

**THE POLLUTER DOES NOT PAY MODEL FOR
ENVIRONMENTAL PROTECTION IN INDIA**

**EUROPEAN MASTERS IN LAW AND ECONOMICS
MASTER THESIS**

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August 10, 2008
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AUTHORSHIP DECLARATION

I hereby declare and confirm that this thesis is entirely the result of my own work except where otherwise indicated. Valuable inputs were given by my Supervisor Prof Francesco Parisi further acknowledged on page 4.

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ACKNOWLEDGMENTS

I would like to acknowledge the supervision of Prof Francesco Parisi, Professor of Law at the University of Minnesota School of Law. I would like to thank him immensely as he helped me gain clarity on the nature of the problem and engage in economic as well as legal solutions.

I would also like to thank Prof Hans-Bernd Schäfer who taught Economic Analysis of Tort Law and Prof PG Babu who taught Public Law and Economics at University of Hamburg during the first term. Their course and class discussions got me interested in the subject of environmental tort.

I would like to mention the EMLE program and its administration who helped immensely with logistics as well as funding for this masters program. The University of Hamburg, University of Gent and University of Bologna, where I attended the first, second and final terms respectively, were wonderful host universities and the professors added immensely to my interest and knowledge of law and economics.

I would like to thank George Mason University, Fairfax for allowing access to its online library and database, which was the primary source for all the research for this thesis.

I would also like to thank all my professors at the Economics Department, Hans Raj College, University of Delhi as well as my professors at the Faculty of Law, University of Delhi; for equipping me with the economic and legal tools which were much needed while writing this thesis.

Finally I would like to thank both Rajagopalan families for their support. In particular, Mr Nandakumar Rajagopalan who let me stay in his home in London while I wrote this thesis. And for providing internet, food, coffee, books, support and more importantly a patient ear and critical eye for all my ideas.

I would like to dedicate this thesis to the victims of the Bhopal Gas Tragedy as their plight inspired me to conduct this enquiry.

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August 10, 2008

THE POLLUTER DOES NOT PAY MODEL FOR ENVIRONMENTAL PROTECTION IN INDIA

A. INTRODUCTION

The World Bank has predicted that India's water, air, soil and forest resources will be under more human pressure than those of any other country by the year 2020. Indian policymakers, non government organizations and the judiciary are looking for solutions to India's environmental problems. One such measure was the application of the polluter pays principle in Indian environmental law and many creative interpretations of the same by the Indian judiciary.

In this thesis I begin with a conceptual explanation of the polluter pays principle in Section B and provide a detailed background of Indian environmental laws and judicial precedent applying the polluter pays principle in Section C. Section D outlines the problem posed by the polluter pays principle within a liability rule in India.

The Supreme Court of India uniquely interprets the polluter pays principle in some cases by making the state pay for the environmental damage and allowing it to recover the same from the polluters. Section E moves on to explain a Model abstracted from the judicial precedent set by the Supreme Court called the 'Polluter Does Not Pay Model'.

Section F uses the principles of public choice to explain the infeasibility of the Model and the un-sustainability of the Court's approach. The thesis concludes with a case study of the Bhopal Gas Tragedy which is a living example of the "Model" and a reflection of its failures.

B. POLLUTER PAYS PRINCIPLE

I. What is the Polluter Pays Principle?

The Polluter Pays Principle is an international guideline for environmental policy formulation and environmental liability. It simply implies that the person who damages the environment must bear the cost of such damage. Since pollution is often an externality and imposes a social cost, it does not get reflected in its entirety in the private cost of the polluters, leading to more pollution than is economically optimal. The Polluter Pays Principle is an attempt to make polluters bear the "real" social cost, thereby bringing pollution to the optimal level.¹

The economic rationale of the Polluter Pays Principle is that "prices of goods (depending on the quality and/or quantity of environmental resources) reflect, more closely, their relative scarcity and that economic agents concerned react accordingly"².

¹ Førsund R. Finn., "The Polluter Pays Principle and Transitional Period Measures in a Dynamic Setting"; *The Swedish Journal of Economics*, Vol. 77, No. 1, Public Finance: Allocation and Distribution, (March 1975), pp. 56-68; downloaded from JStore at <http://www.jstor.org/stable/3439327> on June 5 2008.

² OECD: "On guiding principles concerning international economic aspects of environmental policies", C (72) 128, 1972, Paris, France. Also see, OECD: "The polluter pays principle. Note on the implementation of polluter pays principle", 1974, Paris, France.

The principle had been recommended by many European academics and the OECD since the 1970s and was formally adopted in Europe in the 1987 Act³. The OECD was also responsible for metamorphosing this economic principle into an established legal principle⁴.

The Polluter Pays Principle originally applied only to those actually “polluting” the environment with emissions etc, in the strict sense of the word. However, the principle has now been applied to any activity, which contributes to deterioration of the environment, rather than being strictly limited to polluting activities. On some occasions, this is also referred to as “Extended Polluter Pays Principle”.

The Polluter Pays Principle is typically enforced by direct regulation or economic incentives, which leads to the polluter bearing the cost for abatement of pollution. There are command and control measures wherein the government may specifically allow or disallow certain products, methods, or scientific techniques to polluters. The second method used to make polluters face the true social cost of pollution is taxation. This usually involves a direct tax on every unit of pollution or on every unit produced by the polluting production activity. Both involve some kind of direct government interference directly or indirectly via taxes. A third method of internalizing pollution is through market based instruments by specifying property rights between the polluter and the victim.

³ Single European Act, 17 Feb. 1986, 1987 OJ (L 169) 1.

⁴OECD: “The Polluter-Pays Principle: OECD Analyses and Recommendations”, Doc. OCDE/GD(92)81, 1992, Paris, France, at 9.

II. Liability regimes to implement the Polluter Pays Principle

Liability for damage caused to the environment by the polluter is another method of using the Polluter Pays Principle in environmental and legal policy. In this paper, we shall focus more on the liability principle, as opposed to direct regulation and economic incentives, while discussing the Polluter Pays Principle.

The two forms of liability typically seen in environmental pollution and degradation is strict liability, or no fault liability, and negligence⁵. Under strict liability, the injurer is liable irrespective of the presence or absence of fault or negligence (i.e only harm must be demonstrated). On the other hand, under the negligence rule, both harm and fault must be established attributable to the injurer.

We understand from the economic analysis of strict liability and negligence that strict liability is efficient because, under this rule, the injurer fully internalizes the harm ensuring that the due level of care is taken. Negligence is efficient because the injurer can be induced to take exactly the specified amount of care and this amount can be set efficiently⁶. However, we note that negligence is the dominant rule in tortuous liability as opposed to strict liability, which is reserved usually for cases involving hazardous activity.

⁵ There may be other charges faced according to the civil and criminal laws of the particular jurisdiction, but these are the dominant rules of liability.

⁶ Shavell Steven, Liability for Accidents, *National Bureau of Economic Research Working Paper No. 11781*, November 2005, Cambridge, MA USA, downloaded from NBER at <http://www.nber.org/papers/w11781> on July 18 2008.

In the context of environmental liability, in the last few decades, international and national environmental liability laws are invariably based on strict liability⁷. The proponents of the strict liability rule also focus on "cost internalization," which requires that the social cost of an activity is charged to the polluter. This goes hand in hand with the Polluter Pays Principle, which mandates the cost internalization principle⁸.

The economic rationale for this is that strict liability is better for harm which is unilateral and where only the injurer can take the due care to prevent such harm. This is typically what is seen in environmental pollution and degradation, and consequently, we are now seeing a convergence towards using strict liability in cases of environmental pollution and degradation.

While both strict liability and negligence rules induce the injurer to take the optimal amount of care, the advantage of strict liability in environmental cases is that only the harm must be observable. The level of care is irrelevant and therefore need not be established in a court of law, thereby reducing evidentiary requirements.

The other reason for the increasing use of strict liability in environment protection, especially in an age where all governments are trying to curb industrial pollution, is that in a market setting, negligence may prove inefficient compared to strict liability.

⁷ Commission of the European Communities. Communication from the Commission to the Council and Parliament: Green Paper on Remedying Environmental Damage, COM(93)47 final. Brussels, 14 May 1993.

⁸ Bergkamp Lucas, "Liability and Environment Private and Public Law Aspects of Civil liability for Environmental Harm in an International Context", Draft 10, April 2001, downloaded from http://papers.ssrn.com/paper.taf?abstract_id=266365 on July 5 2008.

“If strict liability is not imposed for the residual damages caused by partially controlled polluting activity, these damages will not be reflected in the price of commodities produced by such activity. As a result, commodities with whose production pollution is associated will be under priced relative to commodities whose production causes no pollution, resulting in resource misallocation.”⁹

Polinsky shows that in a market setting, in the long run, under the negligence rule, there will be excessive entry in the market by parties or firms prone to inflicting injury, thereby increasing the probability of pollution and/or environmental damage. On the other hand, under the strict liability regime, there would be an excessive entry of victims.¹⁰ Since most countries have their goal as reducing and penalizing pollution (as opposed to an optimal number of victims and lawsuits), strict liability seems to be the better choice as a liability rule.

Therefore, economists, lawyers and policy-makers in the last few decades have converged towards implementing the Polluter Pays Principle and using the strict liability regime for the same. This is a distinct shift from the fault-based liability system and has in place a better incentive system for both injurers and victims.

⁹ Krier James E. and Stewart Richard B., “Environmental Law and Policy: Readings, Materials and Notes”, 1978, 2d ed., Indianapolis, USA.

¹⁰ Polinsky A.Mitchell, “Strict Liability vs. Negligence in a Market Setting”, *Journal of American Economic Association*, May 1980 on page 363.

C. ENVIRONMENT PROTECTION IN INDIA¹¹

The Indian judiciary has both acknowledged and implemented the Polluter Pays Principle in many decisions on environmental pollution. On the other hand, it has also made the state pay for damages and asked it to recover the same from the polluter. Indian environmental policy and judicial decision making differs significantly from the rest of the common law legal system. This section gives an insight into the legislative and judicial standards and principles for environment law in India and discusses the Indian Supreme Court [Hereinafter “SC”] interpretation and enforcement of the Polluter Pays Principle and no-fault liability. This will enable us to analyse the efficiency of a system requiring the state to pay damages to the victim and allowing it to recover the same from the polluter.

I. Environmental Laws

In keeping with international standards, the Indian government enacted legislation for environment protection, water pollution, air pollution and wildlife conservation. However, these laws were very poorly implemented, and this poor implementation mattered only if the laws were enforced in the first place. With rising environmental degradation, the increasingly activist Indian judiciary began to take greater note of these standards and tightened the enforcement of these laws.

¹¹ The basic research regarding the various legislation and environmental cases for this section was done through Jaswal Paramjit S, “Environment Law”, 2008 Edition, Allahbad Law Agency, Faridabad India.

The touchstone for Indian environmental legislation was the Stockholm Declaration in 1972. India agreed with 113 other nations on principles and an action plan to protect the environment and came under an obligation to implement these domestically. This led to the amendment of the Indian Constitution, which incorporated Articles 48A¹² and Article 51A (g)¹³. On the basis of these constitutional provisions, the Indian Parliament enacted the Water Act, 1974, Air Act, 1981, and the Environmental Protection Act, 1986.¹⁴

The Water Act, 1974 was the first of much legislation passed in India following the Stockholm Declaration. This was the first environment related legislation passed in India, with the objective of ensuring that domestic and industrial pollutants are not discharged into rivers and lakes without adequate treatment. The government set up Pollution Control Boards and standards for factories discharging pollutants into bodies of water under this legislation. The most important feature of the Act was that it permitted the relevant authority to order the closure of non compliant industries. The Air Act, 1981 was also drafted on very similar grounds to prevent and control air pollution.

