

# Remedies and Their Effectiveness for Ensuring Environmental Compliance: Evidences from Gujarat, India

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**Abstract:** Environmental compliance in the fast developing countries has been an area of interest for researchers to find out how sustainable growth can be achieved without compromising on environment. In India, agencies responsible for enforcement of environmental laws are resource scarce and juxtaposing this with the pace of industrial development, it raises serious concerns about how effective enforcement of environmental laws can be managed. This paper analyses the effectiveness of various remedies available for ensuring environmental compliance. The methodology included identification of remedies available for ensuring environmental compliance, identification of parameters for measuring their effectiveness and then selecting a few cases for detailed study. The analysis suggests that the powers delegated to State Pollution Control Board for issuing closure directions to polluting industries is the most effective remedy and has been resorted to the maximum by Pollution Control Boards in the recent past. However, complete reliance on this remedy by regulatory institutions may lead to ‘rent seeking.’

**Key words:** Industries, pollution, environmental laws, constitution, remedies, effectiveness.

## Introduction

Gujarat, over the years, has become one of the most rapidly growing states in India and its industrial sector has grown at a rate of 10.9 percent for the period 2005-06 to 2011-12 (CSO, 2013). Industrial sector in the state has been contributing approximately 40% to the state domestic product in the last decade which is highest in the country. Industrialisation is considered to be prerequisite to economic growth but pollution seems to

be the inevitable price of this development. The World Bank has predicted that India’s water, air, soil and forest resources will be under more pressure than those of any other country by year 2020 (Rajagopalan, 2010).

The government over time has tried to maintain a balance between development and environment through various measures. The right to wholesome environment is implicit in the fundamental Right to Life under article 21 of Constitution of India<sup>1</sup>. At the

<sup>1</sup> Article 21 of the Constitution of India guarantees fundamental right to life and personal liberty. The Supreme Court of India interpreted the right to life and personal liberty to include the right to a wholesome environment. The first indication of this may be traced to Dehradun Quarrying Case (Rural Litigation and Entitlement Kendra, Dehradun v. State of Uttar Pradesh, AIR 1988 SC 2187). Another observation justifying this was made by Justice Singh in his concluding remarks justifying closure of polluting tanneries in Ganga Pollution (Tanneries) Case: “We are conscious that closure of tanneries may bring unemployment, loss of revenue, but life, health and ecology have greater importance to the people.” There are High Court decisions too where environmental dimension to Article 21 has been recognized.

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same time, the Constitution puts a responsibility on all its citizens through article 51A(g), where it states that it is fundamental duty of every citizen to protect and improve the natural environment. The directive principles of state policy under article 48A of the Constitution makes the State responsible for protecting and improving the environment. The national policies governing environmental management include the National Policy on Pollution Abatement—1992, the National Conservation Strategy and Policy Statement on Environment and Development—1992 and the recent comprehensive Environmental Policy—2006. While these national policies are not judicially enforceable, they act as guiding principles for the Centre and State. A number of legislations were enacted to protect environment after Stockholm conference in 1972. These include The Water (Prevention and Control of Pollution) Act, 1974; The Air (Prevention and Control of Pollution) Act, 1981; The Environment Protection Act (EPA), 1986 and a host of legislations enacted under EPA. Such legislative measures were further reinforced by judicial pronouncements and court interventions brought in by legal cases and Public Interest Litigations (PIL). Pre-Stockholm era had dealt with environmental issues with the help of civil law remedies such as Tort Law, Public Nuisances, Citizen's Suit and the remedies were in the form of fines to compensate damages and injunctions.

