

Improving Corporate Environmental Performance A Strategic Approach

Introduction

Environmental performance has become a critical issue in recent times. Environmental disasters can create serious problems for organizations. A good example is the Bhopal gas tragedy of 1984 in which thousands of people lost their lives after methyl isocyanate gas leaked from the Union Carbide plant in Bhopal. The 1986 Chernobyl nuclear disaster in Kiev, Ukraine is also etched in the minds of many people. The explosion of the nuclear reactor killed 31 people and released large quantities of radioactive substances into the atmosphere. In scale, complexity and long-term consequences, it was the most catastrophic incident in the entire history of atomic energy use across the world.

Bhopal and Chernobyl did not mark the end of environmental disasters. The Valdez (United States) oil spill of 1989 and the Tokaimura (Japan) nuclear accident of 1999 are prominent examples. In developing countries like India, environmental issues often take the backseat and accidents are quite common.

Quite clearly, companies need to manage their environmental performance carefully. But many do not have a clear idea of how to go about the task. Most companies view environmental risks differently from other risks. Typically, a health or safety department deals with issues concerning the environment. Moreover, managers are not clear about what and how to invest in improving environmental performance since the benefits are difficult to quantify.

This paper emphasises that environmental issues must be treated like other business issues. By tackling environmental problems, there may not be any immediate improvement in the bottomline. At the same time it is wrong to assume that investments made to improve environmental performance will never pay off. A strategic approach to environmental risk management can generate sustainable competitive advantage in the long run. For this, environmental issues must be integrated with the company's corporate strategy.

The need for a new approach

The time has come for companies to take a fresh look at environmental issues. Attempts to improve environmental performance should be viewed as an opportunity to innovate rather than as a burden. As Porter and Van der Linde have put it [\[1\]](#) "The relationship between environmental goals and industrial competitiveness has normally been thought of as involving a trade off between social benefits and private costs. The issue was how to balance society's desire for environmental protection with the economic burden on industry. Framed this way, environmental improvement becomes a kind of arm-wrestling match. One side pushes for higher standards; the other side tries to beat the standards back... The notion of an inevitable struggle between ecology and the economy grows out of a static view of environmental regulation in which technology, products, process and customer needs are all fixed... Properly designed environmental standards can trigger innovation that may partially or more fully offset the costs of complying with them."

More and more companies are now realising the need for a proactive approach to environmental issues instead of passive compliance with the laws. Take the case of the Canadian paper company, Alberta Pacific Forest Industries (AP). When AP faced opposition from politicians, farmers, aborigines and other activists, over the adverse environmental impact of a proposed pulp mill, it decided to take a

range of measures to mitigate the impact. The company designed its plant to keep pollution levels well below those specified by the government. From time to time, AP apprised the local community of the environmental impact of its operations. It also announced plans for afforestation. As a result of all these measures, the company successfully improved its relationship with the local community and eliminated costs which could have resulted from potential business disruption.

Exploding some myths about environmental management

Myth 1: Environmental costs have rocketed but the worst is almost over.

Reality: Given current regulation, law and public feeling, environmental costs are unlikely to come down.

Myth 2: Costs are uncontrollable and non-discretionary.

Reality: There is much more control and discretion than is commonly perceived

Myth 3: Regulations have the same impact on all competitors in an industry.

Reality: The impact of regulations is uneven, disadvantaging some and benefiting others.

Myth 4: Just do the right thing

Reality: What is right depends on the situation.

Source: Susan Colby, Tony Kingsley and Brad Whitehead, "The real green issue: Debunking the myths of environmental management." The McKinsey Quarterly, 1995 Number 2, pp. 132-143.

AP is however, an exception rather than the rule. Most companies show a high degree of ad hocism and display knee-jerk responses to environmental issues. They also believe that command and control mechanisms, and formal procedures and rules will automatically take care of environmental issues.

The right way to manage environmental issues is to integrate them with the company's corporate strategy. This implies collecting and storing information about environmental issues and dealing with environmental risks like other business risks. Companies should have a clear idea of how investments in improving environmental performance will affect their competitive position. Environmental costs normally do not affect all competitors equally and tend to vary with location, size of the facility, technology used and age of the plant. Companies which fail to appreciate these differences miss opportunities to put competitors at a disadvantage. To take an example, vertically integrated and non-vertically integrated players in the same industry may be affected in quite different ways by a new environmental regulation. Through outsourcing, a firm may be able to put vertically integrated competitors to a severe disadvantage.