The other event that led to a series of legislation to protect the environment was the Bhopal Gas Tragedy¹⁵. The Environmental Protection Act, 1986 gave the government extensive power to monitor and regulate industries. The Act empowered the Indian government to make rules and regulations, formulate standards, prescribe procedures for

¹² Article 48A is a Directive Principle guiding the state for the “protection and improvement of environment and safeguarding of forests and wild life.

¹³ Article 51A(g) is a Fundamental Duty for the citizens of India India to “protect and improve the natural environment.

¹⁴ Kumari Areti Krishna, “Evolution of Environmental Legislation in India”, January 2007, downloaded from SSRN at <http://ssrn.com/abstract=956228> on July 30 2008.

¹⁵ For details on the Bhopal Gas Tragedy see Infra Section G

managing hazardous substances, regulate industries and establish safeguards for preventing accidents¹⁶. It also empowered the government to set up parallel regulatory agencies for roles such as to protect specific parts of the environment and also to delegate its powers to such an agency. The legislation and its Rules clearly incorporated the Polluter Pays Principle and imposed civil liability for non-compliance. The Act also provided for criminal punishment for non-compliance with environmental standards¹⁷.

Another reaction to the Bhopal Gas Tragedy was the Control and Regulation of Hazardous and Solid Wastes under Environment Protection Act, 1986 to specifically empower the government to protect the environment from hazardous substances. The Act and its Rules incorporated the Polluter Pays Principle and no-fault liability for accidents involving hazardous substances. It specifically provided for the liability of the occupier, transporter and operator of a facility handling hazardous waste and enforced the Polluter Pays Principle¹⁸.

The Public Insurance Liability Act was perhaps conclusive evidence for the Polluter Pays Principle being applied in Indian environment law. This was the first time the government acknowledged absolute liability for accidents due to hazardous substances. The Act specified how much compensation was to be paid for every degree of injury or death of civilians and / or workmen¹⁹. The Act mandated owners of facilities employing hazardous substances to take out insurance policies for accidents. The Central

¹⁶ Section 3, Environment Protection Act, 1986.

¹⁷ Section 15, Environment Protection Act, 1986.

¹⁸ Rule 16, The Hazardous Wastes Management and Handling Rules, 1989.

¹⁹ Section 3 read with the Schedule of the Public Liability Insurance Act, 1991.

government also created an *Environment Relief Fund* under which owners could make payments equal to their insurance policy and use the fund to pay compensation in case of accidents.

One would imagine that with such an extensive and pervasive set of laws, Indians are protected from accidents and can almost always be assured compensation due to no-fault liability and other measures such as mandatory accident insurance. However, the reality is quite different from legislative intentions. Indian environmental policy is the perfect example of over-legislation and under-enforcement. All environmental legislation in India was a knee-jerk reaction to events that unfolded in the 1970s and 1980s. Some were international obligations to UN treaties while others were in the midst of outrage over the Bhopal Tragedy.

One of the reasons for the failure of these environmental laws is governance structures in India. Environmental regulation and governance are both state and federal subjects; therefore, the governance agencies are also state / federal in nature. The apex authority is the Central Ministry of Environment and Forests. The main role fulfilled by the Ministry is representation of India in international treaties and the implementation of those treaties in Indian laws and regulation.

The Central Pollution Control Board (CPCB) and State Pollution Control Boards (SPCBs) were initially set up under the provisions of the Water Act, 1974, and now also carry out the functions under the Air Act, 1981. The CPCB and the SPCBs will also perform all additional functions under this the Environmental Protection Act and are the

prime environmental authorities in India. But they are also supported by the relevant authorities for the supervision of coastal zone regulations; the National Coastal Zone Management Authority and State Coastal Zone Management Authorities. At times, specialised authorities are set up by the Supreme Court of India, such as the Central Empowered Committee which supervises all forest-related matters and timber-related industries.

These authorities have failed to fulfil their purpose. They have wide powers including closure of industries and the power to give any directions to protect the environment, yet these authorities suffer from administrative failures similar to those plaguing the rest of the Indian bureaucracy and executive. They typically initiate action only when directed to do so by the Courts, out of fear of being held in contempt, and have a very poor record for proactive precautionary measures.

II. Public Interest Litigation and the Environment

In the face of over-legislation and under-enforcement, cities and rivers in India, in particular, underwent unprecedented degradation. The Indian judiciary took special interest in the matter on counts of social justice as thousands of poor Indians were drinking contaminated water or dying of respiratory diseases. Most of the victims of such environmental degradation had no possible means of individually suing the polluters.

The usual remedy, one especially followed in the USA, is class action torts - where the claims for various individuals can be bundled and this result in reduced cost of litigation

for each individual in the bundle. Indian law also recognizes a class suit or a representative suit, wherein one or more members of a class having the same interest, may sue or defend on behalf of themselves and all the other members of the class²⁰. However, this has been used in very few cases and with little success. However, given the limitations of the legal system in India, its bias against the poor and its chronic delays, the Indian judiciary decided to take a different route to enable victims to seek remedy from polluters.

The SC opened the floodgates for such environmental cases by allowing them to be filed as writ petitions ever since it recognized the right to a clean environment as part of the Fundamental Right to Life under Article 21²¹. If the complaint is of a legal wrong, then the High Court of the state can be approached under Article 226 of the Constitution. The right to approach the High Court or the SC, if any of a person's "fundamental rights" are violated, is included in the fundamental rights chapter of the Constitution under Article 32.²²

The SC has used this jurisdiction as enforcer of fundamental rights along with its plenary powers to intervene in cases which, in its opinion, qualify as Public Interest Litigations²³.

²⁰ Order 1 Rule 8 of the Civil Procedure Code of 1908

²¹ Article 21 states 'No person shall be deprived of his life or personal liberty except according to procedure established by law'. The narrow interpretation of this right was that that the state had to demonstrate only that the interference with the individual accorded with the procedure laid down by properly enacted law. However the Supreme Court intended to give substance to this fundamental right as opposed to interpreting it in a narrow procedural manner. Therefore the right to life now extends to many other rights such as; right to livelihood, rights of slum dwellers and hawkers, right to medical care, right to shelter, right to education, right to food, right to privacy, right to a clean environment, and other socioeconomic rights.

²² Jain MP, "Indian Constitutional Law" 2005 Edition, Wadhwa & Company Nagpur, New Delhi India.

²³ Craig PP and Deshpande SL, "Rights, Autonomy and Process: Public Interest Litigation in India" *Oxford Journal of Legal Studies*, Vol. 9, No. 3, Autumn, 1989, pages 356-373, downloaded from Jstor at <http://www.jstor.org/stable/764422> on July 29 2008.

For the above purpose, the SC diluted the *locus standi* requirements for petitioning the Courts which meant that the victim was no longer required to petition himself, but any public-spirited person to approach the court on behalf of disadvantaged classes or a member of a disadvantaged class (who was unable to approach the court himself by reason of his disadvantage)²⁴.

The court also relaxed the rules of procedure for filing a petition, creating a new 'epistolary jurisdiction' in which the court recognized even a letter or post-card sent to it containing a complaint, as constituting a Public Interest Litigation petition. In the last decade, the SC has moved from recognising socio-economic rights of the disadvantaged groups to solving governance issues (which are long pending because to government inaction). The SC has assumed a 'creeping jurisdiction', in which it passes series of interim administrative orders on the failure of the state to take the administrative decisions which, in the courts opinion, it should have taken in the first place.

In *MC. Mehta v. Union of India*²⁵, the SC held that environmental pollution and industrial hazards were not only potential civil torts, but also violations of fundamental rights, redressable directly by the SC through a public interest petition under Article 32. Since then the SC has assumed jurisdiction in various environmental cases using the writ of mandamus and intervened in matters such as pollution from tanneries²⁶, pollution caused by chemical industries in Delhi²⁷, Taj Mahal Pollution case²⁸, Ganga River water

²⁴ *SP Gupta v Union of India* 1981 Supp SCC 87

²⁵ *MC Mehta v Union of India* AIR 1987 SC 1086; where the Court laid down the rule of Strict Liability for using substances in a matter where Oleum Gas leaked in a residential area from a chemical factory.

²⁶ *Vellore Citizens Welfare Forum v. Union of India* (1996) 5 SCC 647

²⁷ *M.C.Mehta v. UOI & Others* Writ Petition(Civil)No.4677 of 1985

pollution case²⁹, Yamuna River water pollution case³⁰, Gomti River water pollution case³¹, pollution due to H Acid case³², ban on import of toxic waste case³³, noise pollution by fire cracker case³⁴, mercury pollution in Singrauli case³⁵, pollution by chemical industries in Gajraula area case³⁶, diesel generator sets case³⁷, of regulation of traffic in Delhi³⁸, modernisation of slaughter houses in Delhi matter³⁹, regulation of garbage disposal in Delhi matter⁴⁰, pollution control and check of vehicles matter⁴¹ and a host of other issues concerning the environment.

In all the above cases, the relevant Central/State Pollution Control Board, an executive authority, was given directions (through continuing *mandamus* orders) creating a system wherein the Board reported back to the Court with its progress and for further directions. These orders are often ignored and a game of ping pong is played between the executive and the judiciary. The government spurs into action only out of the fear of being held in contempt of court.

²⁸ *M.C.Mehta v. UOI & Others* Writ Petition (Civil) No.13381 of 1984

²⁹ *M.C.Mehta v. UOI & Others* Writ Petition (Civil) No. 3727/1985

³⁰ *AQFM Yamuna v Central Pollution Control Board* (2000) 9 SCC 499

³¹ *Vineet Kumar Mathur v. UOI & Others* (1996) 7 SCC 714

³² *Indian Council for Enviro-Legal Action v Union of India* AIR 1996 SC 1446

³³ *Research Foundation for Science Technology National Resource Policy v. Union of India and anr.* (1999) 1 SCC 223

³⁴ *In Re Noise Pollution -* (2005) 5 SCC 733

³⁵ *M.C.Mehta v. UOI & Others* I.A. No. 343/2000 in Writ Petition (Civil) No. 3727/1985

³⁶ *Imtiaz Ahmad v. UOI & Ors.* Writ Petition (Civil) No.418/1998

³⁷ *The United Communist Party of India v. The Union of India & Ors.* CWP No.1640/2001

³⁸ *Hemraj & Ors. v. Commissioner of Police & Ors* CWP No.3419/1999 in the High Court of Delhi

³⁹ *Buffalo Traders Welfare Association v Union of India & Ors.* (2004) 11 SCC 333

⁴⁰ *B.L. Wadhwa v Union of India and Ors.* (1996) 2 SCC 594

⁴¹ *Acti-Recti & others Vs UOI & Others* C.W.P. No.3105/1999

III. Polluter Pays Principle and Absolute Liability in India

In India, the rule followed on strict liability was first laid down in *Ryland v. Fletcher*⁴². In this case, the rule laid down was that if a person employs non-natural use of land, then he is strictly liable for the damage caused by any escape of matter from that land. The law already provides exceptions to this rule⁴³.

However, in the wake of the Bhopal Gas Tragedy, the SC felt the need to evolve new jurisprudence to keep up with a developing and highly industrialised economy. In 1985, during the situation involving an industrial oleum gas leak in New Delhi, the SC evolved a new principle called the principle of Absolute Liability. “Where an enterprise is engaged in a hazardous or inherently dangerous activity resulting, for example, in the escape of toxic gas, the enterprise is *strictly and absolutely liable* to compensate all those who are affected by the accident and such liability is not subject to any of the exceptions which operate vis-à-vis the tortuous principle of strict liability.”⁴⁴ Therefore, it is clear that the SC has removed all exceptions and given a very strict meaning to no-fault liability.