The approach adopted by regulatory institutions in India for ensuring environmental quality is Command and Control (C&C). The “command” being the laying down of standards and the “control” being the power to withdraw water or power supply of erring units, the imposition of penalties and fines and even imprisonment. The standards which individual industries

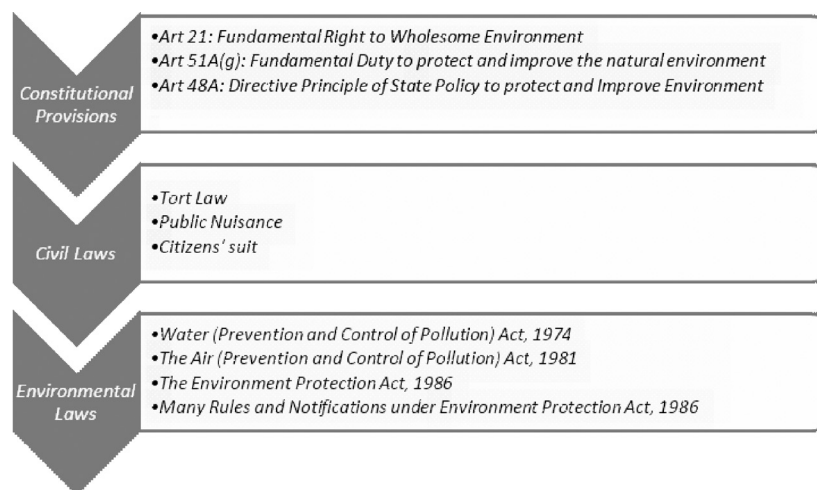
need to comply are prescribed to them through the ‘consent to establish’ and ‘consent to operate’ issued by the State Pollution Control Board (SPCB). India has yet not adopted the market-based instruments (MBI) like taxes, subsidies, permits for pollution control as are being practiced in developed countries. Developed countries have complemented the C&C approach with MBIs e.g. the US use tradable permits and Europe uses pollution taxes. A number of studies emphasise that the use of economic instruments force the industry to adopt ways to cut down on pollution and encourage actions to improve environmental compliance. There are some efforts by the government for using MBIs at pilot scale in states of Gujarat and Tamil Nadu but nothing has so far happened in practice.

Kathuria and Haripriya (2000) observed that despite having a number of legislations and institutions set up to implement them in the country, success in abating and controlling pollution has been limited. The effective compliance to existing environmental regulations has proved to be challenging in spite of having all the teeth as reflected in opening lines of the judgement by Supreme Court of India pertaining to Indian Council of Enviro-Legal Action v. Union of India 1996:

*“.....if the mere enactment of laws can ensure a clean environment, perhaps India would be pollution-free.....”*

*.....despite enactment of several laws the desired result has not been achieved due to their poor implementation!”* (Rangrajan, 2009).

The current paper is an attempt to assess effectiveness of different remedies available for controlling water pollution from industries and ensuring environmental compliance. This has been done through a detailed



**Figure 1: Provisions for environmental protection.**

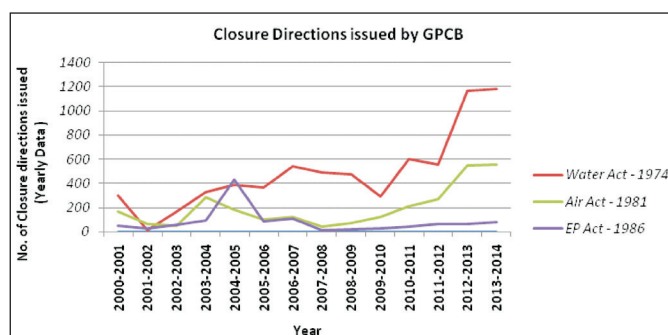
analysis of selected cases in Gujarat. The paper has been organized in the following way. After the introductory remarks in first section, the environmental performance of State is discussed in the next. The third section deals with the compliance of environmental laws and the subsequent section discusses the various remedies available for ensuring environmental compliance. The effectiveness of remedies available for control of water pollution with respect to selected parameters is discussed in penultimate section. The concluding remarks for the study are presented in the last section.