Most companies fail to get the best returns from their environmental investments due to poor cost benefit analysis. They undertake grandiose projects which do not yield commensurate benefits. They would be better off if they concentrate on liabilities which are small today but may escalate in future and where efficient solutions to the problem are available. Companies also tend to overlook some of the non quantifiable benefits resulting from better environmental performance. These include higher employee retention, higher employee morale and higher employee productivity.

Sometimes, companies take decisions without a careful analysis of the deeper implications. What seems to be a right decision on the surface later creates serious problems. For example, companies

close plants in a hurry without considering the impact of such a decision. Regulators may intervene and demand expensive clean up operations, because there is no more fear about people losing their jobs. Such an eventuality would not have risen if the plant was operational and there were fears of job losses.

Managers also tend to forget that the essence of environmental issues is managing stakeholder expectations. Very often, managers are committed to improved environmental standards but do not involve nearby stakeholders before taking major decisions. Due to poor communication and a failure to take the local community along, they run into problems, even after making heavy investments to improve their environmental management practices.

Managing environmental issues

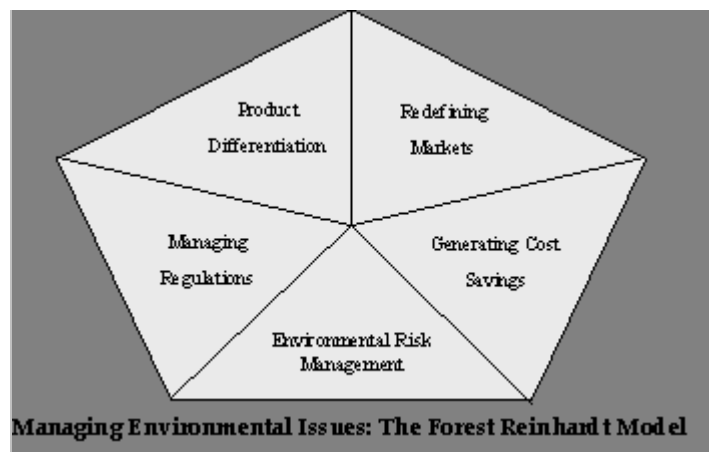
In general, corporate environmental policies may serve one or more of the following objectives:

- Reducing costs through measures such as recycling or energy conservation.
- Reducing the possibility of accidents.
- Establishing a good corporate reputation.
- Motivating employees by providing a better work environment.
- Maintaining a good relationship with the local community and regulatory authorities.
- Conforming to a code of ethics.

Forest Reinhardt^[2] 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 investing in environment protection and forcing other firms to make similar investments.
- Investing in environmental performance improvement, without increasing costs. This may be possible, for example, if input consumption comes down because of effective recycling. This means the company does not have to charge higher prices 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.
- Looking at environmental issues from 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 when they occur.

The specific approach to environmental issues would depend on the industry structure, the firm's competitive positioning, its organisational capabilities and its perceptions about the response of regulatory authorities and environmental activists. We now examine each of the five approaches in greater detail.



Product differentiation

There is considerable scope to innovate through better environmental performance. A company can design better-performing, higher-quality or safer products. There may also be scope to modify the product so that there is higher resale value. If one or more of such conditions are met, the company may be in a position to charge a premium that more than recovers the costs incurred in improving environmental performance.

Industrial 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 consider the superior product to be a hedge against stringent environment regulations in the future. Ciba Specialty Chemicals is a good example. Its environment friendly 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 dyes.

In the case of consumer goods, retail customers may be prepared to pay more if the environmental benefits can be bundled 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. This is probably why customers were unwilling to pay extra for Starkist's dolphin safe tunas[3].

Managing Regulation

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

Self-regulation

Firms in an industry can come together and agree to incur additional costs for improving environmental performance. Self-regulation can pre-empt more stringent government regulations. It also gives companies greater latitude in dealing with environmental problems. Self-regulation may also enable companies to develop better environmental standards than the government.

The main problem with self-regulation is that the pay-offs from the improved environmental standards may vary across companies in the industry. 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.

Reinhardt mentions various conditions for the success of a self-regulatory mechanism. The companies in the industry must be able to set measurable performance standards. They must have access to information to be able to verify compliance. They should also 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. The program must have credible mechanisms for standard setting, monitoring and enforcement.