⁴² *Rylands v Fletcher* L.R 3 H.L. 330 (1868)

⁴³ The five exceptions to strict liability are - If the victim consented to the harmful substance present or contributed to the escape of the substance on the land; If the injurer employed non natural use of land for the common benefit of the injurer and the victim and the injurer was non negligent; If the escape and damage is caused by the act of a third party; If the escape is caused due to an Act of God or by natural circumstances without human interference where no foresight or prudence could avoid damage; The rule of strict liability may be excluded by a statute or a statutory authority.

⁴⁴ *MC Mehta v Union of India* AIR 1987 SC 1086 at 1099.

In 1995, the courts used this rule in case of workers working in asbestos mines exposed to extreme health hazards. The SC used the absolute liability principle and held that even if the mine owners were not at fault, by bringing their workers in contact with hazardous substances, they were vulnerable to liability. The SC ordered many asbestos mines and industries to pay compensation to workers who had contracted asbestosis⁴⁵.

This principle was used again in 1996 when H Acid produced highly toxic environmental levels in Bichchri village in Rajasthan. The Court went to the extent of calling the polluters “rogue industries”, who flouted all the environmental standards and licences and persistently violated laws to conceal sludge and other toxic discharge. The SC reiterated that the English rule of strict liability was inapplicable for Indian conditions and that absolute liability with no exceptions was the rule applicable in this case⁴⁶.

In the above cases, the SC has also recognized and implemented the Polluter Pays Principle in environmental cases and allowed for no fault liability. In the Bichchri village case⁴⁷, the SC held that the question of damages must be determined by the now universally accepted Polluter Pays Principle. “The Polluters Pays Principle demands that the financial costs of remedying damage caused by pollution should lie with the undertakings which cause the pollution, or produce the goods which cause the pollution”⁴⁸.

⁴⁵ *Consumer Education and Research Center v Union of India* AIR 1995 SC 992.

⁴⁶ *Indian Council for Enviro-Legal Action v Union of India* AIR 1996 SC 1446

⁴⁷ *Ibid.*

⁴⁸ The interpretation of “produce the goods which cause the pollution” is still unclear. If a company makes cars by following the right environmental standards, would the company be liable for the pollution caused by the car owner or the car driver in future?

In many cases in the 1990s, the SC has categorically blessed the marriage of absolute liability and the Polluter Pays Principle; this is now followed as established environmental jurisprudence. “The polluter pays principle as interpreted by this court means that the absolute liability for harm to the environment extends not only to compensate the victims of pollution but also the cost of restoring the environmental degradation”⁴⁹. Under this principle, it is not the role of the government to meet the costs involved in either the prevention of such damage, or in carrying out remedial action, because of effect of this would be to shift the financial burden of pollution incidence to the taxpayer.”

In the following years, in the southern Indian states of Tamil Nadu⁵⁰ and Andhra Pradesh⁵¹, many villagers were victims of pollution by tanneries and other industries producing toxins such as sulphur dioxide. A PIL was filed in both situations and the SC held that principles that were part of international environmental law were now part of the domestic law through treaties and the interpretation of the SC. It upheld the Polluter Pays Principle and the precautionary principle as important features of sustainable development in India and also held the polluting firms absolutely liable for their actions.

Another important principle evolved by the SC of India in this regard is the *Deep Pocket Theory*⁵². Justice Bhagwati, one of the pioneers of judicial activism in India and the

⁴⁹ *MC Mehta v Union of India* AIR 1997 SC 761

⁵⁰ *Vellore Citizens Welfare Forum v. Union of India* (1996) 5 SCC 647

⁵¹ *Andhra Pradesh Pollution Control Board v Prof MV Nayadu* (1999) 2 SCC 718

⁵² *MC Mehta v Union of India* AIR 1987 SC 1086

author of the principle of absolute liability, felt that the amount of damages payable an enterprise should be “correlated to the magnitude and capacity of the enterprise because such compensation must have deterrent effect. The larger and more prosperous the enterprise greater must be the amount of compensation payable by it for the harm caused on account of an accident in the carrying on of the hazardous or inherently dangerous activity by the enterprise”. However the *Deep Pocket Theory* was rejected in the Union Carbide Settlement and has since then not been used very often.

However, even though the *Deep Pocket Theory* has not been used, it has become a common practice to award exemplary damages in case of rogue industries or in cases, where there is extreme violation of law. There have also been cases, where imprisonment was ordered under the penalty provisions of the Environment Protection Act, 1986.

While discussing the cases where the SC shaped the environment law for the country, it is pertinent to mention some very important substantive and procedural issues. The above mentioned procedure has been followed in many cases involving the environment. Let us assume that ‘A’ is the victim of pollution; ‘B’ is the polluter; and ‘P’ is the pollution control authority of the government. Due to the pollution caused by ‘B’, a public spirited citizen ‘Z’ files a petition in the SC that his fundamental right to life under Article 21 (along with the fundamental right of ‘A’ and other citizens) has been violated. Since fundamental rights are enforceable only against the State, the petition is filed against the federal or state government. The appropriate authority in charge of pollution is the pollution control authority and therefore the petition is against ‘P’. The problem arises because the polluter is ‘B’. Therefore we see an odd situation where for an injury caused

by 'B' to 'A', we find 'Z' is filing a PIL and is suing a public authority 'P'. Once the petition is filed, the Court gives directions through continuing *mandamus* orders to 'P' to clean the environment. However, since the court applies the Polluter Pays Principle, it requires 'P' to collect the damages from 'B' and give it to 'A'.⁵³

One may ask, why not simply allow 'A' to sue 'B' under tort law prevalent in India? That would be simpler and the Polluter Pays Principle can be directly applied without involving the community as the petitioner and the state as the respondent.

The first reason is that under the Indian Constitution, a writ petition can only be filed for infringement of fundamental rights under Article 32 and such Fundamental Rights are enforceable only against the "State"⁵⁴. Therefore if these environmental cases had to be filed without a class action suit, they had to fulfil the basic grounds for a PIL, which meant that the petition must be filed against the State.

However, most of the polluting industries were private enterprises and therefore no writ petition could lie against them. In this regard, the SC has included the appropriate government authority in the matter and a writ petition may be filed against it. The SC has held that if it finds that the government or the authorities concerned have not taken the

⁵³ A typical example of this is the *Indian Council for Enviro-Legal Action v Union of India* AIR 1996 SC 1446 where the case was not against the private enterprises polluting but against the state pollution control board on the ground that the state failed to carry out its duty and such failure violated the rights of the citizens under Article 21.

⁵⁴ Under Article 12 of the Indian Constitution as "the State" includes the Governmental and Parliament of India and the Government and the Legislature of each of the States and all local or other authorities within the territory of India or under the control of the Government of India.

action required of them, and their inaction has affected the right to life of citizens, it is the duty of the Court to intervene and the Court can issue the necessary directions.

For instance, in the case of Bichchri village, the pollution was caused by private industries. However, the PIL was not filed against these units but against the Union of India, the State Government of Rajasthan and the State Pollution Control Board of Rajasthan. This was on the ground that they failed to carry on their duties as the pollution control authority to keep private industries in check and therefore violated the right to life of citizens under Article 21. This is an excellent example of judicial activism and creativity employed by the SC to ensure that a forum under PIL is available even against private industries.

The Environmental Protection Act, 1986 gives the government plenary powers to take all steps necessary for protecting and improving the environment. It also allows for the appointment of several general and expert authorities for implementing the environmental policy of the government⁵⁵. The Act also gives the government or governmental authority the power to issue directions to any person with regard to compliance with the Act. Therefore, the various Pollution Control Boards and environmental authorities are free to take action including closure of industries and criminal action against persons⁵⁶ violating any provision of environment laws.

⁵⁵ Section 3, 4 and 5 of the Environment Protection Act, 1986.

⁵⁶ *Suo Moto v Vatva Industries* AIR 2000 Guj 33

In cases of pollution by private industries, where there is also lack of administrative action by the government, the SC has ordered the Central Government to constitute an “authority” under the Environment Protection Act, 1986. This has been done in some leading cases like *Godavarman Case*⁵⁷ for protection of forests and in the *Jagannath Case*⁵⁸ where the coastal area, sea shore and waterfront became vulnerable. This does not end at merely appointing authorities. In the Bichchri village case, the SC held that Section 3 of the Environment Protection Act, 1986 empowers the government to “take all such measures as it deems necessary or expedient for the purpose of protecting and improving the quality of the environment”.

In most cases, the SC has heard such petitions due to government inaction and ordered the government, through the process of issuing continuous mandamus, to take the requisite action or constitute the appropriate authority. However, in some cases, the SC has included the government within the ambit of damages and compensation. In the *Obbaya Case*⁵⁹, the SC even ordered the government to constitute an authority, which would adjudicate and administer the claims that would result from the court order.

In some cases, the government inaction not only restricts itself to constituting an authority, but to the fundamental duties of some government agencies. In this regard, *Wadhera Case*⁶⁰ is an important case, concerning the situation where in Delhi had become a free dumping ground for garbage, sewage and the city itself doubled as a large

⁵⁷ *TN Godavarman v Union of India* (1997) 10 SCC 775

⁵⁸ *S. Jagannath v Union of India* (1997) 2 SCC 87

⁵⁹ *Obayya Pujari v Member Secretary KSPCB* AIR 1999 Kant 157

⁶⁰ *BL Wadhera v Union of India* (1996) 2 SCC 594

garbage disposal ground. In this case, the polluters were the residents of the city of New Delhi. However, authorities such as the New Delhi Municipal Corporation (NDMC) and the Municipal Corporation of Delhi (MCD) were responsible for the collection and disposal of garbage and sewage generated in the city. They received money from taxpayers to do the same and failed to do their duty. The Court held that the citizens had the right to live in a clean environment and ordered the MCD, the NDMC and the state government of Delhi as well as the federal government to take up the task of cleaning the city and river Yamuna. The Court also ordered the government to budget for the requisite amount and appoint the authority as well as the staff to begin the cleaning of the river.

It is to be noted here that Yamuna is one of the largest rivers in India and the main source of water in Delhi. The environmental degradation of Yamuna and its banks were a result of thousands of polluters including industries and households. The MDC and NDMC were like any public or private garbage disposal and monitoring agency and the entire burden of cleaning the city fell on them as opposed to the polluters, who were the citizens of Delhi. Therefore, there are cases where the polluter no longer pays, but instead, the agency which is responsible for pollution or an intermediary pays for the pollution. For the restoration of Yamuna river an action plan with an allotment of almost Rs. 25 billion has been set aside by the government.⁶¹ There are many similar cases involving other rivers in India including the Ganga⁶² and Gomti⁶³, where the SC has issued orders to the relevant municipal authority to constitute mechanisms to clean the river and these

⁶¹ *AQFM Yamuna v Central Pollution Control Board* (2000) 9 SCC 499

⁶² *MC Mehta v Union of India* (1987) 4 SCC 463

⁶³ *Vineet Kumar Mathur v. UOI & Others* (1996) 7 SCC 714

authorities have been penalised for their inaction. The municipality, however, is not and cannot be the polluter.

Taking the liability of the State one step further, we can analyse the cases emerging from the Bhopal Gas Tragedy. In this case, a class action was filed by the Government of India on behalf of all the victims of Bhopal under the Bhopal Act⁶⁴. The District Court ordered the government to give interim relief while the petition was continuing and the government was ordered to pay interim relief by way of construction of hospitals, provision of medical help, cleaning the toxic levels of Bhopal and interim compensation to victims. This was an interim measure until the litigation was complete and the exact amount of damages was awarded. However, after five years of litigation, an out of court settlement was reached between Union Carbide and the Government of India. The SC held that if the settlement fund that was negotiated was exhausted, then the Government of India must make good the deficiency for all the claims past, present and future arising from the gas leak.⁶⁵

Therefore, we can see an oddity in Indian environmental jurisprudence. The involvement of state authorities that were created as a result of constitutional and civil procedure has now changed to a much larger role. The state is now involved in all environmental matters and is often instructed by the Courts on a range of matters; right from creating the appropriate authority to cleaning the environment pollution by industries and citizens to actually stepping in for the polluter and paying the damages. The surprise lies in the fact

⁶⁴ Bhopal Gas Leak Disaster (Processing of Claims) Act, 1985

⁶⁵ *Union Carbide Corporation v Union of India* AIR 1990 SC 273

that this model of PIL and state involvement has been lauded by many as the saviour of India's ecology. In the next section, we will analyse this model where the polluter does not pay and the state pays instead to identify its procedural, substantive and economic benefits.

