

Tying Environment to Strategy*

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Introduction

Environmental mishaps can seriously damage corporate reputation, impose heavy costs and in extreme instances even lead to the bankruptcy of a company. A good example is the Bhopal gas tragedy of 1984. Thousands of people lost their lives and many more were injured and left homeless after methyl isocyanate gas leaked from the Union Carbide plant in Bhopal. Union Carbide's reputation was tremendously damaged.

Memories of Bhopal are still alive in the minds of most Indians. Indeed, Bhopal served as a wake-up call to organisations. Yet environmental disasters have continued to occur subsequently at regular intervals. The Valdez (United States) oil spill of 1989 for example, created a serious crisis for Exxon though the company easily survived the crisis due to its financial muscle. In developing countries like India, environmental issues often take the backseat and accidents are quite common. In the 1980s, Shriram Foods and Fertilisers, found itself facing adverse publicity because of leakage of chemicals at its plant in Delhi. More recently, Hindustan Lever Ltd has been involved in a mercury leakage incident at its Kodaikanal plant. Although the impact of the leakage on the environment seems to have been marginal, HLL has paid a heavy cost in terms of both money and managerial resources after the incident was reported.

Towards a new paradigm

Quite clearly, companies need to manage environmental issues carefully. But many do not have a clear idea of how to go about the task. The mistakes which companies make can be classified as follows:

- Not considering environmental risks to be different from other risks. Typically, a health or safety department deals with issues. As a result, environmental risks are not integrated into corporate strategy.
- Not being clear about how much to invest in improving environmental performance since the benefits are difficult to quantify. Vagueness and confusion characterize the approach towards environmental issues.
- Being excessively focused on regulatory compliance, i.e., doing just that much to be on the right side of the law - This may be wrong for two reasons. There is much more control and discretion when it comes to environment related expenditures, than commonly assumed. Moreover, regulation is subject to numerous interpretations. So what constitutes compliance is often not very clear.
- Equating environmental management with over designing plant processes and building a lot of safety. Indeed, like many other investments, beyond a point,

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expenditures incurred in improving environmental performance may show a negative pay-off.

- Overlooking the opportunities to innovate through a more sophisticated approach to environmental management.

Managing environmental issues

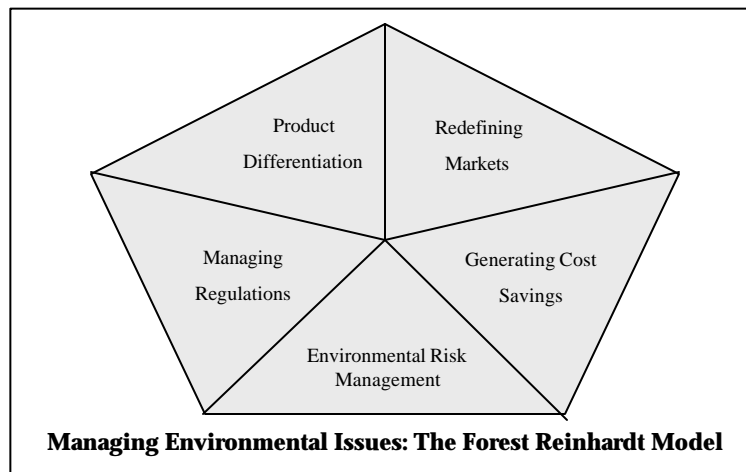
Environmental issues must be managed with a strong business perspective, i.e., on the basis of a rigorous cost benefit analysis not sentiments or misplaced altruism. In general, corporate environmental policies may serve one or more of the following objectives:

- Reducing costs through measures such as recycling or energy conservation.
- Establishing a good reputation for the company. This helps in attracting good people and generating goodwill.
- Motivating employees by providing a better work environment. This helps in retaining people, improving productivity and organizational morale.
- Maintaining a good relationship with regulatory authorities in general and the government in particular. Such relationships turn into very valuable intangible assets, especially in developing countries like India.
- Reducing the possibility of accidents. This prevents the direct and indirect costs associated with environmental mishaps.

Forest Reinhardt of Harvard Business School and an outstanding scholar in the field of environmental management suggests five different approaches to managing environmental issues.

- Investing in environment friendly processes or products. The additional costs are recovered from customers through a clear differentiation and product positioning that allows the firm to charge a premium.
- Managing environmental regulations. This includes self-regulation and influencing government policies.
- Investing in environmental performance improvement, without increasing costs. This may be possible, for example, if input consumption can be reduced by effective recycling. In that case, higher prices need not be imposed on customers to recover the investments made.
- Combining all the three methods mentioned above to change the basis for competition and redefine the market so that both the firm and the environment can benefit.
- Taking a risk management perspective. This involves putting in place systems and processes to prevent or minimise the possibility of accidents and dealing with them effectively by containing the damage if and when they occur.

