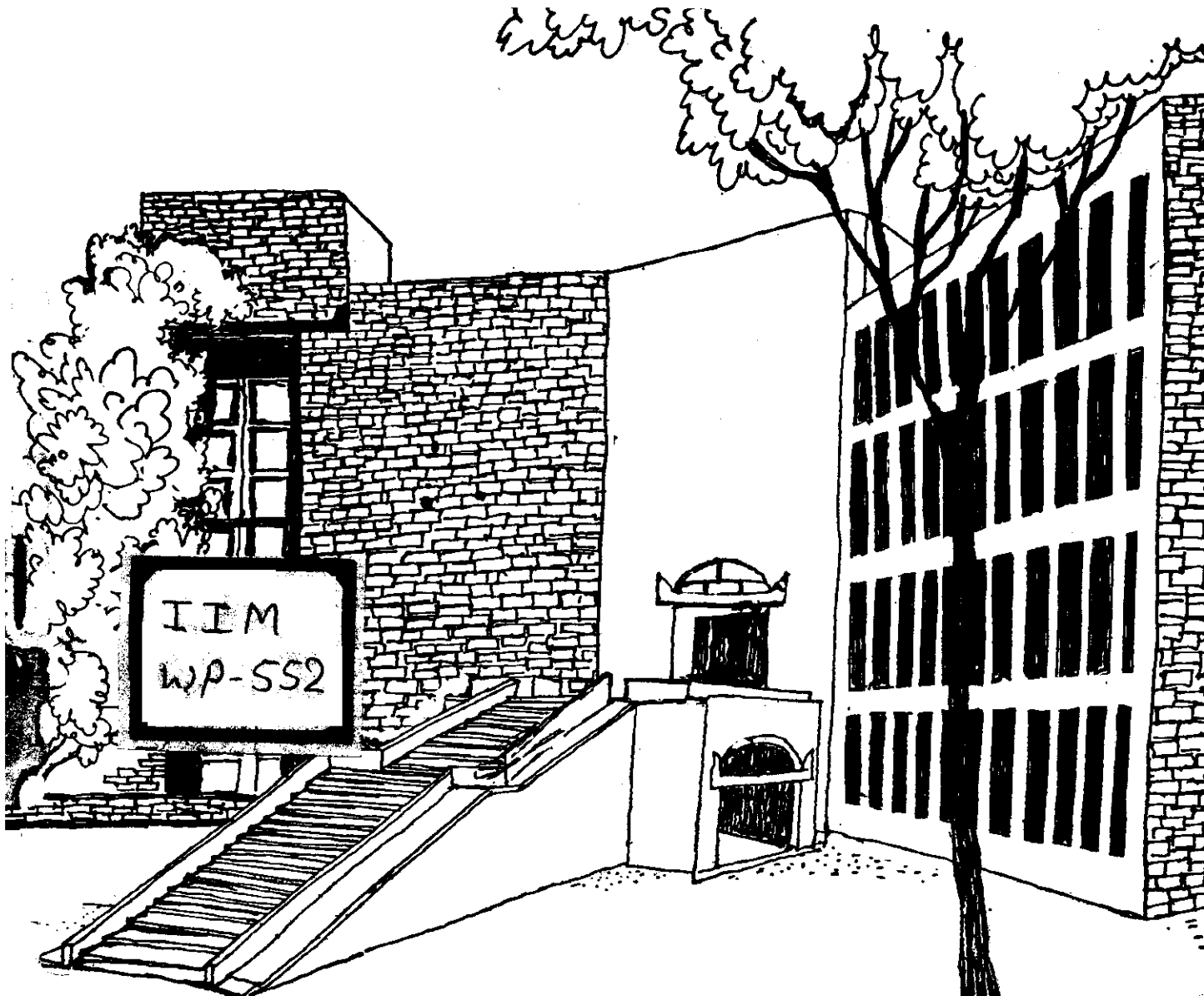




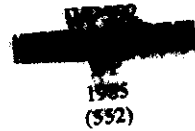
Working Paper



MANAGING SOCIO-POLITICAL ENVIRONMENT
IN INDIA: A NEW TASK FOR TOP
MANAGEMENT

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Abstract

A recent study of environmental scanning practices of larger Indian corporations (Dixit 1984) surprisingly finds a total absence of socio political factors in a list of twenty-five external factors considered to be most important by the sample of 24 companies. Though this study was conducted on a relatively small sample, it does indicate the contemporary belief of corporate management that socio-political forces in the external management are not very critical to the prosperity of the firm perhaps because according to them they can be managed easily. However, this paper takes the view that the nature of the socio-political environment is changing and is increasingly becoming adverse for the survival and prosperity of the firm. Hence business organizations would be required to devote an increasing amount of time and energy towards understanding and anticipating the social consequences of their operations. The paper also discusses two approaches for responding to the new challenge: the "issues management" approach and the good corporate citizenship approach and suggests that the latter is the more creative and effective one?