### Environmental Performance of State

The Center for Development Finance, Institute for Financial Management & Research, Chennai had studied Environmental Sustainability Index (ESI) for Indian states and published the report in 2011. ESI had been constructed as a composite index using 41 key environmental indicators which were further grouped into nine thematic sub indices—air quality and pollution; water quality and availability; land use and agriculture; forest and biodiversity; waste generation and management; energy management; impact on human health and disaster; population pressure on ecosystem; and environmental budget. Gujarat got a very low overall sustainability percentile ranging between 0 and 20 as compared to other industrialised states of Maharashtra and Tamil Nadu which obtained a sustainability percentile of 40.1-60.0. The state thus faces maximum challenge in maintaining its environment. It is particularly important in light of the fact that the overall economy as well as the industrial sector in Gujarat has been showing a high growth rate.

### Compliance of Environmental Laws

Industrial development often conflict with environmental protection though a need has always been felt to balance



Source: GPCB Annual Reports

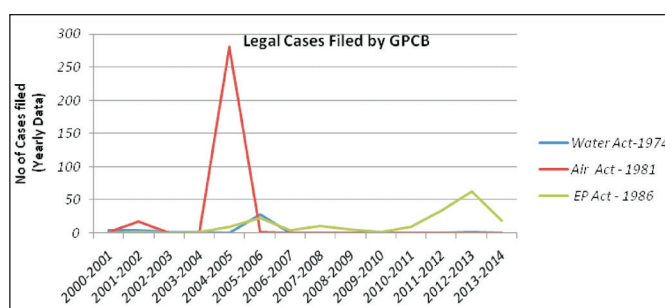
Figure 2: Closure directions issued by GPCB.

the two. The compliance level to the environmental laws can be judged by the closure directions issued to industries and the legal cases filed against industries in courts for non-compliance as shown in Figures 2 and 3. The number of closure orders issued for non-compliance every year have been very large as compared to legal cases filed.

The high number of closure orders issued every year indicate that the industries are not complying with the environmental laws. A number of studies have dwelled upon the issue of environmental compliance and tried to find out the causes of non-compliance. Some of the causes, most agreed upon by different researchers (Gupta, 2003; Curmally, 2002; OECD, 2006; Planning Commission, 2000) are: over-ambitiousness of law and standards, weak enforcement and poor monitoring, lack of effective punitive measures, paucity of funds and incentives to invest in pollution controlling measures.

The first cause concerns the compliance levels of small and medium size enterprises (SMEs). SMEs account for 40 percent of industrial production, employ limited pollution control technologies and are responsible for an estimated 70 percent of the total industrial pollution load nationwide (OECD, 2006). According to a World Bank Country Study conducted in 1995, the minimum national standards (MINAS) fixed by the CPCB ensured maximum technically feasible effluent reduction (Gupta, 2003). SMEs are generally resource constrained and could face higher costs of compliance as they need not benefit from the economies of scale in end-of-pipe pollution control and may lack the financial capacity to install adequate process technologies and pollution control mechanisms. They may, therefore, not be able to achieve these standards.

Second, the weak enforcement is mainly attributed to frequency of inspection. Looking at the skewed ratios of staff allotment and number of industries, it becomes apparent that the impact of merely formal inspection on enforcement draws a very weak response from firms



Source: GPCB Annual Reports

Figure 3: Legal cases filed by GPCB.

towards compliance. Dearth of manpower leads to improper monitoring. Evaluation study on functioning of State Pollution Control Boards (SPCBs), conducted by Planning Commission of India in 2000-2001 reported that 'In Andhra Pradesh, one technical person was required to monitor one hundred units; in Himachal Pradesh and Kerala there were 12 and 14 persons for the same task. The Arunachal State PCB had no staff of its own and was run by the personnel of the state Department of Environment and Forests (Planning Commission, 2000). In Gujarat, registered polluting industries as on Aug 11, 2015 are 25,727 (gpcb.xgn.gujarat.gov.in accessed on Aug 11, 2015) and the strength of technical staff is 252 (Annual Report 2013-14, GPCB) which means that less than one technical person is available for 100 registered industries.