Each firm must approach environmental issues, taking into the account, industry structure, the firm's competitive positioning, its organisational capabilities and its perceptions about the response of regulatory authorities and environmental activists.



Product differentiation

In many industries, customers are often prepared to pay a premium for products with improved environmental performance if their (customers') own costs can be reduced. Some customers may also be prepared to pay a premium, if they perceive that the superior product can be a hedge against stringent environment regulations in the future. The Swiss company, Ciba Specialty Chemicals' special dyes have helped consumers to cut expenditure on salt and water treatment and improve quality. This has enabled Ciba to charge a higher price for its environment friendly dyes.

In the case of consumer goods, retail customers may be prepared to pay more if the environmental benefits can be bundled and communicated suitably. For environment friendly products to command a premium in the market, the company's concern about the environment must be consistent with the other signals it sends to customers. If improved environmental performance is not well integrated with the overall product positioning or corporate strategy, it may fail to capture the value created.

Managing Regulation

This can be done in two ways: Imposing Self-regulation and Managing government regulation.

Self-regulation

Firms in an industry can come together and decide on the measures to be taken for improving environmental performance. Self-regulation can pre-empt more stringent government regulations and at the same time, lead to better standards that provide more managerial discretion in dealing with environmental issues.

The main problem with self-regulation is that the pay-offs from the improved environmental standards may vary from firm to firm. Quite often, smaller firms are at a disadvantage while larger firms can leverage the benefits of a good reputation that results from better environmental performance. Thus, self-regulation can change the basis for competition by favouring some firms at the expense of others.

For a self-regulatory mechanism to succeed, the companies in the industry must be able to set measurable performance standards, be able to monitor compliance and be in a position to enforce the rules. The program must be broad-based, involving a sufficiently large number of companies, especially all the important players in the industry, so that opponents cannot come together and block it.

Managing government regulation

A firm can steal a march on its competitors by influencing government regulators. To do this successfully, the firm must have a unique competitive advantage when the new laws come into effect. Mere lobbying power cannot generate lasting benefits. The firm should be able to convince customers, rivals and regulators that the new rules it is proposing are feasible.

Unfortunately, many companies approach the government not to shape the right kind of environmental standards but to dilute them. In some cases, serious differences may also emerge between industry and government. As Porter and Van der Linde² argue, any antagonism between the regulators and the industry locks companies into static thinking. It also leads to gross overestimates of the costs involved. Because of the learning curve effect, the cost of compliance with regulations is likely to decrease progressively. Indeed, aggressive lobbying by an industry to dilute environmental standards may be opportunistic and counter productive.

Generating cost savings

In some cases, conformance to improved environmental standards may be accompanied by process innovations that lead to reduced consumption of raw materials or energy. For example, in the hotel industry, many companies have reduced solid waste generation and slashed water and energy consumption. The Dutch flower industry at one time faced stringent regulations as the pesticides and fertilizers used in cultivating flowers were contaminating the soil. The industry developed a closed loop system to reuse water. In some greenhouses, flowers were grown in water and rock wool instead of soil. These measures led to uniform growing conditions and improved the product quality. Thus, not only did environmental performance improve, but costs also came down.

Improved environmental performance may also lead to intangible or unquantifiable benefits, which in turn can lead to cost savings. For example, the company may be able to attract and retain talented managers. This leads to lower recruitment and training costs. A systematic search for internal cost savings may also result in organisational learning and improved process capabilities, leading to greater productivity.

Redefining Markets

Companies can use research to develop new ways of offering services to customers and attempt to shape the future of the industry's environmental practices. They can reduce the cost of disposal for customers, through buy back schemes. They can offer value to customers in ways which competitors cannot and charge a premium. By pursuing such strategies, companies can generate a competitive advantage.

² Harvard Business Review, September-October, 1995.

Risk management

For many organisations, the major pay-off from environmental investments is avoiding the costs associated with accidents, catastrophes and other environmental mishaps. Such costs can be phenomenal as in case of the Bhopal gas tragedy. Reinhardt points out that environmental risk should be managed systematically as follows:

- determining the probability of occurrence of a mishap
- determining the probability distribution of the total costs if the event occurs
- allocation of responsibility if an accident occurs
- collection of necessary information to facilitate a better assessment.

In other words, four different tasks are involved while dealing with environmental risks. The management must minimise the probability of occurrence of the adverse event. The management must cut losses when an accident occurs. They should be able to shift responsibility to other parties to the extent possible, when the event occurs. They must obtain more information to make the risk assessment methodology as robust as possible.