Managing government regulation

A firm may try to put pressure on its competitors by influencing government regulators. But straight and simple lobbying of the type Indian companies excel in, may not have the desirable impact in the long run. To use this approach successfully, the firm must have a unique competitive advantage when the new laws come into effect. As Reinhardt puts it[4], “There is no long-term benefit in a strategy of pure rent-seeking. Without some complementary investment in the market place or some pre-existing source of competitive advantage, the payoff to an investment in regulatory change will be zero; the firm and its rivals will compete away the economic surplus they are trying to divert into their own pockets.” The firm should be able to convince customers, rivals and regulators that the new rules it is proposing are feasible and desirable.

Porter and Van der Linde[5] argue that any antagonism between the regulators and the industry locks companies into static thinking. It also leads to gross overestimates of the costs involved. In many cases, because of the learning curve effect, the cost of compliance with regulations tends to decrease progressively over time. Hence, aggressive lobbying by an industry to dilute environmental standards may not only be opportunistic but also counter productive. They suggest that companies must keep three points in mind while trying to influence environmental standards being set by the regulatory authorities. The standards must create sufficient opportunities for the industry to innovate. The regulations should leave the door open for further improvements instead of locking companies into a particular technology. The regulatory process should create minimum uncertainty about the outcome expected. Porter and Van der Linde emphasize that environmental regulations must focus on outcomes and not technologies.

Environmental Management in India

Environmental practices in India have improved significantly in recent times. Used to a fairly lax regulatory environment for a long period of time, 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 means to improve their image and cut costs. A recent survey of 47 companies conducted by *Business Today*[6] and Tata Energy Research Institute has 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. Not surprisingly, quite a few of these companies are subsidiaries of global companies.

Bayer India believes that the benefits of successful environmental management programs far out weigh the costs. The company has made substantial investments in incinerators and leased out 30% of its incineration capacity to other chemical firms. The fees charged by the company have enabled it to recover most of the costs. 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 lower consumption of raw materials and better utilisation of waste.

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 15 adjoining villages have been affected by radiation while many 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. Lack of safeguards at the mines has 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.

According to the UCIL Chairman and Managing Director, Ramendra Gupta[7], “The Pan Parags (Chewing tobacco) are causing bigger health hazards than uranium mining. You (Journalists) should run after the manufacturers of these than chasing us.” Gupta has even cited an Atomic Energy Commission report as stating that radiation levels within five kilometres of Jaduguda are normal. He has also contended that malnutrition and alcoholism, rather than radioactivity are the causes of illnesses in Jaduguda.

How safe are India’s nuclear facilities has once again become a topic of hot debate. Many of the facilities are located in densely populated areas. Some do not have adequate cooling systems. According to a *Times of India* editorial[8], “Alarmist as this may sound, a Chernobyl is waiting to happen here... Our nuclear pundits will insist a Chernobyl cannot happen here... Such smugness is not seen even in the developed world which is much more conversant with nuclear technology.”

Many Indian companies look at ISO 14001 certification as an end in itself. Most have not integrated environmental management into their corporate strategy. In some instances, green initiatives have been launched without a clear understanding of the potential benefits. In the worst cases, companies flout pollution laws merrily and pay bribes to government inspectors when they visit the premises. Quite clearly, Indian companies still have a long way to go in the area of environmental management. The costs they may have to incur in the event of mishaps may turn out to be heavy.

Generating cost savings

Conformance to improved environmental standards may be accompanied by process innovations. These include higher process yields leading to higher resource productivity, less downtime through careful monitoring and maintenance, reduced input consumption, lower energy consumption and reduced material storage and handling costs.

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 came up with innovative solutions. It developed a closed loop system to reuse water. In some greenhouses, flowers were grown in water and rock wool instead of soil. These measures resulted in uniform growing conditions and improved the product quality. As a result environmental performance improved, even as costs came down.

Dow Chemical is another good example of how a company can cut costs and improve environmental performance at the same time. In its California complex, hydrochloric acid gas is scrubbed with caustic soda to produce various chemicals. The earlier practice was to store the waste water in evaporation ponds. Regulators insisted that these ponds be closed by 1988. Dow responded by redesigning the

production process and decreasing caustic and hydrochloric acid waste by 6,000 tons per year and 80 tons per year respectively. It invested \$250,000 to generate annual savings of over \$2.4 million.

Conducting an environmental audit

In general, there can be two types of environmental audit. An environmental compliance audit checks the degree of conformance to laws and rules prescribed by the relevant regulatory authorities. An environmental management audit is an appraisal of the company's internal capabilities to discharge its environment-related responsibilities.