Third, the penalties that are imposed on firms in case of non-compliance are extremely low and irrespective of the extent of compliance and the quantity and quality of pollution created. A case in point is the penalty charged for an offence under the Water Act<sup>2</sup>. A defaulting firm, irrespective of the extent of pollution, faces a fine of only Rs. 10,000 or imprisonment up to three months, which is bailable.

Fourth, due to paucity of funds, the PCBs lack adequate infrastructure facilities like laboratories and monitoring equipment, required for execution of their responsibilities. An example in this regard is that of the Bihar PCB that does not have a single laboratory to test the effluent sample (Curmally, 2002). In the budgetary expenses, administrative expenses constitute 57% of the total budget (83% of the administrative expenses is on salary). Next major share is of maintenance expenses. Less than 1% of total expenditure is done on training of employees to update their knowledge and skill with the latest advancements in the field despite human resource

development being one of the important responsibilities of SPCBs (Planning Commission, 2000).

And lastly, one major reason for poor compliance is the "race to the bottom" approach adopted by states to attract investments. A small-scale unit may end up paying Rs. 7500 as consent fees<sup>3</sup> to the Madhya Pradesh Pollution Control Board and Rs. 2000 for the same to the Kerala Pollution Control Board. These inter-state variations act as an incentive to firms to locate where there is minimal enforcement, resulting in creation of states that can suitably be called "pollution havens" (Curmally, 2002).

All these factors give rise to a question that "Despite all constraints, is there a remedy available for controlling pollution by industrial units and how effective is this remedy?" This paper will try to answer this question by analyzing in detail a few cases.

### **Remedies Available to Ensure Environmental Compliance**

Identification of remedies prescribed within the environmental legislation<sup>4</sup> for dealing with non-compliance was done through content analysis of relevant legislation. This led to identification of three distinct remedies which could be resorted to in case of non-compliance. These are: (1) filing of legal case by SPCB<sup>5</sup> against defaulters, (2) filing of legal case by individuals in the court of law<sup>6</sup> and (3) closure directions to industrial units by SPCB. These directions include stoppage of electricity and/or water supply and/or closure of the industrial unit. Another remedy which is not there in Environmental Acts but is provided in Indian Constitution under Articles 32 and 226 is filing of a Public Interest Litigation (PIL) and is resorted to when interests of general public or a section of public are affected. PIL has been used in some landmark cases in the country concerning protection of environment.

2 Available at : <http://www.moef.nic.in/legis/water/wat1.html>

3 Under The Water (Prevention and Control of Pollution) Act, 1974, any industrial unit has to apply for consent of the pollution control boards as 'Consent to Establish' and 'Consent to Operate' before establishing and commencing operation of the unit respectively; and accordingly has to pay scrutiny fees. Different State Pollution Control Boards have fixed different fees for the same.

4 In India, the environmental legislations have been enacted by Ministry of Environment & Forest (MOEF), Government of India, New Delhi and the SPCBs are responsible for implementation of these legislations.

5 In case of Gujarat, SPCB is known as Gujarat Pollution Control Board.

6 An individual can move to the court of law by directly filing complaint against defaulter. However, in this case, the individual has to serve a notice of not less than sixty days to SPCB. The individual can file a case against polluter only if the SPCB fails to take action.