D. THE PROBLEM WITH INDIAN ENVIRONMENT LAW AND THE POLLUTER PAYS PRINCIPLE

A problem that is very specific to India is that “legal redressal through private law may not be an option for most of the poor, illiterate, uneducated and rural masses because often they are unaware of their rights and of legal procedures”⁶⁶. There is also certain disillusionment prevalent because courts in India are unable to provide relief and redressal to citizens due to legal delays, higher litigation costs, complicated legal procedures, and a general apathy towards smaller, less urgent, cases⁶⁷.

While the Polluter Pays Principle using the absolute liability regime has designed a better incentive and cost internalisation structure; it is not perfect and has its own set of drawbacks.

The first problem faced by all liability regimes is that like the harms of degradation on the environment are externalised, so are the benefits of environmental litigation. Therefore, often the damage borne by an individual is very small and the compensation

⁶⁶ Prasad P.M., “Environmental Protection: The Role of Liability System in India”, *Economic and Political Weekly*, January 17th 2004, on page 257

⁶⁷ *Ibid*

he shall receive from the courts shall also be small, whereas the cost of environmental litigation is usually high. Thus, there is the problem of “rational disinterest” as the expected compensation may not be enough to induce any individual victim to sue the injurer⁶⁸. This problem of rational disinterest is further exacerbated in the case of health problems, when the victims are insured. This problem is particularly heightened in India, where the common man already suffers much disillusionment towards the Indian judiciary and the criminal justice system. This problem has been partly mitigated by allowing class-action tort or PIL. It is however seen in practice that most legal systems have very little exposure to such litigation⁶⁹.

Second, the outcome of civil liability “would be inefficient if the tortfeasor has the opportunity of settling with the a few potential litigants in return for continuing his polluting activity. This small portion of the victims could become a credible threat and appropriate due compensation out-of-court from the tortfeasor leaving the majority to their fate. Here only a part of the social cost is internalized by the tortfeasor by means of paying compensation to group A. This leaves the economy still in a sub-optimal equilibrium where the socially damaging activity is over-supplied”.⁷⁰

⁶⁸ Ott Claus and Schäfer Hans-Bernd, “Special Problems in Civil Liability”, The Economic Analysis of Civil Law, 2004, Edwar Elgar Publishing Ltd, UK; Ott Claus and Schäfer Hans-Bernd , “Widening the Scope of Environmental Liability”, Erling Ide and Roger van den Bergh, Eds, Law and Economics of the Environment 1996, (J & F), page 109- 114

⁶⁹ Schäfer Hans-Bernd, “The Bundling of Similar Interests in Litigation. The Incentives for Class Action and Legal Actions Taken by Associations,” *European Journal of Law and Economics*, 2000, page 183

⁷⁰ Raja, A.V and Rathinam, Francis, “Economic Efficiency of Public Interest Litigations (PIL): Lessons from India” *Munich Personal RePEc Archive*, MPRA Paper No. 3870, June 2005, Munich Germany, downloaded from MPRA at <http://mpra.ub.uni-muenchen.de/3870/> on July 17 2008.

Thirdly, even in strict liability regimes where one does not need to prove fault; *causation* must be proved and attributed to the injurer. To begin with, there may be many given sources or causes for a particular pollutant and it may not be possible to impute the source to the injurer. And more often than not, environmental damage is cumulative and it is difficult to attribute the share of damage. The problem is exacerbated further in those cases where there is a latency period between the event of pollution and the time when the harm manifests itself on the victim. It is also difficult or impossible to determine harm in cases where the environment increases the probability of a certain disease, but may not be the only manifest cause⁷¹.

A fourth, more crucial problem often faced by courts is that the injury suffered by an individual due to the pollution must be protected by a legal right. In the case of environment, it becomes difficult to delineate clear property rights especially when it concerns an injury like deforestation, as opposed to something more explicit such as chemical poisoning.

The fifth problem is that in many cases where the damage is large with many victims suing for compensation, the injurer might be judgment proof. This implies that he may be insolvent or may not have the required solvency to pay for the full damage caused by his actions⁷². This problem may be mitigated by using insurance for environmental liability.

⁷¹ OECD: "Recommendation of the Council concerning the Application of the Polluter-Pays Principle to Accidental Pollution C(89)88," 1989, Paris, France.

⁷² Supra Note 68

Finally, there is the problem of assessment of damages, which is often faced by courts. This partly follows from the inability to delineate property rights and partly from the problem of cumulative pollution over many years by many polluters. In many cases, the effects of certain environmental harms are still unknown and therefore it becomes more difficult to estimate damages.

The extended Polluter Pays Principle demands that the polluter not only ceases to pollute or reduce his activity; but also pays for the reversal of the environmental degradation in the past. The Principle is an important economic tool as it reduces pollution by cost internalisation. This principle is particularly effective for current pollution or the current polluting activities of a firm. However, in a situation where the firms are liable to clean the environment, the Principle looks less efficient. The problem of causation, which exists in the Polluter Pays Principle is magnified in the extended Polluter Pays Principle especially in matters of historical pollution⁷³. Even if causation is determined, in a country like India, a large number of poor households, informal sector firms, and subsistence farmers cannot bear any additional charges for energy or for waste disposal. Even where firms and farmers are able to bear the costs, an additional problem arises because for exporters, their competitiveness in foreign markets is compromised or they have to bear the entire cost of ecological restoration and this drives them out of the market.⁷⁴

⁷³ Guelton Sonia, "Who can pay for depollution ? an economic approach", *Laboratoire d'Observation de l'Économie et des Institutions Locales*, TRADE/WP.8/AC.1/SEM.7/2002/4/S.8, 2002, downloaded from www.unece.org/ie/intersol/documents/s.8e.pdf on July 28 2008.

⁷⁴ Interpretation Of Polluter Pays Principle (PPP) In India, October 9 2007, available at <http://www.legalserviceindia.com/article/154-Interpretation-of-Polluter-Pays-Principle.html> accessed on 21 July 2008.

E. THE MODEL

I. The Polluter Does Not Pay Model

In the last few sections, we have seen the nature and structure of Indian environment law and the specific problems with respect to environmental litigation and the Polluter Pays Principle in India. The Indian judiciary has evolved a new method of approaching environmental tort through PIL and by including the state authorities in the process of regeneration, compensation and relief.⁷⁵ This method has also been lauded as a very proactive step and one that is very unique by the Indian judiciary.

Therefore, I propose a Model along the lines of what the Indian judiciary has already implemented in several cases called the Polluter Does Not Pay Model.

1. All cases of environmental tort and environmental accidents, etc. can be filed through PIL. This involves filing a writ petition under Article 32 against the “State” and the polluters.
2. In the PIL, apart from the polluters, the State will be one of the parties responding to the victims. If the case of environmental pollution is made against the polluters, then the Court orders the State to take action against the polluters.
3. The amount that is determined as damages will be paid by the State to the victims and the State will also set up an authority to oversee the administration of claims.

⁷⁵ See Supra Section C part II

4. The State will recover the damages caused by the pollution and the amount for environmental restoration from the polluter.

This Model can be seen in various cases where the SC has decided to entertain writ petitions against the government for violating the fundamental right to a clean environment due to government inaction and administrative failure. In these cases, the Court has given clear instructions to the government authority by the writ of *mandamus* to take steps to reduce the pollution and restore the environment. The government authority in turn issues orders and notices to the various polluters claiming damages and restoration costs for the same⁷⁶.

The Polluter Does Not Pay Model works if some basic conditions are fulfilled. The first is that the government has the authority and the resources to pay the interim relief and damages and bear the costs of environmental restoration. The second is that the government must have the power to recover the money from the polluter.

In India, both conditions are fulfilled. The Federal and State governments have a duty to preserve the environment according to the constitution⁷⁷ and have been given extensive authority to do the same by various environmental legislations like the Water Act, Air Act, and the Environment Protection Act, 1986. The government has the power to file

⁷⁶ See cases *Andhra Pradesh Pollution Control Board v Prof MV Nayadu* (1999) 2 SCC 718; *Indian Council for Enviro-Legal Action v Union of India* AIR 1996 SC 1446; *Vellore Citizens Welfare Forum v Union of India* (1996) 5 SCC 647; *Obayya Pujari v Member Secretary KSPCB* AIR 1999 Kant 157; *BL Wadhera v Union of India* (1996) 2 SCC 594; *FQFM Yamuna v Central Pollution Control Board* (2000) 9 SCC 499; *MC Mehta v Union of India* (1987) 4 SCC 463.

⁷⁷ Article 21 which is a fundamental right to life and includes the right to a clean environment as well as Article 48A which is a Directive Principle guiding the state for the “protection and improvement of environment and safeguarding of forests and wild life.

class action suits on behalf of victims in case of an environmental⁷⁸ disaster and also has the authority to represent victims and recover claims on their behalf from the polluter through legislation as well as under the doctrine of *parens patriae*⁷⁹.

Under the Environment Protection Act 1986, the pollution control board has the power to issue directions to direct the closure, prohibition, or regulation of any industry, operation or process or direct the stoppage or regulation of electricity or water or any other service⁸⁰. The EPA also provides for penalty in case of violation of the Act with imprisonment up to five years or a fine of one hundred thousand rupees or both. Therefore, the government in India has the power to administer relief to victims as well recover damages from the injurer⁸¹. The Central Board of Pollution Control can also enter into a contract with any other person or party and can sue and be sued in the name of the Central Board⁸².

II. Assumptions

For the Model to work, the following assumptions are necessary. The first and most important assumption is the presence of a *Benevolent Administrator*. This essentially means that we believe that the administrator will not be self interested in his personal

⁷⁸ For instance The Bhopal Gas Leak Disaster (Processing of Claims) Act, 1985 which gave the government of India the sole right to sue Union Carbide Corporation on behalf of the victims.

⁷⁹ *Parens patriae*: In English Law, the Crown as *parens patriae* is the constitutional protector of all property subject to charitable trusts, such trusts being essentially a matter of public concern. According to the Indian concept, *parens patriae* recognises the King as the protector of citizens as a parent.

⁸⁰ Section 5 Environment Protection Act, 1986 and *MC Mehta v Union of India* (1991) 2 SCC 137

⁸¹ Section 15 Environment Protection Act, 1986

⁸² Section 3(3) Water Act, 1974.

gains and rewards such as promotions or illegal monetary gains; but will be conscientious of his duty and will be a servant of the public.

Secondly we assume that the Administrator can be rewarded and / or sanctioned and these rewards are such that they incentivize the administrator to have preferences aligned with the citizens.

III. Rationale behind Polluter Does Not Pay Model in India

The notion of making the State to pay for environmental damages is only a more sophisticated form of communal liability or group liability. This is not a new phenomenon and in fact precedes the “state” itself.

Primitive communities had remedies ranging from communal compensation to communal retaliation for wrongs. In his seminal paper on the theory of primitive societies, Posner claims that the important thing is that the harm and the responsibility are borne collectively⁸³.

