certification to use eco-labels, which is given to those firms whose products are judged environmentally less hazardous. Reverse distribution is fast becoming a popular practice with the marketers who collect back the used products after the product has lived its life or the pack is empty. Hindustan Lever offered discount of Re.1 on the production of empty pack of wheel detergent powder to promote green marketing. Hewlett Packard, which manufactures toner cartridges for the computer printers, for instance, allows consumers to return their empty cartridges to the dealer or mail them back to the manufacturer for re-use in some countries. Xerox Corporation is another firm, which makes use of the reverse distribution system to collect back the leased copiers and recycle them to release it to consumers.

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