### Effectiveness of Remedies

In order to capture the effectiveness of various remedies and compare them, a set of parameters were chosen. These are: (1) time taken to enforce the remedy, (2) punishment to polluter and (3) corrective actions taken by defaulters. In case of filing of legal case, time is measured as time elapsed between filing of a case and date of judgement, whereas in the case of 'issuing closure direction', time is measured in terms of duration between issuing closure direction and disconnection of the power supply and or water supply and/or closure of industrial unit. Punishment works as major deterrent for industrial units for not complying with the existing standards. Severe punishment in terms of monetary payment or reputational loss or prosecution actually compels the industrial units to abide by the standards or to achieve compliance level as soon as possible in the event of non-compliance. In case of PIL or cases filed by GPCB or individual, punishment is measured in terms of fine imposed in the judgement or other punishment served in the judgement, whereas in the case of 'issuing closure direction' punishment is measured by the total time unit for which the unit remained closed. Corrective measures taken by the industries to bring back the compliance is yet another important factor in evaluating the effectiveness of remedial measures. What are the corrective measures taken and in what time compliance is achieved is considered as a major parameter. In case of PIL or cases filed, corrective actions are measured by the actions initiated by the industrial units pursuing the directions of the court while in case of 'issuing closure direction,' the corrective actions are measured as the actions taken by the industrial units as testified in legal undertaking and as verified by the board during inspection visit. It is also measured as improvement in the quality of the effluent discharged before and after the notice is served.

#### Cases Filed by the Board against Defaulters in the Court of Law

Six legal cases filed by Gujarat Pollution Control Board (GPCB) in the court of metropolitan magistrate were analysed in detail for the parameters listed above. Out of six, five units were manufacturer of chemicals and one was engineering unit. An average time of five years was taken for announcing judgement in these cases. This time does not include the time taken if the cases

had been re-appealed in higher courts but is certainly to be added in order to achieve total time spent. None of the accused was held guilty and no corrective measures were taken by these units for improving compliance. The details of the cases with respect to selected parameters are presented in Table 1. The findings are reinforced by another study where the cases filed under Water Act by GPCB during the period 1987 to 1995 in the court of chief metropolitan magistrate, Ahmedabad were analysed. Out of a total of 223 cases filed, 136 cases were disposed off; 72 per cent of the disposed off cases took 1.75 to 5 years for decision to come. In all the cases, the accused got acquitted for one reason or the other. Main reason cited was 'improper sampling' and non-compliance to section 23 of Water Act by the GPCB during entry and inspection. Only four accused were punished and maximum punishment imposed by the court was fine of Rs. 50 to Rs. 1500 and in case if the industrial unit fails to pay the fine then, imprisonment of two days to one month were ordered.

#### Cases Filed by Individuals in the Court of Law

While looking into the details of this remedy, it was found out no one has resorted to it so far.

#### Closure Directions to Industrial Units

To analyse this remedy, six cases of 'closure direction' issued by the GPCB to polluting industrial units between the years 1992 and 2011 were analysed. Out of six industries, five were small scale and one was large scale industry. Four industrial units were manufacturers of chemicals and one was producing dyes and one was an engineering unit.

Time taken for implementation of closure order in these cases ranged between one day and fifteen days. Punishment is measured as number of days the industry remained close ranged from minimum 26 days to maximum 162 days. Corrective actions taken by industrial units varied from providing adequate effluent treatment facilities, upgradation of effluent treatment plant (ETP)<sup>7</sup>, regular operation and maintenance of ETP by the unit, providing flow meters, improved housekeeping, disposal of ETP sludge to common scientifically designed facilities (TSDF). All these corrective measures were taken by respective industrial units before closure direction was revoked by GPCB. The measurements of the parameters is presented in Table 1.

<sup>7</sup> Effluent Treatment Plant (ETP) is the pollution control mechanism installed by industry to treat waste water so that it complies the standards prescribed by the SPCB.

**Table 1: Comparison of remedial measures**

<i>Parameter/Remedial measures</i>	<i>Time</i>	<i>Punishment</i>	<i>Corrective actions</i>
Cases filed by Board u/s 33 of Water Act	2.09 years to 8.92 years	Nil	Nil
Cases filed by Individuals under section 49 of Water Act	No case filed		
Closure Directions issued u/s 33 A of the Water Act	One day to 15 days	Closure of unit for 29 to 162 days	Upgradation of ETP, improved housekeeping, disposal of sludge to TSDF, production as per consented quantities etc.
PIL under Article 32 of Constitution	180 days	Writ of mandamus + Closure of units	Directions to State Government, SPCB, GIDC, AMC and polluting industrial units