MANAGING SOCIO-POLITICAL ENVIRONMENT IN INDIA:
A NEW TASK FOR TOP MANAGEMENT

Shekhar Chaudhuri*

A recent study of environmental scanning practices of larger Indian corporations (Dixit 1984) surprisingly finds a total absence of socio political factors in a list of twenty-five external factors considered to be most important by the sample of 24 companies. Though this study was conducted on a relatively small sample, it does indicate the contemporary belief of corporate management that socio-political forces in the external management are not very critical to the prosperity of the firm perhaps because according to them they can be managed easily. However, this paper takes the view that the nature of the socio-political environment is changing and is increasingly becoming adverse for the survival and prosperity of the firm. This view is echoed by others.

... A substantial minority of managers has accepted the fact that the future is not reversible, and the firm will be changed from a purely economic to a socio-economic instrument of society. ...

Passively, or proactively, management will be increasingly preoccupied with the problem of business legitimacy (Ansoff, 1979).

This new demand for change, which has become almost a worldwide phenomenon, had its rumblings in the 1960s with

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the attacks on indiscriminate use of pesticides and insecticides, and the pollution spewing automobiles in the U.S.A. The demand became a deluge in the 1970s...(Rao, 1984).

In this paper, I shall try to illustrate with the help of four case studies, two detailed and the other two smaller ones; the nature of the emerging socio-political environment of the firm in India and then suggest approaches that may be adopted by managements to respond to the new challenges.

The Case of the Dying Fish*

This is the case of the Zuari Agro Chemicals Limited, which faced the threat of closure immediately after a few months of its operations when the effluents discharged by the plant polluted drinking water and paddy fields in the immediate vicinity. The company was promoted by the Birla Gwalior Private Limited, a sister concern of the well known business conglomerate, the Birla Group of Companies in 1967. The company entered into a financial-cum-technical collaboration with the United States Steel Corporation in November, 1968. At that time U.S. Steel was considered to be the tenth largest industrial concern in the U.S. in terms of turnover; it was the world's largest steel producer, and one of the largest producers of fertilizers,

*This is a summary of a case entitled "The Case of the Dying Fish" IIMA BP 143, 1979, written by C.Gopalakrishnan under the guidance of S. Sreenivas Rao.

fertilizer material and agricultural chemicals in the U.S. The complete responsibility for design, engineering, and construction of the plant was given to Toyo Engineering Corporation, a unit of Mitsui Group of companies of Japan.

The factory commenced commercial production of urea in June 1973. On September 5, 1973, a large amount of dead fish was noticed in the vicinity of the effluent discharge point in the sea. The inhabitants of the nearby villages began to agitate. Fish was the staple food of the villagers. The villagers also complained of pollution of their wells and damage to crops.

The state government's public health laboratory analysed the samples of dead fish and reported arsenic as one of the causes of the mass death of fish. The management of Zuari denied that the death of the fish had been caused by the effluents discharged by the plant. The Managing Director also went on record in an important business daily saying that the plant had by far the most modern chemical complex equipped with modern devices to check pollutants. Then followed chemical analysis by a number of other agencies, all of which proved that arsenic discharged by the plant was responsible for the death of fish. The state government ordered the temporary closure of the factory and also suggested to the management the maximum amount of arsenic that could be allowed to be

discharged into the sea if the plant were to be operated. The company was also asked to implement some long term measures to reduce the pollutants in the discharge. The concerned ministry of the central government also summoned the company's Managing Director to discuss the pollution issue.

However, a year later, ammonia effluents began to pollute again the drinking water wells and paddy fields nearby. The villagers again began to agitate, this time, with the support of major political parties, both regional and national. The management's reaction was similar to the previous one. They tried to play-down the effects of the effluents.