“If one person kills another, in the retaliation stage of social order the victim's kinsmen have a duty to him which they can discharge by killing either the killer or one of his kinsmen. In the compensation stage the killer's kinsmen must come up with the required compensation if the killer himself cannot or will not do so. If neither the killer nor his

⁸³ Posner Richard A, “A Theory of Primitive Society, with Special Reference to Law” *Journal of Law and Economics*, Vol. 23, No. 1, April 1980, page 1-53, downloaded from Jstor at <http://www.jstor.org/stable/725284> on August 6 2008.

kinsmen pay the required compensation, the killer's kinsmen then have a duty to retaliate against the killer or his kinsmen to punish them for their refusal to compensate. The principle of collective responsibility so abhorrent to modern sensibilities may be efficient in the conditions of primitive society. The fact that any of a killer's kinsmen is fair game to the victim's kinsmen avenging his death, or, in the later stage of development, that the killer's kinsmen are collectively liable to the victim's kinsmen should the killer fail to pay the compensation that is due from him, gives the killer's (or potential killer's) kinsmen an incentive to control his conduct. They may decide to kill him themselves to avert the danger to them. More generally, they have an interest in weeding out the potential killers in their midst in order to avoid the costs in retaliation or compensation should they be harboring a killer. Thus the fact that the killer may not be the initial target of retaliation, rather than reducing the probability that the sanction will ultimately come to rest on him, increases it by giving his kinsmen an incentive to "turn him in".⁸⁴

These so-called primitive are essentially methods of extraction of information⁸⁵; they create incentives for the community to monitor the injurer and prevent injury. In the *Ybarra Case*⁸⁶, a patient was able to recover compensation from a number of doctors and nurses for an injury caused during an operation. In this case, the medical practitioner who negligently caused injury was unknown and the fellow practitioners in the room were unlikely to testify against one another. The facts suggested that one unidentified

⁸⁴ Posner Richard A, "A Theory of Primitive Society, with Special Reference to Law" *Journal of Law and Economics*, Vol. 23, No. 1, April 1980, page 1-53, downloaded from Jstor at <http://www.jstor.org/stable/725284> on August 6 2008. on page 44.

⁸⁵ Levmore Saul, "Gomorra to Ybarra and More: Overextraction and the Puzzle of Immoderate Group Liability" *Virginia Law Review*, Vol. 81, No. 6, September 1995, page 1561-1604, downloaded from Jstor at <http://www.jstor.org/stable/1073532> on June 30 2008.

⁸⁶ *Ybarra v. Spangard* 154 P.2d 687 (Cal. 1944).

defendant negligently caused the injury, and the court held that the "patient would be entirely unable to recover unless the doctors and nurses in attendance voluntarily chose to disclose the identity of the negligent person"⁸⁷.

This kind of judge-made law has many implications. It not only works well as an information extraction tool, but also provides incentive to the members of the community to reduce injuries and to isolate the injurer (sometimes even before the injury). This can be particularly useful in harms that are dispersed over a group of people and the causation is often difficult to determine, especially in the case of environmental tort.

Saul Levmore has extended the applicability of this principle and states that "if we are unable to identify the polluter of a waterway, we might eventually resort to a tax on, or to assigning cleanup costs to, nearby factories, or to an industry as a whole. When these costs are borne by taxpayers, recreational users, or consumers of fish, it is apparent that innocent people are forced to pay for the wrongs the law could not or chose not to assign. As the target group is narrowed, the private incentive to help identify the wrongdoer increases, yet even in the absence of identification, greater liability falls on the actual wrongdoer. At the same time, however, more innocents are made to pay in a way that may seem both distributionally unfair and likely to generate inefficient activity-level effects as these innocents try to keep their distance from liability".⁸⁸

⁸⁷ *Ibid.*

⁸⁸ Levmore Saul, "Gomorrah to Ybarra and More: Overextraction and the Puzzle of Immoderate Group Liability" *Virginia Law Review*, Vol. 81, No. 6, September 1995, page 1561-1604, downloaded from Jstor at <http://www.jstor.org/stable/1073532> on June 30 2008.

The targeted group liability is also used as an economic tool increasingly in the case of microfinance. By making a group of clients liable for each other's loans, the lender can extract information to improve screening candidates for loans as well as for debt recovery. This system of debt recovery works because even where legal enforcement is weak or the legal system does not provide adequate incentive and pressure to repay, there is significant peer or group pressure to repay loans. The clients also have a big incentive to screen other clients so that only trustworthy individuals are allowed into the program. Clients also ensure that, not only their own funds, but the funds of all group members are invested in profitable ventures.⁸⁹

The same notion of community liability can also be used in the case of environmental pollution as Saul Levmore points out. However, the targeted community needs to be carefully selected to have the intended information extraction as well as the incentive effects. In the case of environmental pollution, it is difficult to delineate the community in terms of the entire nation; or as a specific state, district, or municipality due to the unknown and dispersed nature of environmental harms.

However, whichever way the community is identified, I believe that if the government, being the modern representative of the community, takes up the cost of damages and the cost of restoration with taxpayer money, and recovers the same from the polluter subsequently, the system of communal liability will have the intended effects.

⁸⁹ Giné Xavier and Karlan Dean, "Group versus Individual Liability: A Field Experiment in the Philippines", *Economic Growth Center Yale University*, Paper No. 940, July 2006, downloaded from <http://www.econ.yale.edu/~egcenter/research.htm> on August 1 2008.

For the Model to work we make the following assumptions. First and most important assumption is that we are dealing with a *Benevolent Administrator*. Secondly, that Administrator is rewarded and sanctioned and these rewards and punishments are aligned with the interests of the community.

IV. Why does the 'Polluter Does Not Pay Model' work?

The Polluter Does Not Pay Model works where the incentives of the administration are aligned in such a way that they are responsive to the preferences of the electorate and citizens. This works in two phases; the first phase requires that the electoral process creates a situation where the preferences of the electorate are reflected in the policies of the government. The second phase requires that the policies of the government (being reflective of the preferences of the electorate) are effectively administered by the executive.

The first requisite (political responsiveness) is a factor of many things such as greater competition among political parties, an informed electorate and an independent press. The second phase (an effective administration) depends on the rewards and penalties structures that incentivize the bureaucrats who administer the relief and recovery process.

1. Electoral Responsiveness

Having a more informed and politically active electorate strengthens incentives for governments to be responsive. This suggests that there is a role for both democratic

institutions and mass media in ensuring that the preferences of citizens are reflected in policy.

One of the main factors in the responsiveness of the candidates is the amount of political competition. In India, regional politics is extremely competitive; this is typically reflected by the strong anti-incumbency voting. Anti-incumbency plays a large role in regional politics⁹⁰. The other, more competitive, factor in regional elections is the small margins by which candidates often win i.e. how the “swing vote” plays an important role. Often there are over 10 candidates in a single constituency and the margins by which the candidate wins is less than 1%.⁹¹

Some research points out that Indian state governments are more responsive during falls in food production and crop flood damage in areas where the is more informed. Government responses in such circumstances are typically provided through the government directed public food distribution and calamity relief expenditure⁹². Theoretically, this should translate for all kinds of relief and compensation, whether natural or man made environmental calamities.

⁹⁰ For instance, in the southern Indian state of Tamil Nadu no government has served two terms since the legendary MG Ramachandran and the two main political parties DMK and AIADMK form the government alternatively.

⁹¹ For instance, in the 2004 Parliamentary Elections, Uttar Pradesh (UP) had voter turn out of only 48% - one of the lowest in the country. Of the 80 seats in UP, 65 seats had over 10 candidates per constituency with some constituencies having up to 32 candidates. In the Mohanlalganj constituency, where there were 10 contestants, the winner won by a margin of 0.004%. The winner won only 25.8% of the votes.

⁹² Besley Timothy J and Burgess Robin, “The Political Economy of Government Responsiveness: Theory and Evidence from India” *The Quarterly Journal of Economics*, Volume 117, November 2002, page 1415-51 downloaded from Jstor at <http://www.jstor.org/stable/4132482> on July 17 2008.

2. Press and Media

In India, over 97% of the newspapers are owned independently without any state ownership or funding. And Indian newspapers are known to be fiercely independent and among the freest institutions in the modern third world. They are the pillar on which the largest democracy in the world continues to thrive and perform.

“India has not had a famine since independence, and given the nature of Indian politics and society, it is not likely that India can have a famine even in years of great food problems. The government cannot afford to fail to take prompt action when large-scale starvation threatens. Newspapers play an important part in this, in making the facts known and forcing the challenge to be faced.”⁹³

“In India following Independence in 1947, the introduction of representative democracy and the rise of mass media, it is argued, has helped to strengthen accountability and ensure effective implementation of public food distribution and calamity relief programs. Elected state governments assumed responsibility for relief operations and there was large increase in regional papers published in languages other than English or Hindi which are more likely to report on government responses to local shocks. Readership of regional newspapers will also tend to comprise local vulnerable populations who rely on action by state governments for protection.”⁹⁴

⁹³ Sen, Amartya, “Food Battles: conflicts in the access to food,” *Food and Nutrition*, X, 1984, pages 81-89. on page 84

⁹⁴ Supra Note 92 on page 1423.

The total number of newspapers in India in 2001 was 55,550 with a circulation of 115,253,948. Newspapers were published in as many as 101 languages and dialects during 2001. Apart from English and 18 other principal languages, listed in the Eighth Schedule of the Constitution, newspapers were also published in 82 other languages, dialects and in a few foreign languages. The newspapers in regional languages have the following break up. Hindi (20,589) followed by English (7,596), Marathi (2,943), Urdu (2,906), Bengali (2,741), Gujarati (2,215), Tamil (2,119), Kannada (1,816), Malayalam (1,505) and Telugu (1,289). In 2001 there were a reported 5,638 number of dailies with a circulation of 57,844,236; and 348 tri and bi weeklies with a circulation of 515,701 copies.⁹⁵

The more informed the voter, and often enough, the more educated a voter, the lesser is the political opportunism⁹⁶. Therefore, an increase in the number of newspapers in a region increases the total available political information in a society – consequently causing an increase in a political candidate’s responsiveness to the electorate. The above evidence seems to suggest that the role of the media enhances politician’s incentives to be responsive to the desires of the electorate by more closely tying their actions to voting outcomes⁹⁷.

⁹⁵Statistics on Newspapers in India, Chapter I, downloaded from <http://216.239.59.104/search?q=cache:mWgmLeSVjaIJ:rnin.nic.in/pii2002.html+madhya+pradesh+number+of+newspapers+and+dailies&hl=en&ct=clnk&cd=4> accessed on August 5 2008.

⁹⁶ Besley Timothy J, Pande Rohini and Rao Vijayendra, “Political Selection and the Quality of Government: Evidence from South India” *Economic Growth Center Yale University*, Paper No. 921, July 2005, downloaded from <http://www.econ.yale.edu/~egcenter/research.htm> on August 5 2008.

⁹⁷ Supra Note 92

3. Monetary Incentive

One important thing to note about the Model is that where the government authority is unsuccessful in either identifying the polluter or in recovering the damages from the polluter; the government authority will have to pay for the damages and restoration from its own budget. Therefore, the payment of damages is made with taxpayers' money to the victims in the community.

As a result of this, citizens and taxpayers have a large incentive to monitor the environmental administration of the government authority because where the administration fails, the taxpayer foots the bill for the exercise. This, coupled with electoral responsiveness and information adequacy through the press and media, will play a strong role in incentivizing the government to recover the damages and restoration cost from the polluters, else they will be voted out by taxpayers.