A compliance audit may cover issues such as housekeeping, practices followed while storing dangerous chemicals, how hazardous waste is being stored and disposed, the method followed for releasing waste water, etc. A management audit is more concerned with capabilities. So, it focuses on people issues such as organizational structure, accountability, training of employees to respond to crisis situations and relationships between plant personnel and local regulatory authorities. The audit can examine the environmental policy statement of the company, the documented procedures for preventing and managing crisis situations, the type and frequency of review of the programs, etc.

If used well, audits can generate various benefits for the organizations.

- Problems can be corrected before they are too large to fix
- Opportunities can be identified for cutting costs through measures such as waste minimization and recycling.
- Insurance costs can be reduced.
- Employees can be persuaded and motivated to take environment issues seriously.
- The corporate image can be improved.

Source: Norman S Wei, "How to conduct your own environmental audits," Pollution Engineering, September 2001, Vol 33, Issues 8.

In 1991, US regulators asked distillers of coal tar to drastically cut their benzene emissions. The regulation motivated Aristech Chemical Corporation of Pittsburgh, Pennsylvania to develop a method for removing benzene from tar in the first processing step. This did away with the need for expensive gas blankets. The new pollution control measures enabled Aristech to save \$3.3 million.

Redefining Markets

Companies can also try a combination of the various approaches discussed so far. They 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 match and charge a premium.

Environmental risk management

For many organisations, managing environmental issues means avoiding the costs associated with

accidents, catastrophes and other environmental mishaps. Reinhardt has identified four different elements of environment risk:

- probability of occurrence of an adverse event such as an accident
- probability distribution of the total costs if the event occurs
- allocation of responsibility if an accident occurs
- certainty of the assessment.

In other words, four different tasks have to be performed by management while dealing with environmental risks. They must minimise the probability of occurrence of the adverse event. They must cut losses when an accident occurs. They should be able to pinpoint responsibility on other parties, when the event occurs. They must obtain more information to make the risk assessment methodology as robust as possible. Managers have to use the right mix of risk reduction, risk shifting and collection of information to manage environmental risk efficiently.

The simplest way to manage environmental risk is to buy an insurance policy. This shifts the risk to the insurance company. Such an approach makes sense if the company feels 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. Another approach is to link promotions of managers with their contribution to risk management.

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. Inbuilt mechanisms are necessary to check this.

Though Reinhardt considers environmental risk management as a separate approach, there is a strong case for arguing that the various risk-mitigation measures can be incorporated in each of the four approaches covered earlier. Improving the process, cutting costs, differentiating the product and managing regulation can all be viewed as methods to reduce the risk of incurring heavy losses owing to environmental mishaps.

Concluding Notes

Environmental issues should be analysed 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 acceptable, pouring a large amount of money into environmental projects, in the name of discharging social responsibility, is unwise. As Reinhardt puts it^[9]: “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.”

Managers should look at better environmental performance as an opportunity rather than as a threat. As Porter and Van der Linde^[10] 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?”

Many companies allow environmental issues to be handled by lawyers and consultants who tend to focus on compliance rather than innovation. To correct this situation, environmental strategies must become the direct concern of the top management. Environmental impact should be incorporated in the overall process of improving productivity and competitiveness. Managers should be proactive and go beyond currently regulated areas. They should look for opportunities to improve design, manufacturing and delivery processes on an ongoing basis.

According to Frank P Popoff, former CEO of Dow Chemical^[11]: “Competitive advantage must not be gained through non compliance or minimum compliance. Some companies try to reduce cost this way. But it is deadly. Sooner or later, mandates will come into place to prevent such an approach and put the company at an enormous competitive disadvantage. Success truly belongs, I believe, to those companies that not only comply with environmental standards, whether mandated or self-imposed, but do it more efficiently and effectively than others. If they conserve energy more efficiently through internal cycling or on-site disposal, they will ultimately reduce cost.”

- ^[1] Journal of Economic Perspectives, 1995 Vol 9 Issue 4.
- ^[2] Reinhardt is an outstanding scholar in the field of environmental management. He teaches at Harvard Business School.
- ^[3] Tunas caught without killing dolphins. In many waters, tunas are found below dolphins floating on the sea.
- ^[4] Down to Earth, Harvard Business School Press, 2000.
- ^[5] Harvard Business Review, September-October, 1995.
- ^[6] May 6, 2001.
- ^[7] The Week, September 2, 2001.
- ^[8] October 5, 2001.
- ^[9] Harvard Business Review, July-August 1999.
- ^[10] Harvard Business Review, September-October, 1995.
- ^[11] The McKinsey Quarterly, 1993 Number 4.