As a consequence of the damage caused to agricultural land and wells the state government asked the company to set up an ammonia stripping plant to control the pollution. Zuari agreed to set up the plant, but estimated that it would take two years. Meanwhile an Indian firm claimed that it had approached the company offering a new method of treating effluents which Zuari had turned down.

The villagers however did not calm down. They, with the support of political parties organized a relay hunger strike to press the issue, which then came up before the legislative assembly for discussion. The state government gave two weeks time to the company to arrange for control of the pollution or close down the plant. But three days

before the expiry of the notice, the company obtained a directive from the central government prohibiting the state government to order the closure of the company in view of the acute shortage of fertilizers. However, the State Government did not heed the central government's directive. In the meanwhile the company assured the state government that it would take appropriate measures on a long term basis to control the pollution. However, the public assurance did not change the mood of the villagers.

Two days before the expiry of the state government's notice, the company appealed to the court to withhold the closure order till the Central Board constituted by the Water (Prevention of Control of Pollution) Act, 1974 met to discuss the case. The court, however, turned down the appeal. Immediately thereafter the state government ordered the company to make full compensation to agriculturists for crop damage and to supply piped drinking water to 40 new villages in addition to the existing 15 villages.

Why did the company's management behave in the manner described above? At the time of the court's order to close down the plant, the management envisaged that various short, medium, and long term measures would entail an expenditure of about Rs.3 crores. In fact, the company had already lost an equal amount or more as a

result of closure at different points of time. With hindsight, it is clear that delaying tactics did not ultimately succeed. It seems from the pattern of responses that management assumed itself to be a mighty force which could influence the central government to achieve anything it desired. The management seemed to be insensitive to the increasing intensity of the agitation. The reason could have been that the villagers were few in number (around 500 in the immediate vicinity) and therefore could not create much of a problem. Hence the management's reaction was to deny that the pollution was caused by the effluents discharged by the plant. In its anxiety for profit maximization in a high growth market characterized by shortage of supply, it did not read some of the environmental signals correctly. It failed to recognize that the interests of the state and the central governments could be different. The central government looked at the situation from a national perspective. Fertilizer production had to be kept up so as to keep the supply lines full. This was essential because otherwise larger quantities of fertilizer would be required to be imported implying worsening of the balance of payments situation. On the other hand, the state government of Goa, the state in which the plant was located was committed to the maintenance of the ecological balance of the state.

Also fish was the staple food of the people in the state. These considerations led the state government to defy the central government's directive. Hence, we see the management's objective of maximisation of economic gains led them into a situation which ultimately went against that very objective. This case leads us to believe that the organization totally failed to recognize the emerging socio-political forces in its external environment.

The Silent Valley Project

A major hydroelectric power project was planned to be set up by the state government of Kerala in an area known as the Silent Valley, known for its dense primordial forests which harbours a large variety of flora and fauna. However, agitation by nature conservationists during the early 80's helped to initially stall the project and finally the central government asked the state government of Kerala to completely abandon it. The following quotation from the newsletter of the World Wildlife Fund elaborates on the above issues:

... The campaign to save the Silent Valley has received tremendous support and further publicity is being achieved by distribution of hand-bills in local languages, highlighting the actual facts.

The Central Government's letter to the State of Kerala to abandon the hydro-electric project in Silent Valley and its offer of help if an alternative project is considered

by the State has brought in a ray of hope to the conservationists and ecologists, who have applauded the Government action.

The World- Wildlife Fund India claimed that the communications of their supporters to the political leaders, decision-makers and to the press created a powerful public opinion which was instrumental in making the government review the project.

This case is different from that of Zuari Agro Chemicals Limited in the sense that the project could not even **get** started. The state government could not be blamed for anything except that they had not anticipated the opposition to a major project, which in their view would have brought economic gains much larger than the environmental loss. This has been perhaps the biggest victories for environmentalists in India.

The Chipko Andolan

The famous Chipko Andolan or the "Tree Hugging Agitation" was initiated in the late 70s by . . . Mr. Chandi Prasad Bhatt and Mr. Sunderlal Bahuguna in the forests of the Himalayas against indiscriminate felling of trees for commercial purposes.