4. A Bureaucrat's Incentives

In India, the Pollution Control Board is appointed by the Central Government and the officers appointed are under the general control and direction of the Central Government. The Board has a chairman nominated by the Central Government (typically an individual with special technical knowledge and experience relating to environmental protection). The rest of the board is a combination of government appointed civil servants and government nominated experts. The Central Government or the State Government may remove any member of a Board before the expiry of the term of office after giving the

officer a reasonable opportunity to be heard⁹⁸. Therefore, if the candidate's preferences are aligned with the voters and citizens, and the administrator serves at the request of the elected government representative; then the administrator's incentives have to be aligned with the preferences of the citizens since it is a politically responsive government.

5. Administrative Audit and the Right to Information

In India, the recently introduced Right to Information Act, 2005 has been excellent reform on part of the Manmohan Singh government towards greater transparency in government administration. It allows citizens to request the government for information on administrative matters, especially those affecting relief, compensation, welfare and food distribution schemes. Under this legislation, the government is bound to act within thirty days of the request and give an explanation for the governmental inaction.

The Mazdoor Kisaan Shakti Sangathan (MKSS) is an outstanding example of increasing transparency at the grass roots in India. They used the information and public hearings as tools to uncover corruption and political scams. The MKSS obtained muster rolls for the state employment programs and bills and vouchers relating to purchase and transportation of materials to cross check these against actual payment made to workers. This model has been replicated very successfully and the same system has been used to check the quality of roads. Similar use of information at the grassroots level has resulted in obtaining incremental relief funds after the tsunami disaster in southern India.⁹⁹

⁹⁸ Section 5, Water Act, 1974.

⁹⁹ Rajagopalan Shruti, "Sunlight is the Best Disinfectant: A Review of the Right to Information Act 2005", *Delhi Law Review*, Vol II 2005.

The Right to Information Act is an excellent tool to make administrators accountable and efficient. This also applies for pollution control authorities. Citizens and victims can demand information regarding samples of effluents and information about polluting industries. Citizens can also demand a written explanation for governmental inaction regarding a certain polluting industry or on the status of the ecological restoration¹⁰⁰.

6. The Market

Some recent findings in India indicate that the stock markets seem to generally penalize environmentally un-friendly behavior of firms. Shreekant Gupta's study further shows that announcement of weak environmental performance by firms leads to negative abnormal returns of up to 43 percent. A positive correlation is found between abnormal returns to a firm's stock and the level of its environmental performance.¹⁰¹

Even markets other than stock markets punish environmentally unfriendly behavior. After the Bhopal gas tragedy, the Indian Institutes of Technology refused to allow Union Carbide to recruit its students. Many other schools have similar policies towards environmentally unfriendly firms. Therefore, given that there is sufficient information in the market about a firm, which is also achieved through a strong and independent press,

¹⁰⁰ "Pollution Control Board Asked to Come Clean," July 16 2008, accessed at

<http://www.rtiindia.org/forum/5327-pollution-control-board-asked-come-clean.html>, on August 5 2008.

¹⁰¹ Goldar Bishwanath and Gupta Shreekant, "Do Stock Markets Penalise Environment-Unfriendly Behaviour? Evidence from India" *Centre for Development Economics Working Paper No. 116.*, March 2003, downloaded from SSRN at <http://ssrn.com/abstract=394621> on June 30 2008.

non governmental institutions such as financial and other markets will also punish firms for the environmental damage they impose on the community.

V. Advantages of Polluter Does Not Pay Model

1. Rational Disinterest

In this Model, the problem of rational disinterest is mitigated because neither the active participation nor the consent of every victim is required to petition the courts. Consequently, even without active participation, the victims can get the benefits by virtue of being citizens of India. The tool of PIL used in India allows any individual (not just the victim) to petition the court against the state pollution authority requiring them to take action against polluters and give damages and relief¹⁰². This method imposes very small costs on the individual or the victims because PIL procedures have been modified to such an extent that even a letter to the senior most members of a judiciary can turn into a PIL.

PIL, thus, is seen as an efficient method of bundling interests because environmental harm is seen to generate disincentives for private litigation. Therefore, we would expect that PILs would ensure that the right incentives for litigation are created with fewer settlements and greater deterrence to pollute.

¹⁰² Supra Section C Part II.

2. Causation

The most important benefit of this Model is that only the existence of an injury needs to be determined by the Court. If the rights of the victim have been infringed, a PIL petition can be filed and if the injury is proved, the Government authority must take action. Therefore, causation of injury due to one firm or a group of firms does not need to be proved.

To illustrate this further, there have been cases where a certain technology has been injurious to the environment and all the firms using that technology have been ordered to relocate. The causal link between the individual polluter and the victim need not necessarily be established in the Model.

Moreover, even in cases where no firm can be held liable because the causation is not proved, the state is liable because of its failure in its duty to take preventive action. The state must, therefore, pay for the damage caused. This State liability ends up being community liability and consequently, also provides greater incentive for the state to prevent environmental pollution (or in the event of pollution, identify the polluters to recover the cost of pollution).

3. Property Right

One of the difficulties with environmental pollution is that it is difficult to define and assign property rights. Where the petition is filed under civil law, the problem of legal

right and injury comes into play. However, an important feature of the model is that, in India, the SC has upheld the right to clean environment as a fundamental right and therefore makes it the duty of the government to preserve the environment¹⁰³. This implies that any citizen of India can petition the courts and demand action against environmental pollution irrespective of the property right regime.

4. Judgment Proof

An important problem in environmental litigation is that the harm is so widespread that a single polluter is often unable to pay for the damage he has done to the environment. He is judgment proof, and victims are unable to recover damages. Under the Model, the Court will hold the government liable for the damage, where the polluter is judgment proof. Therefore, the entire community pays for the restoration of the environment. The government authority, however, has other ways of penalising the pollution with criminal charges, community service, and even imprisonment, if he is judgment proof and without insurance.

Therefore, the Model ensures that the victims are always compensated and that the environment is always preserved and pollution free, even institutions where one cannot make the polluter pay.

¹⁰³ The first time the right to a clean environment was read into the fundamental right to life under Article 21 was in *RL&E Kendra v State of Uttar Pradesh* AIR 1985 SC 1259

5. Damage Assessment Problem

The Central Government has the power to constitute an authority or a board with experts to assess damage. In many cases, where the Central Government has failed to do so, the Courts in India have formulated a committee with members having specialised technical knowledge and given them specific tasks to carry out¹⁰⁴.

Therefore, the problem of accurate assessment of damages and costs, which is faced by ordinary civil courts is not faced by Indian Courts in the case of a PIL, due to the courts' abilities to form expert committees and authorities.

6. Development Trade-off

Often, the polluters are small firms or farmers, who are unable to use the latest technologies to abate pollution or unable to pay damages in the case of litigation. In countries like India, it is the duty of the state to perform welfare functions for the under privileged as well as preserve the environment. In a developing and fast industrialising nation, there is often a trade-off between the environment and livelihood of these firms and farmers.

Since a rule like the Polluter Pays Principle will put them out of business or reduce their earnings and welfare, in India, many scholars have upheld the socio-economic benefits of

¹⁰⁴ For Instance, in *MC Mehta v Union of India* (1991) 2 SCC 353, the Supreme Court set up a "High Power Committee" to look into the problem of vehicular pollution in Delhi and for devising methods and solutions to the problem. The committee was headed by Shri Bhure Lal.

the Model. The government, or the community at large, pays to preserve the environment, when the underprivileged cannot pay for environmental restoration; and the livelihood of many is preserved at the same time. For instance, in one of the cases of air pollution, the court ordered the polluters to change technology used by the automobile. At the same time, the court recommended that the state must help in making these technologies cost effective. The State government provided a subsidy for installation of the eco-friendly technology using natural gas¹⁰⁵.

Instead of the Polluter Pays Principle, the Model works in developing countries by using the community based inclusive approach and making an entire community take decisions that can maintain the pace of development as well as ensure restoration / maintenance of the ecology.

Therefore the Model is better than the polluter pays principle. The reason is that victims get paid irrespective of proving causation or negligence; the poorest polluters do not bear the entire cost of pollution alone; and yet the environment remains clean and creates deterrence among polluters. In the Model the incentives of the government are aligned with the people through elections and audit. And the voters have a rational incentive to monitor the government from inaction towards pollution as well as overspending.

¹⁰⁵ In the cases pertaining to Delhi's Vehicular Pollution, The Bhure Lal Committee recommended that financial incentives and subsidies should be given to all commercial vehicles such as taxis and auto rickshaws to change from petrol and diesel to Compressed Natural Gas vehicles. The court appreciated this recommendation and admonished the government of Delhi for its inaction due to which poor auto rickshaw pliers were facing bankruptcy and the government decided to subsidize the CNG kit for commercial vehicles.

F. PARADOX OF REVERSE POLITICAL ACCOUNTABILITY

“Its democratic traditions, it is often said, including a free press, independent judiciary and vigorous social activism, will help prevent the damage. So should its voters: according to a survey last year by the Pew Research Centre, 79% of Indians considered pollution a “very big problem”. And yet, if India cannot begin to deal with its own excrement, how will it cope with more complicated, and politically contested, hazards?”

*The Economist*¹⁰⁶

Posner explains how primitive societies used communal liability as a method to make the community more vigilant of potential injurers. The same theory is taken forward by Levmore, who explains the incentives for deterrent behaviour as well as information extraction. As explained in the Model, theoretically, one would expect the same to work in India since a lot of the de-pollution activities are carried on by local governments and municipalities elected by citizens (this can be equated to a community).

However, what we see in India is the fastest growing list of polluted cities, victims of environmental disasters without compensation and an increasing number of deaths caused by air and water pollution. Therefore, one wonders - why does the “community pays model” not lead to effective pollution control in India? This section explains why the theoretical Model, which has been established by various SC precedents, does not function as well as it should.

¹⁰⁶ *The Economist Print Edition*, “Up to their neck’s in it”, July 17 2008, India Edition.

I. Relaxing the Assumptions

1. Benevolent Administrator

The first assumption is that of a benevolent administrator. This essentially means that we believe that the administrator will not be self interested i.e the administrator will not be interested in personal gains and rewards (such as promotions or illegal monetary gains); but will be conscientious of his duty and will act as a servant of the public.

In reality, the Indian Administrator is the ‘rational self interested bureaucrat’. There is sufficient evidence and public choice theory leading conclusively to believe that bureaucrats work to pursue their own self interest and regulators and Indian bureaucrats are no different¹⁰⁷. The Indian administrative system and its bureaucrats are perceived as rigid, overly procedural, self important, indifferent to public opinion, politically motivated and corrupt. Political scientists Dwivedi and Jain¹⁰⁸ go to the extent of calling the entire Indian bureaucracy immoral. “The civil servant also fails to recognize the relationship between the governors and the governed as an essential part of the democratic process. One of the most undesirable characteristics of bureaucracy in India is that administration is treated as a secret, even an esoteric, process. There is no appreciation of the citizen's viewpoint, and exercises in public relations are aimed more at publicity and propaganda than at establishing rapport with the community or making genuine attempts to involve the public.”

¹⁰⁷ Tullock Gordon, “The Politics of Bureaucracy” 2006, Public Affairs Press, Washington USA.

¹⁰⁸ Dwivedi OP and Jain RB, “Bureaucratic Morality in India” *International Political Science Review / Revue internationale de science politique*, Vol. 9, No. 3, Bureaucratic Morality/La Morale bureaucratique, July 1988, pages 205-214 downloaded from Jstor at <http://www.jstor.org/stable/1601131> on August 9 2008.

The Indian bureaucrat could not be farther away from benevolent. And the administrative system is clouded by “caste loyalties” and “political sycophancies”.

2. Rewards and Sanctions for the Administrator

The second assumption applied was that the incentives of the system are such that the preferences of the administrator are aligned with the preferences of the electorate. This implies that the Administrator is rewarded and sanctioned and these rewards and punishments are determined by elected candidates whose preferences are aligned with the interests of the community.