### **PIL Filed against Defaulting Pollution by Industrial Units**

A PIL filed in late 1990s has been studied in detail. This was filed by farmers from the villages downstream of Khari river in High Court of Gujarat. The petitioners alleged that industries which had been set up in industrial estates at Naroda, Vatva and Odhav in Ahmedabad were discharging their polluted effluents into Kharicut Canal which, in turn, led to Khari River. This was causing damage to the agricultural fields on downstream side. It only took 180 days to reach a judgement in this PIL. As far as punishment is concerned, court issued a ‘writ of mandamus’ directing the state government to close down the industrial units producing particular acids and chemicals. Government bodies like Ahmedabad Municipal Corporation (AMC) and Gujarat Industrial Development Corporation (GIDC) were directed to lay down separate pipeline to carry the effluent to treatment plant and expense incurred for the same was to be borne by the industrial units concerned. GIDC, GPCB and AMC were directed to carry out detailed industrial inventory for Ahmedabad. The polluting industrial units (756 industrial units) were asked to make a lumpsum payment (calculated at a rate of one percent of their one year’s gross turnover) to the eleven villages affected by pollution caused by the industries. Polluting industries were also directed to pay Rs. 10,000 to each of the petitioners. Court made it clear that closure of the units at any point of time due to their not meeting the permissible limits would not result in the denial of wages to any of the workmen. The directions issued in this PIL had addressed a wide spectrum of issues related to pollution caused by industries. The details of measurement of various parameters are presented in Table 1.

### **Conclusions**

Far reaching directions were issued by the court in case of PIL. These included closure of polluting units, directions to government agencies in the form of ‘writ of mandamus’ for laying the required infrastructure, strengthening of regulatory body and compensation to individuals affected by the industrial pollution. However, resorting to PIL is not very common as we could come across only one such case in the last decade in Gujarat. Similarly, there has been a shift in enforcement strategy by GPCB from judicial to administrative enforcement of environmental laws to improve environmental compliance. Before 1999, GPCB had to approach a first class judicial magistrate to enjoin the polluter but after 1999<sup>8</sup>; they themselves were in a position to close down a non-complying industry or order the responsible agencies for withdrawal of water and power supply to this industry (Rosencranz et al., 1991).

Comparing the remedies built in the Water Act by the parameters identified leaves little doubt about the effectiveness of ‘closure directions’ issued by GPCB over the other two options. Effectiveness of closure direction in terms of ‘time’ is commendable. On the front of punishment also, closure direction has imposed maximum amount of punishment—monetary as well as production loss measured in terms of number of days an industrial unit remained closed. Apart from monetary loss, reputational loss is another factor strongly associated with closure of industrial unit, which is a big deterrent for large scale industrial units having high market credibility. Multiple corrective actions were taken by the industries as a result of closure directions issued and these were verified by Pollution Control Board before revoking the closure directions. This had

<sup>8</sup> Parliament in 1988 passed an amendment to the Act which granted powers to the Board to give directions. The legislature of Gujarat passed the same amendment and made it into effect from the year 1999.

led the board to shift its reliance from filing a case in a court of law to issuing closure directions to polluting units. This is reflected in the sharp decline in the total number of legal cases filed by the Board over the decade as shown in Figure 3. This reliance of SPCB on issuing closure orders in place of filing legal cases became more prominent if we consider the data for last few years where no legal case has been filed under Water Act, whereas, since 2006-07, 4769 closure orders were issued under Water Act. Though the legal remedy in the form of court cases is slow and evidence is difficult to establish, complete reliance on closure by regulatory institutions may lead to 'rent seeking.'<sup>9</sup>

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<sup>9</sup> Rent seeking is an act or process of exploiting or manipulating the process to increase one's own revenue and in this case, it is equivalent to increasing its own powers by SPCB.

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