It is now recognized that ecological changes in the Himalayas have affected the lives of hundreds of millions

in the high lands as well as the foothills known as the Terai region. Contractors appointed by the government have been exploiting the forest wealth of the Himalayas indiscriminately. This has created a high degree of soil erosion on the mountain slopes resulting in frequent landslides avalanches and flash floods. According to a study in the Himalayan region glaciers are receding; hill slopes are becoming barren; and valleys are turning into deserts (Bahuguna, 1983) water sources are drying up and drinking water is becoming scarce. Mixed forests have been turned into five forests; and pine forests into near deserts. Migration of people from the hill region towards cities in the plains has already started on an increasing scale as a result of the ecological crisis in the Himalayan Children of 8 to 10 years go far away in search of firewood.

The Chipko Andolan had its historic beginning in December 1972 at the Mandal village in Chamoli District (in Uttar Pradesh) which started a chain reaction of a series of protests. Though the focus and nature of the protest and the force behind it has changed considerably, it is reported that there has been some degree of success in reducing the indiscriminate felling of trees. In 1977 the Chipko movement shifted its focus from a purely economic demand of the forest dwellers' right to forest

resources towards a much broader goal of maintaining an ecological balance between ^{man} and nature. Women were in the forefront of this shift in the movement's orientation.

The Bhopal Tragedy*

The gas tragedy that resulted in the death of more than 2500 people in Bhopal was described by one of the fortnightly Indian magazines in the following manner:

The night of December 2/3, a night that Bhopal can never forget. A Monday of macabre death, a killer cloud of gas that silently settled on an unsuspecting city and converted a pleasant, mild winter's night into a nightmare of misery, panic, sickness, and for at least 2,500 people ... a slow, painful, unnecessary s out of life. That it was the worst ever industrial accident in history, taking an unprecedented and still uncounted death toll and leaving no fewer than 50,000 affected, was quietly drafted by the tidal wave of human suffering that spread quietly across the city like the poison cloud that caused it... (India Today, December 31, 1984).

In this case too the management of the company adopted a reactive strategy to agitations by people affected by ppollution created by effluents discharged by the plant over a considerably long period of time. The company's management always tried to suppress the movements against it by either making side payments to influential persons

*This case is based on a number of articles published in magazines and newspapers recently.

or paying monetary compensation to directly affected people as borne out by various reports in newspapers and journals. The Government, both at the State level and at the Centre, it seems took a lenient view of the safety lapses on the part of the company. Here too the state and central governments had a larger perspective and were interested in the production of pesticides which was congruent with the firm's objective but at variance with the interest of the local people which wanted an atmosphere free from pollution. It is an irony that it had to be left to an unimaginably devastating catastrophe to force the government to ask the management to close down the plant. A number of steps have been taken by the central and state governments for avoiding such calamities. But the moot question is why such a tragedy had to occur at all? Could not the management have taken preventive measures? To find answers to these questions we have to go into the details of the situation.

The industrial licence for setting up the Union Carbide plant at Bhopal for manufacturing the pesticide brand named Sevin (the generic name of which is Carbaryl) was granted in 1969. In 1971, the first step towards manufacturing Sevin was taken by Union Carbide when a pilot was set up to manufacture alpha naphthol. The next year, process development was started to make Temik,

a highly toxic pesticide. In 1972 the company received a letter of intent for the manufacture of 5,000 tonnes of MIC - based pesticides, the first phase was completed in 1977 and production was started, the second phase of construction being completed towards the end of 1979.

The two basic raw materials used by Union Carbide are monomethylamine (MMA) and phosgene, MMA and phosgene are first converted into an intermediate, methyl carbonyl chloride, which is then thermally decomposed to produce MIC. Apart from these two substances, the other ingredients used in various stages of the production of MIC are carbon monoxide and chloroform. Table provides the hazard rating of the chemicals.

<u>Table 1</u>		
<u>Chemical</u>	<u>Formula</u>	<u>Hazard Rating</u>
Carbon Monoxide	CO	4-4-1
Chloroform	CH ₂ CL ₃	3-0-1
MIC (highly inflammable)	CH ₃ NCO	4-4-3
Phosgene	CO CL ₂	4-0-2
MMA	CH ₃ NH ₃	4-4-1

Source: Adapted from Radhika Ramaseshan, "The Bhopal Tragedy", Economic and Political Weekly, December, 1984.

Inspite of the fact that the government had been apprised of the noxious character of the materials, the

government went ahead and granted the licence to set up the plant, ostensibly to conserve foreign exchange.