The Indian administrative system or the IAS neither has a reward nor a sanction system. The members of the bureaucracy are paid by a scale fixed and reviewed by a “Pay Commission” and their compensation is fixed at each level in the hierarchy of the administration. Their position and their compensation increases only with seniority and not with merit.

An important sanction which, by virtue of its existence and not exercise, induces efficiency in administration is suspension and termination of employment. For historical and political reasons, it is extremely difficult, if not impossible, to fire a civil servant in India.

Historically, the Indian Civil Service was started by the British and only English officials were in the service. Therefore, all steps were taken to protect these officers against any kind of disciplinary action and to safeguard their service and tenure from termination. Such special provisions were made as the civil servants were the rulers and India was not yet a sovereign democracy.

When the British created the All India Services to keep up with the growing size of the government, similar protections were given to civil servants. The Government of India Act, 1935 specified that no member of the civil service *"shall be dismissed from the services of His Majesty by an authority subordinate to that by which he was appointed"*. Since the Constitution of India was largely based on the 1935 Act, the protections for the civil servants also translated. Article 311(2) of the Constitution of India made it virtually impossible to terminate the service of a civil servant and punish them for inefficiency, nepotism or even corruption.¹⁰⁹

Therefore, in the Indian context, relaxing the theoretical assumptions breaks down the foundation for the entire Model. The notion that administrators will perform the function of the market well by recovering costs of pollution from the polluter and giving damages to the victims is proven to be incorrect in practice.

In reality, the administrative system in India is a complete failure. This is due to the level of power and discretion given to the bureaucrat and the lack of any sanctions or similar

¹⁰⁹ Dwivedi OP and Jain RB, "Bureaucratic Morality in India" International Political Science Review / Revue internationale de science politique, Vol. 9, No. 3, Bureaucratic Morality/La Morale bureaucratique, July 1988, pages 205-214 downloaded from Jstor at <http://www.jstor.org/stable/1601131> on August 9 2008.

checks and balances, that there is widespread corruption in the system. Even in a system where no corruption exists, because the assumptions have been negated, it becomes clear that there is no incentive for the administrator to align his preferences with the citizens. This is the reason for the failure of the Model and the reason for the continuing pollution in river Ganga despite Rs 5.1 billion being allotted by the government for the cleaning up of the river. This is the reason why the victims of the Bhopal gas tragedy are still waiting for their compensation, even though twenty four years should be considered sufficient, if not excessive, for distribution of damages to a few hundred thousand people¹¹⁰.

II. The Rational Voter

The Model depends on the rational voter's incentive to be vigilant of the government wasting taxpayers money (by not recovering it from the polluter) and of government inaction (leading to a more polluter environment). However, what we realise is that the Indian voter is not interested in curtailing wasteful government expenditure or in the preservation of environment.

India is the largest democracy in the world (in terms of the size of the voting populace) and the number of potential voters (i.e. citizens above the age of 18). In 2004 during the last general election the potential voters were approximately 680 million people. The number of voters who actually exercised their right to vote during these elections was approximately 380 million (56%).¹¹¹

¹¹⁰ Infra Section G

¹¹¹ India Election 2004, Statistics Facts and Figures; available at http://www.neoncarrot.co.uk/h_aboutindia/india_election_stats.html#general accessed on August 1, 2008.

In India, for the year 2004, only 20 million people paid taxes. Even if we assume that all the taxpayers are voters, taxpayers are still a very small percentage of the voting population. The number of taxpayers in India is less than 3% of potential voters and are just a little over 5% of the actual voters.

This is one of the main reasons that the Model will fail. If the basis for the model to work is that the taxpayers (who will be injured if the government is inefficient in recovering the damages from the polluter) will keep the elected representatives in check through the voting mechanism; then the Model will fail because taxpayers are a very small percentage of the voters and non taxpayers do not care about the extent of government spending as long as they benefit from it.

Therefore, mismanagement of taxpayers' funds and overspending are rarely an important election issue, which change results of an election. In fact even in cases where compensation and relief have been administered efficiently, candidates have been known to lose elections over other important issues such as welfare schemes, religion and caste¹¹².

There is a reason why environmental concerns are not reflected in the preferences of the rational voter, even though according to a survey last year by the Pew Research Centre,

¹¹² In Tamil Nadu, the Jayalalitha government efficiently administered the Tsunami relief and rehabilitation. The government used taxpayers' money as well as welfare funds for the victims. Yet she lost the elections to M Karunanidhi in 2006. Murari S, "Tamil Nadu: Close Fight, Decisive Verdict on the Cards" *Hindustan Times*, May 6 2006, New Delhi.

79% of Indians considered pollution a “very big problem”. India is one of the fastest growing economies in the world and such industrial and economic development results in greater number of jobs and greater economic welfare of citizens. However, such growth is also the main reason for the level and growth of polluting activities. There is a clear trade-off between economic development and environmental preservation in economies like India. The average Indian voter is poor, illiterate and malnourished and his rational self interest makes him prefer growth and development over the environment. This is the reason why the general concern of the majority of people in India does not get translated into a political concern.

III. Monetary Incentives

It is clear that good governance to appease taxpayers and voters does not provide the correct arithmetic to win elections in India. Winning elections in India, on the other hand, depends on caste and community and a host of other regional factors. Therefore, the Model is demolished due to its dependence on community vigilance through voting.

But there are factors other than the voter and administrator which affect the success and failure of the Model. The Model suggests that the administrator has sufficient power to threaten polluters with fines, closures and even imprisonment to extract information as well as payment of damages for pollution. However, this is not in the economic interest of the administrator. Enterprises pay taxes and India has a small tax base with only 2% of the people paying income taxes. Therefore, every administrator needs such enterprises as they are potential taxpayers and therefore, they fund the government.

Threatening the closure of an enterprise, even if the enterprise is polluting to the detriment of the community, would be in the disinterest of the government because they receive funds from such enterprises (by way of direct and indirect taxes). Therefore, it is in the interest of the administrator that the enterprise grows at an increasing rate, even if this means increasing pollution.

Secondly, closure or decrease in the number of such polluting firms implies a decrease in the number of available jobs in an area. Livelihood is the biggest concern for the average voter and closure of a number of industries with workers who no longer have employment is a politically unfeasible decision.

IV. Paradox of Election Manifestos

Finally, the basis of all politics, especially caste politics in India is preconditioned on the backwardness of the people. If the masses are of a backward caste or a backward socioeconomic stratum, then the politicians can easily identify them and promise them jobs, education and welfare in return for votes. Similarly, in cases of environmental disasters, governments come to power by making promises of relief compensation and rehabilitation to the group of victims.

If these promises are fulfilled, then the succeeding election manifesto has nothing left to promise the voters in exchange for their votes. Therefore, it is in the interest of the political candidates to not solve all problems and have strong groups of victims, whether

of environmental disasters or of historical persecution, to keep these groups backward and keep their promises to these groups atleast partially, if not fully, unfulfilled. We see an excellent example of this in the Bhopal gas tragedy matter, where virtually every government promised compensation in its manifesto during every successive election and continue to deprive the victims of the compensation funds and medical treatment until this day.

I call this the *paradox of reverse political accountability* because it is a perverse effect of the kind of electoral politics in play in India. The system works in a way that votes are extracted through political promises and it is in the interest of the candidates to keep some promises unfulfilled.

G. CASE STUDY - BHOPAL GAS TRAGEDY

"If seven maids with seven mops

Swept it for half a year.

Do you suppose," the Walrus said,

"That they could get it clear?"

"I doubt it," said the Carpenter,

And shed a bitter tear.

The Walrus and the Carpenter

Through the Looking-Glass and What Alice Found There, Lewis Carroll, 1872.

I. Background

On the night of December 2nd/3rd 1984, one of the greatest peace time disasters in modern history was caused due to the leakage of Methyl Iso-cyanate (MIC) and other highly toxic gases from a plant set up and poorly maintained by the Union Carbide India Ltd. (UCIL) for the manufacture of pesticides in Bhopal. UCIL is a subsidiary of Union Carbide Corporation (UCC), a multinational company, from United States of America. The deaths attributable to the leak range were 2,660 on that morning and at least 200,000 people suffered permanent, temporary and mild injuries. The real death claims were 11,267 in five years, now stand at over 20,000.

Several lawsuits were filed by American lawyers in New York District Court and by Indian lawyers in the Madhya Pradesh District Court. Judge Keenan in New York District Court accepted the plea of *forum non-conveniens* and held that the proceedings must continue in India provided UCC consented to the courts of India and agreed to satisfy any judgement rendered by an Indian court.

The Parliament passed an act called the Bhopal Gas Leak Disaster (Processing of Claims) Act, 1985 on 29th March 1985. A key extract of the Act is provided below.

3. Power of Central Government to represent claimants.

(1) Subject to other provisions of this Act, the Central Government shall have the exclusive right to, represent, and act in place of (whether within or outside India) every person who has made, or is entitled to

make, a claim for all purposes connected with such claim (related to the Bhopal Gas Leak) in the same manner and to the same effect as such persons.

The Government of India was worried about the ability of the courts to handle thousands of law suits against UCC. Further, the tort law system in India was underdeveloped and class action torts of this scale had never been filed¹¹³. The government was also concerned that many victims may enter into a premature and paltry settlement with UCC and that their interests may not be looked after. Therefore, under the legislation the government took away the right of the victims to pursue their remedy from the giant corporation. This was all under the *parens patriae*¹¹⁴ blanket, as they presumed they knew what was best for the victim. The constitutional validity of this Act was challenged in the SC in *Charan Lal Sahu Case*¹¹⁵, but unfortunately, the settlement was announced and fixed at US\$470 Million before any verdict was delivered.

The Union of India then filed a suit in the District Court of Bhopal. The District Judge of Bhopal ordered Interim Relief of Rs. 350 Crores on 17th December 1987. This was however appealed in the High Court where Judge Deo ordered a modified Interim Relief of Rs. 250 Crores on 4th April 1988. UCC appealed the verdict of the High Court in the SC. On 14th February 1989, the SC reached its verdict on the settlement of \$470 million

¹¹³ During the Proceedings in Judge Keenan's Court in New York Professor Galanter was quite right in pointing out the lack of past precedent in India as only 613 tort cases had been reported from 1914 to 1965. Also in these cases there had been no class action procedure in India, which would make speedy litigation very difficult.

¹¹⁴ *Parens patriae*: In English Law, the Crown as *parens patriae* is the constitutional protector of all property subject to charitable trusts, such trusts being essentially a matter of public concern. According to the Indian concept, *parens patriae* recognises the King as the protector of citizens as a parent.

¹¹⁵ *Charan Lal Sahu v Union of India* AIR 1990 S.C. 1480.

or Rs 7.5 billion. This amount absolved UCC and UCIL of all past, present and future liability making the Bhopal settlement unique.

The settlement was to be distributed in the following manner.

- 3000 fatal cases were to receive Rs. 300,000.
- 30,000 victims with permanent disabilities were awarded damages between Rs.50,000 and Rs.200,000.
- 20,000 victims with temporary disabilities were awarded damages between Rs.25,000 and Rs.100,000.
- 20,000 victims with utmost severe injuries were awarded up to Rs.400,000.
- Rs. 250 million was set aside for expert medical facilities and rehabilitation of victims.
- Rs. 2.2 billion was set aside for minor injuries and destruction of property.

The total came to 7.5 billion rupees and the idea was to look at the amount as a corpus which at current rate of interest of 14.5% would over a period of eight years would yield another Rs. 1.5 billion each year.

These figures regarding the number of dead and injured were furnished by Union of India and were gross underestimations of the real figures. However the settlement was based on these figures. The real death claims were 11,267 in five years, now stand at over 20,000.

Little did the Court know that the numbers of the dead and injured on which the Court based its settlement were gross underestimations. When the real figures emerged in

numerous studies in the following years, the SC held that any shortfalls were to be met by the Union of India in the *Charan Lal Sahu* case.