The simplest way to manage environmental risk is to buy an insurance policy. This shifts the risk to the insurance company. The approach makes sense if the company is convinced that the premium being paid is small, compared to the huge risks involved. Another approach is to set up disaster management cells which can respond quickly when an accident occurs. A third approach involves setting clear guidelines, for the operating units, in the form of various documents and manuals. Clearly, a combination of these approaches is desirable.

Behavioral issues need to be carefully examined so that environmental risks are managed systematically. Reward systems normally favour managers who reduce costs or increase profits. Environment related expenditures show up immediately in the books of accounts, but it may take some time for the benefits to be realised. Consequently, there may be a tendency to underinvest in environmental performance improvement measures especially if the company has been organized into SBUs. Inbuilt mechanisms are necessary to check this.

Environmental Management in India

Environmental practices in India have improved significantly in recent times. Used to a traditionally lax regulatory environment, many Indian companies had not taken environmental management seriously in the past. Now, regulations have become more stringent. Moreover, many companies are looking at environmental management as a way of improving their image and cutting costs. A survey of 47 companies conducted by *Business Today*³ and Tata Energy Research Institute in 2001 revealed that 75% of them have an environmental policy. Many companies have quantifiable targets in areas such as emissions. Some companies really stand out in their efforts to upgrade environmental performance.

³ May 6, 2001.

Bayer India has invested in incinerators and leased out 30% of its capacity to other chemical firms. The fees charged by the company have enabled it to recover most of the costs incurred in the pollution control equipment.

At Clariant India, waste reduction has helped to cut waste disposal costs. Better environmental practices have also reduced water consumption.

At Philips India's Pimpri unit, tubelights were earlier flushed with 70mg of mercury each to ensure that 15mg stayed in the tube. This increased both environmental hazards and costs. Philips switched over to argon flushing, reducing both pollution and costs in the process.

At Tata Steel, improved environmental practices have increased profits through the lower consumption of raw materials and the better utilisation of waste in the steel plants. In the mines, Tata Steel's afforestation projects have generated tremendous goodwill and various strategic benefits, which though difficult to quantify, are significant.

Indian Rayon's Veraval plant creates value out of waste. For example, scrubbing hydrogen sulfide with caustic soda has helped it produce liquid sodium sulphide, which is marketed. Likewise, the waste chlorine gas emanating from the caustic soda manufacturing process is converted into sodium hypochlorite which is then used as a bleaching agent in rayon manufacturing. For producing caustic flakes, the company has taken recourse to hydrogen gas, which is one of the cleanest fuels, for the flaker furnace. At its Rishra plant, the company has upgraded the Effluent Treatment Plant, to generate methane rich biogas which can be used to generate power. At the Carbon Black Plants in Renukoot and Gummidipoondi, innovative vent scrubbers seal the venting of carbon black. Excess steam generated through gases is converted into power. Most of the power so generated is used for captive consumption and the additional power is wheeled to the State Grid System.

Hindalco is another company which has a well drawn-out environmental management strategy. Environmental concerns are built into the company's manufacturing processes and business decisions. Hindalco tracks its performance against detailed environmental metrics, engaging professional environmental Audit consultants. KPMG Peat Marwick, Det Norske Veritas, the State Pollution Control Board's certified auditors and Environmental Systems Auditors regularly conduct in-depth environmental audits of the plants.

Advanced hi-tech Dry Scrubbing Systems not only reduce emissions into the air but also restrict alumina losses greatly. Microprocessor based controls in the smelter and baking furnaces help to save energy. This has resulted in a phenomenal saving in fuel consumption. Hindalco attempts to utilize various waste products. Granulated slag, a ferro-silicate compound generated in the manufacturing process is used as construction material. Phosphogypsum generated during the process finds its application as a soil conditioner and as an additive in the Cement sector.

Another good example is Gujarat Ambuja Cements (Ambuja), which operates in an environment-unfriendly industry. Both raw materials mining and cement manufacturing have a harmful impact on the environment. Ambuja believes a proactive approach to discharging environmental responsibility makes good business sense. The Ambuja Cement Foundation (ACF) was set up in the early 1990s, to formally institutionalize this approach.

At Veraval, in Gujarat, extensive reforestation has been taken up and lakes dug. The greenery in the vicinity of the cement plant is the envy of everyone. Ambuja has sealed off many wells whose water had become unfit for use due to excessive saline content. In their place, fresh water wells have been dug. This has reduced the threat of salinity ingress into the ground water resources. Ambuja has worked with the locals to help construct numerous surface water harvesting and groundwater recharging structures. These initiatives have yielded important strategic benefits. For example, an official delegation from Himachal Pradesh was sufficiently impressed to give Ambuja permission to set up a plant in their state.