Bayer, another multinational corporation, also produces MIC in Dormagen, West Germany, and Antwerp, Belgium. It uses non-toxic intermediates, namely dimethyl urea and diphenylcarbonate, for making MIC. Following West German law the Bayer process involves no phosgene. Union Carbide's plant in Bhopal, in addition to using lethal gases has also had a poor safety record almost from the inception. Four major accidents took place between 1978 and 1982, some details of which are provided in Table 2.

One of the recent articles on the Bhopal tragedy noted that atmospheric tests conducted by the Madhya Pradesh Environment Pollution Control Board indicated a high degree of toxicity within the Union Carbide's plant. However no action was taken by the government.

In 1974 a number of cattle died after drinking water from a nearby pond but it is reported that the government did not take any punitive action against the company. The company it seems paid a compensation of Rs.300-500 per animal to the villagers. The "pay-offs" for the government were in the form of a guest house situated in an exclusive residential area of Bhopal for the entertainment of politicians, etc. The company also discouraged doctors of Bhopal's biggest hospital, the Hamidia Hospital from

<u>Table 2</u>				
<u>S.No. of accident & Date</u>	<u>Nature of Accident</u>	<u>Effect of Accident</u>	<u>Government Directive</u>	<u>Remarks</u>
I Nov.24, 1978	Naphthastock caught fire from welding rod	Not known	Remove all sources of ignition from proximity of raw material	No follow up by Government
II Dec.26, 1981	Disregard of basic safety procedures before opening gas pipeline. Head of the Department had not certified whether the pipeline had been emptied of phosgene or not	Death of maintenance worker	1 Workers should be instructed in the use of Breathing apparatus.	No proper investigation either by Govt. or the company.
III Feb.10, 1982	Failure of Mechanical Seal of Phosgene pump led to leakage of Phosgene.	25 workers hospitalised after inhaling Phosgene. No deaths reported	Government instructed management to see to it that some engineer should be given the responsibility to test and check the pump under running conditions for leakages	Government enquiry did not go into details of the reasons for the mechanical failure, Company's excuse was that in case of unexpected mechanical failures amount of toxic properties released would be within tolerable limits. Company advised worker to develop resistance to toxic gases by drinking six to seven glasses of milk and eat a high protein

Table 2 Contd...

S.No. of Accident & Date	Nature of Accident	Effect of Accident	Government's Directive	Remarks
IV Oct. 5, 1982	Flange joining pipelines carrying MIC gave way. Major accident averted by plugging MIC leakage manually.	Four workers seriously affected by the gas. Workers and residents of nearby slums complained of breathlessness and irritation in the eyes.	Government's report did not mention that people had fled their homes in panic. Government's instructions were: (1) Proper procedures should be followed before operating the plant. (2) Management should ensure hanging of red tags on machines not to be operated. (3) Unauthorized persons not to be allowed inside the plant.	

examining Union Carbide's workers. In return the hospital got an artificial respirator and two private wards for the use of VIPs. Other actions taken by the company to suppress agitation against it were the manipulation of the local press and harassment of union leaders etc. It is reported that in 1982 when the plant had celebrated a 'safety week' workers said, ten accidents had taken place within a period of 7 days. According to workers there were several reasons for the poor safety record; untrained supervisors, safety lapses; failures of parent company to ensure that the local management implemented its safety recommendation and also failure of the government to instruct the company to improve the safety aspects inspite of the fact that, Article 48A of the constitution states that, "The State shall endeavour to protect and improve the environment and to safeguard the forests and the wild life of the country". Despite all the warnings the plant gave from time to time, the government failed to pull up the company

However, recently in the aftermath of the tragedy there have been a number of actions taken by the government to avert such accidents in the future. Some of the actions taken are:

1. The government is considering the setting up of a national scientific and medical committee for a coordinated study on the effects of toxic gas

leakage and to give authoritative opinion on the steps to be taken on the medical and scientific level (Times of India, January 19, 1984).

2. The state authorities issued a notice under the Insecticides Act, 1968 cancelling the company's manufacturing licence.
3. The government has already decided to set up a special cell to make a detailed study of the practices in vogue in the developed countries to deal with hazardous substances and the institutional controls in force.
4. A legal cell has been set up in the law ministry to obtaining adequate compensation for the victims.
5. The Tata Institute of Social Sciences has been engaged to assess casualties and other details.
6. The central government has directed the state government to waive court fees in respect of all cases filed against Union Carbide for compensation. It also has decided to amend the law to permit collective action against the company.
7. More than 500 cases have already been filed for compensation.
8. The central government is considering a request of the Chief Minister of Madhya Pradesh to nationalise

and take-over the Bhopal Unit and other properties of Union Carbide in Bhopal.

9. An experts committee has been constituted in the Ministry of Agriculture to look in to the question of phasing out pesticides.

10. The Bhopal tragedy has been responsible for the hardening of the stand taken by Maharashtra Pollution Control Board (MPCB) against the setting up of the second 500 MW unit by the Tata Power Company. The MPCB has withheld the no objection certificate to ensure use of non polluting fuel. It has also decided not to allow any more industrial unit using coal as a fuel to keep a check on air pollution in Bombay. The department of environment of the Central government has also supported MPCB's decision.

The Bhopal tragedy has transcended the borders of India. A Latin American country returned the MIC gas which had been stopped by the parent company's plant in West Virginia in the U.S.A. A report in the Indian Express of December 28 states:

... in the wake of the tragedy in Bhopal which also left some 60,000 people injured MIC shows sign of becoming a chemical without a country.

France and Brazil already have banned importation of MIC and Union Carbide Corporation has temporarily ceased production of the chemical at its plant here (West Virginia)

Discussion

The situations described in the previous section are a pointer to the socio-political environment in India. All the four situations show that environmental forces became extremely powerful though after a protracted period and in some cases aided by a catastrophe. Nevertheless they are indicators of a general trend of the new development in the business environment.

The two cases on pollution caused by effluents discharged by the plants described in the foregoing sections brought out in great detail the reasons for the catastrophes. In both the cases the management was oblivious of the writings on the wall. There were ample signs in the external environment regarding the adverse social consequences of the operations of the plants, but the management did not heed them. It is clear that the management's only goal was maximization of economic gains and in pursuing that goal they were willing to take such actions as they found necessary to overcome any form of resistance encountered. The values of the top management of these two organizations are only representative of the values institutionalised in the contemporary large Indian business firms of to-day. It is not that the Indian business firm does not take part in social activities. Many of the large business conglomerates donate handsomely to social causes. In fact, they pride themselves on the social work done by them. The Birla group of companies has constructed temples in many

major cities, they have set up educational institutions like Birla Institute of Technology in Pilani and Ranchi, planetariums in some cities etc. The Tatas have been in the forefront of social activities too. Long before the founder of the modern Tata empire was instrumental in setting up the now well known Indian Institute of Science at Bangalore, Tata Institute of Fundamental Research, Bombay; Tata Cancer Research Institute, etc. are also products of their entrepreneurship in the social arena. However, it seems that the contemporary view of business in India is that economic activities of business enterprise should be seen in terms of their economic benefits alone and hence the social consequences seem to be glossed over, the concern is to overcome the problem at the least cost. On the other hand, social activities of business firm are seen in terms of their social value only. According to them economic and social activities need to be viewed separately. They should not be combined together. This, according to me, seems to be the reason for the lack of concern of the contemporary manager in India for the possible social consequences of economic activities.

The contemporary business-environment relationship may be termed as Managerialist - Philanthropist. The managerialist is concerned only with profit maximization, while the philanthropist is interested in doing good to society.

Those firms which have surplus funds can transit from a purely managerialist's orientation to a philanthropists orientation. The firm which makes this transition remains in two dichotomous orientations simultaneously. In its economic activities it tries to maximise profits not caring for the social consequences and in its philanthropic activities it tries to get social recognition. However in the emerging environment these two orientations would have to be integrated to induce the firm to respond to the challenge. The cases described in the foregoing sections are not isolated incidents. They are part of an emerging trend. There is likely to be an increase in public pressure on business enterprises and their very legitimacy will begin to be questioned. This has already happened in the West, and that movement is slowly making in roads into India and is likely to spread further in the developing countries.

What can corporations do to respond to this emerging situation? Two possible approaches are described in the following paragraphs.

The "Issues Management" Approach

In this approach business organizations realize that their survival as profitable enterprises depends not only on their effectiveness in business per se but also on their ability to anticipate, understand and influence socio-political issues (Johnson, 1984). In this approach, the manager acknowledges, that there are social consequences of economic activities. As a

result of the social consequences there is likely to be opposition to the firm's activities. This opposition needs to be anticipated, analysed and overcome. The manager's goal would be to influence the development of issues by responding to early warning signals. A model of an effective issue management process is as follows (Johnson, 1984).

1. Scanning/Monitoring

Scan and monitor what is being said, written and done by public, media, interest groups, government and other opinion leaders.