The clinker grinding unit at Ambuja's Ropar unit in Punjab produces PPC (Portland Pozzolana Cement) by utilizing Flyash, a waste product from thermal power plants. At every step of the production chain, Ambuja has installed safe guards to keep emissions negligible. The clinker for the plant is transported in covered trucks. Unloading takes place in a closed truck tippler. Bag filters have been installed to further prevent any elusive emissions. The clinker is then stored in a covered yard. A specially designed chute ensures that no emissions escape the yard. The whole system of conveying, storage and addition of flyash to the cement is also totally closed, to prevent emissions. The final product, cement is stored in closed silos and then into automatic packing machines.

A senior executive of Ambuja recently won the award for the best Environment Manager of the year given by The Centre for Science and Environment (CSE), New Delhi under its Green Rating of Indian Industry project.

Yet, environmental management in India has still a long way to go. Consider the Uranium Corporation of India Ltd (UCIL) mines in Jadugoda. Children in adjoining villages have been affected by radiation while workers are suffering from serious ailments. A study conducted by the Jharkand Organisation Against Radiation (JOAR) in 1998 revealed that many women, in the region suffered from miscarriages and stillbirths. 16% of the children born to them died in their infancy. Poor safeguards at the mines have exposed 30,000 people in 30 villages to radiation risks. Nuclear waste has been pumped into waste dumps called tailing ponds. Wind blows the harmful dust around in summer while in the rainy season, the river water gets contaminated. In 1994, there were 17 deaths. By 2001, it had gone up to 31. Many people have been affected by cancer.

Most Indian companies have not integrated environmental management into their corporate strategy. Many of them look at ISO 14001 certification⁴ as an end in itself. Green initiatives are often launched without a clear understanding of the potential benefits. In the worst cases, companies flout pollution laws merrily and “manage” government inspectors when they visit the premises.

One company which has invested heavily in superior environmental processes and systems and yet found itself in a spot, has been the highly respected Hindustan Lever Ltd (HLL). HLL’s mercury thermometer plant in Kodaikanal was well designed and had the best safeguards and environmental processes. Yet, owing to human failure, a small quantity of mercury leaked out of the plant along with glass scrap in early 2001. The environmental audits conducted subsequently by some of the most reputed (and expensive) environmental consultants in the world, have revealed that the damage to the environment has been marginal. Yet, in the face of severe hostility from the NGOs led by Greenpeace, HLL has incurred heavy costs which are several times more than the total profits generated during the entire history of the plant. Even the Tamil Nadu Pollution Control Board officials – whom I met in connection with a case study I have just completed on the incident for the CII commended HLL’s behaviour. But they were helpless in the wake of the onslaught launched by Non Governmental Organisations (NGOs). HLL’s experience only emphasises that multinationals have to be that much more careful while operating in third world countries. They just cannot afford to make a mistake. Otherwise, NGOs will accuse them of following different standards in developed and developing countries. Once public sympathy is aroused, logic and rational thinking give way to sentiments.

Concluding Notes

Environmental issues should be viewed as business problems. A rigorous analysis is necessary to understand which investments generate value for shareholders. While doing the bare minimum to stay on the right side of the law is not advisable, pouring a large amount of money into environmental projects, in the name of discharging social responsibility, is unwise. As Reinhardt puts it⁵: “Companies aren’t in business to solve the world’s problems nor should they be. After all, they have shareholders who want to see a return on their investments. That’s why managers need to bring the environment back into the fold of business problems and determine when it really pays to be green... The truth is, environmental problems do not automatically create opportunities to make money. At the same time, the opposite stance – that it never pays for a company to invest in improving its environmental performance – is also incorrect.”

Many companies allow environmental issues to be handled by lawyers and consultants who tend to focus on compliance rather than innovation. A compliance perspective is a

⁴ ISO 14001, a standard developed by International Organization for Standardisation (ISO) in 1996, is primarily concerned with “environmental management”. This international standard specifies requirements for an environmental management system, to enable an organization to formulate a policy and objectives taking into account legislative requirements and information about significant environmental impacts. It applies to those environmental aspects, which the organization can control and over which it can be expected to have an influence.

⁵ Harvard Business Review, July-August 1999.

minimalist approach. Indeed, managers should look at better environmental performance as an opportunity rather than as a threat. As Porter and Van der Linde⁶ put it: “Instead of clinging to a perspective focussed on regulatory compliance, companies need to ask such questions as, What are we wasting? And how could we enhance customer value?”

Integrating environmental issues with corporate strategy automatically implies environmental strategies must become the direct concern of general management. Environmental impact should be incorporated in the overall process of improving productivity and competitiveness. Managers should be proactive and look for opportunities to improve the design, manufacturing and delivery processes on an ongoing basis, independent of the regulatory framework. If they do so, environmental investments will yield attractive returns.

⁶ Harvard Business Review, September-October, 1995.