2. Identification/Prioritization

Identify and prioritize the issues that impact on the company and are gaining widespread support.

3. Analysis

Analyze those issues to determine probable impact on the company.

4. Decision

Decide strategy to take advantage of the favourable aspects of those issues and escape the harmful effects.

5. Implementation

Implement the policies and programs approved by top management to achieve those ends.

6. Evaluation

Evaluate the success of those policies and programmes to determine future strategy on this and related issues.

An example of a response in the case of Zuari Agro Chemicals Company Ltd consistent with the "Issues Management" perspective in the following*

1. Accept the charge made by the villagers but say that they are not the only ones. A lot of fish die of oil slicks, mineral dust, hot water discharge or their suicidal tendencies.
2. Do something to compensate for the loss to the fishermen like a quick yielding project to improve fish culture or provide aid for setting up a cold storage which could also preserve the local cashew fruit for out-of-season distillation.
3. Educate the local people and activists about the benefits of fertilizers.
4. Educate the local people in great detail the steps being taken by the management. This should be done in a form intelligible to the local people.
5. The same education should be imparted to political leaders, bureaucrats and relevant technical people.
6. Spell out clearly to all the stakeholders the total cost all the pollution control measures would entail and their implications in terms of higher costs of production and therefore higher prices.

The assumption is that frequent and detailed communication about the various aspects mentioned above would help to defuse such a situation because once the people understood all the ramifications that is though industries create pollution they do produce benefits.

*Adapttd from S.V. Desai, "Needed: A Will to Communicate" Vikalpa, PP.204-255.

The Good Corporate Citizenship Approach:

This is the most creative response because this approach assumes that social activities of business organization can have economic benefits too. Economic and social activities are not seen as divorced from each other but are deliberately combined to achieve synergy. When this view is internalised, managers would not consider responding to social consequences of economic activities as a necessary evil but view them as sources of business opportunities. An example of response consistent with the "Good Corporate Citizenship Approach" in the Zuari Agro Chemicals Limited case is the following*:

1. Appreciate the values of the local population and their economic reality.
2. Initiate short and long term measures to solve the pollution problem permanently by soliciting active support of financial institutions and the state government for funding of pollution control equipment.
3. Improve corporate credibility by effective communication.
4. Explore the possibility of involving in social activities/pollution control operations, which might have economic benefits.

An example of the fourth kind of action (Rao, 1984) mentioned above is provided by the strategy adopted by the Indian Petrochemicals Corporation Limited (IPCL); Gujarat

*Adopted from Hasmukh Shah, "Provide Social Costs in the Capital Outlay," Vikalpa, pp.203-204.

Refinery, Gujarat State Fertilizers Corporation, Gujarat Industrial Development Corporation and other industries in and around Vadodra, a city in Western India. They have together contributed Rs.130 million for installing a 55 km long effluent disposal channel. IPCL also extracts oil as a by-product from the effluents.

Conclusions

It is the author's belief that in India public opinion against companies whose operations have adverse impact on the environment is likely to become increasingly strident. Firms not only in this category but business in general is likely to face the problem of proving their legitimacy if they behave as irresponsibly as Zuari Agro Chemicals and Union Carbide. The cases described here are not isolated incidents but seem to be part of a new trend in the socio-political environment. Firms would be required to respond creatively to this challenge and move from a managerialist-philanthropist view of their relationship with the environment to a pragmatic view which sees economic and social activities in an integrated fashion.

References

1. Mukand R. Dixit, "Practice of Environmental Scanning in Large Private Corporations in India," Working Paper No.538, Nov. 1984, I.I.M., Ahmedabad.
2. S. Sreenivas Rao, "Winds of Change," Vikalpa : The Journal for Decision Makers, Vol.9, No.3, July-Sep.1984, P.205.
3. H.I. Ansoff, Strategic Management, (New York: Halsted Press, 1979) P, 133.
4. World Wildlife Fund News Letter No.31, "Silent Valley," Octo. 1979.
5. Sunderlal Bahuguna, "What man does to mountain and man," Mainstream, 21(43),1983.
6. India Today, Cover Story, P.6.
7. Radhika Ramaseshan, The Bhopal Tragedy, Economic and Political Weekly, December, 1984, pp. 2109-2110.
8. Jon Johnson, "Issues Management : What are the Issues," Business Quarterly, Vol.48, No.3, 1984.