The Sadbhavna Trust, Bhopal did an analysis and wrote on the absurdity of the categorisation of the victims into three broad categories for a disaster with such varied effects. It turned out that there were as many as 15,168 death claims of which 3,891 were rejected and the remaining 11,267 received an average sum of Rs. 67,267 without interest¹¹⁶. An amount less than a third of what the victims might have expected. On an average, if all victims were to receive an equal amount, with the real number of claims, each would have received only Rs. 10,000.

Activist Abdul Jabber who heads two organizations set up for the relief and rehabilitation of the Bhopal victims says “In 1992, claims courts were started. Till now, for the first compensation, most injured victims were given just Rs. 25,000 and the families of dead were given Rs. 100,000. But even claims courts have 11,000 cases pending. In the high court, some 4,000 cases are pending. This only shows how poor the disbursal of compensation is. If the 40 welfare courts could not, after all these years, give out the compensation, one wonders what was the purpose of setting them up. It would have been better to simply send out money orders to the victims”¹¹⁷.

¹¹⁶ Following figures were procured from Environmental Activists' Handbook. See Bhat Aparna, Dubey Sunita, Dutta Ritwick and Gonsalves Colin, Eds, “Environmental Activists' Handbook I & II” Socio-Legal Information Centre, Mumbai,

¹¹⁷ Diwanji Amberish K, “*The Rediff Interview/Bhopal activist Abdul Jabber*” *Rediff News*, December 9 2004, at <http://www.rediff.com/news/2004/dec/09inter.htm> accessed on August 1 2008.

II. Political Accountability?

This case vindicated that the Model based on SC cases, does not work in reality. A private firm caused a huge environmental disaster negligently. The government did not allow individuals to seek relief or even a class action tort, but chose to represent the victims. The government was supposed to provide interim and final compensation through a fund set up and operated by the government. The corpus for the fund was to come from the litigation or the settlement between the government and the firm. The court ordered that any shortfall between the settlement amount and the damages to be paid to victims was to be met by the government.

In theory, the Model should work well because the citizens of Bhopal who were the victims of the tragedy are also voters and exercise political will through their elected representatives. The Government of the state of Madhya Pradesh (where Bhopal is situated) and the Government of India being responsible and responsive, as shown in the Model, should have paid the damages and restored the environment of Bhopal. However, it has been 24 years and there has been no improvement in the conditions of the victims.

One wonders what the voters were doing for twenty four years, because Bhopal is a key issue on the welfare agenda in the state of Madhya Pradesh. The Indian National Congress Party was in power when the gas leak happened in Bhopal. The years following the gas leak were filled with promises made by the government to prosecute UCC and its officials and to substantially compensate the victims. The Indian National Congress party continued to govern in the Madhya Pradesh despite government inaction on relief and

rehabilitation¹¹⁸. The paltry settlement amount was blamed by the Congress on the VP Singh government at the Centre and they continued to promise their voters relief and justice.

In the next decade the continuing Indian National Congress rule was not overthrown despite its failure on the Bhopal issue. Barring a brief period with the Bharatiya Janata Party government (the main opposition over the last couple of decades) and President's rule, the Indian National Congress party continued to promise the people of Bhopal a substantial settlement and won elections despite inaction.

Mr Digvijay Singh of the Indian National Congress, for the years before he became the Chief Minister of Madhya Pradesh, was known to have made the welfare of the gas victims the "*major objective of his life*". In the party's 1993 Election Manifesto, Mr Singh stated "the Bhopal gas victims are today feeling utterly harassed and frustrated because of the cumbersome procedure of distribution of interim relief and compensation. The grievances of the victims will be redressed by speeding up the payment of

¹¹⁸ One of the spokespersons for the gas victims organisation, Mr Abdul Jabber said "Actually, if you analyse the whole tragedy, far guiltier than Union Carbide are the government of India and Madhya Pradesh (both were being ruled by the Indian National Congress Party at the time). First, the factory (*manufacturing pesticides*) was within city limits, which was wrong. Then before the big tragedy, at least 19 smaller accidents had taken place at the factory between 1978 and 1984, clearly proving that something was seriously wrong. A fire had taken place that troubled people. Workers who were sent to clean up the pipes died after inhaling the noxious fumes. One such case occurred on December 25, 1981. Third, the license given to Union Carbide was to manufacture light chemicals, but they were manufacturing heavy chemicals. Now why wasn't this inspected and stopped? Fourth, they were using outdated technology at the plant. In fact, Union Carbide was in the process of selling off this plant since it was proving unviable, but till such time, they decided to keep it going by reducing costs. So instead of four operators they had one; instead of four cooling plants they had just one. In fact, an internal safety audit said the plant had some 32 problems." Diwanji Amberish K, "*The Rediff Interview/Bhopal activist Abdul Jabber*" *Rediff News*, December 9 2004, at <http://www.rediff.com/news/2004/dec/09inter.htm> accessed on August 1 2008.

compensation. Besides, schemes for providing jobs to the gas-affected women will be implemented”¹¹⁹.

Mr Singh won the elections and for the whole term, no new schemes were prepared for the victims and old schemes by previous governments were shut down. The process of distributing compensation amounts continued at its dismal speed. Millions were spent on relief and rehabilitation, but none of them were received by the victims. Mr Singh’s government is rumored to be one of the most corrupt governments, which had made a profitable industry out of the Bhopal victims. “It will not be inappropriate to say that Mr. Digvijay Singh forgot the gas victims after becoming the Chief Minister. There was no word about them in his party’s 1998 manifesto”¹²⁰.

However, contrary to the theoretical belief that such a government would be voted out under the Model Mr. Digvijay Singh’s government came back for a second term in 1998. There was no significant progress in the relief and rehabilitation plan of the government during this second term in power and the gas victims continued to fight for their compensation, not from the Union Carbide Corporation, but from the Government of India.

After this long rule by the Indian National Congress Party, the last five years have seen the Bhartiya Janata Party in Madhya Pradesh. However, there has been absolutely no

¹¹⁹ Sharma ND, “After 17 years of gas leak disaster- No end to govt apathy for survivors” *The Tribune*, December 3 2001, Chandigarh available at <http://www.tribuneindia.com/2001/20011203/edit.htm#3> accessed on July 29 2008.

¹²⁰ *Ibid.*

change in the state of the victims, except that many victims have died due to lack of medical care and compensation.

The bureaucrats administering the relief under the Bhopal Gas Disaster Ministry were absolutely ineffective. There has been no reported penalty or dismissal of any of these officials for their lack of efficiency in the Bhopal matter. There were many cases of corruption filed against some officials from in the Government of Madhya Pradesh for misdirecting the funds from the gas relief corpus for personal use; but these cases are still pending and inconclusive.

Except for a brief period of President's Rule, Madhya Pradesh has had a fully functioning democracy with periodic elections. The voters repeatedly chose the Indian National Congress party from 1985 till 2003 despite their inaction on the Bhopal matter. Madhya Pradesh had an informed electorate since the voters were themselves victims awaiting compensation from the government. Madhya Pradesh also has the fourth largest number of newspapers in any Indian state and in 2001 there were 3555 newspapers published in the state.

Therefore, the key requirements of the Model seem to be fulfilled and yet the entire system of trusting the government with litigation and damages has been an utter failure. Theoretically, the incentives for the voters, politicians and the administrators were in place; but in reality the incentive structure is far more complicated and the preferences of a rational bureaucrat and a selfish politician are not aligned with that of a median voter.

The fact that the legislature and judiciary did not realize that a damages and compensation system based along the line of the Model would not work in the real world is the real tragedy of Bhopal.

H. CONCLUSION

They say the road to hell is paved with good intentions; and the environmental model created by the SC is one such road. Though PIL in India has truly brought access to legal justice to millions who were previously deprived of it; state intervention in a matter of private environmental tort law is begging for a distortion of economic incentives.

The Model which works well theoretically and has succeeded in a few cases of the SC due to the fear of being held in contempt of court is not a sustainable solution for the environmental problems in India. This is heightened particularly due to the administrative system and the priorities of the electorate in a developing economy. The Bhopal case vindicates the fact that the Indian administration cannot effectively pay damages and recover the same from a private entity.

The reality in India shows that state intervention in a market (even if it is a market for judicial remedy under private law) causes the economic, political and legal opportunism by the administrators.

Therefore the polluter pays principle, despite its shortcomings, has the benefit of making individual polluters make the economic choice of reducing pollution due to cost

internalisation. And this mechanism cannot be replicated by the state and should be left to individuals.

BIBLIOGRAPHY

Bakshi PM, “The Constitution of India”, 2005 (Sixth Ed), Universal Law Publishing Co, New Delhi India.

Bergkamp Lucas, “Liability and Environment Private and Public Law Aspects of Civil liability for Environmental Harm in an International Context”, Draft 10, April 2001, downloaded from

http://papers.ssrn.com/paper.taf?abstract_id=266365 on July 5 2008.

Besley Timothy J and Burgess Robin, “The Political Economy of Government Responsiveness: Theory and Evidence from India” *The Quarterly Journal of Economics*, Volume 117, November 2002, page 1415-51 downloaded from Jstor at <http://www.jstor.org/stable/4132482> on July 17 2008.

Besley Timothy J, Pande Rohini and Rao Vijayendra, “Political Selection and the Quality of Government: Evidence from South India” *Economic Growth Center Yale University*, Paper No. 921, July 2005, downloaded from <http://www.econ.yale.edu/~egcenter/research.htm> on August 5 2008.

Bhat Aparna, Dubey Sunita, Dutta Ritwick and Gonsalves Colin, Eds, “Environmental Activists’ Handbook I & II” Socio-Legal Information Centre, Mumbai,

Bhopal Gas Leak Disaster (Processing of Claims) Act, 1985.

Carroll Lewis, “The Walrus and the Carpenter” Through the Looking-Glass and What Alice Found There, 1872, (1973 edition) New York: Clarkson N Potter Publisher, USA

Cassels Jamie, “Judicial Activism and Public Interest Litigation in India: Attempting the Impossible?” *The American Journal of Comparative Law*, Vol. 37, No. 3, Summer, 1989, pages 495- 519, downloaded from Jstor at <http://www.jstor.org/stable/840090> on July 29 2008.

Craig PP and Deshpande SL, “Rights, Autonomy and Process: Public Interest Litigation in India” *Oxford Journal of Legal Studies*, Vol. 9, No. 3, Autumn, 1989, pages 356-373, downloaded from Jstor at <http://www.jstor.org/stable/764422> on July 29 2008.

Commission of the European Communities, “Communication from the Commission to the Council and Parliament: Green Paper on Remedying Environmental Damage”, COM (93)47 final, 14 May 1993 Brussels, Belgium.

Diwanji Amberish K, “*The Rediff Interview/Bhopal activist Abdul Jabber*” *Rediff News*, December 9 2004, at <http://www.rediff.com/news/2004/dec/09inter.htm> accessed on August 1 2008.

Dwivedi OP and Jain RB, “Bureaucratic Morality in India” *International Political Science Review / Revue internationale de science politique*, Vol. 9, No. 3, *Bureaucratic Morality/La Morale bureaucratique*, July 1988, pages 205-214 downloaded from Jstor at <http://www.jstor.org/stable/1601131> on August 9 2008.

Førsund R. Finn., “The Polluter Pays Principle and Transitional Period Measures in a Dynamic Setting”; *The Swedish Journal of Economics*, Vol. 77, No. 1, Public Finance: Allocation and Distribution, (March 1975), pp. 56-68; downloaded from JStore at <http://www.jstor.org/stable/3439327> on June 5, 2008.

Fullerton Don and Tsang Seng-Su, “Environmental Costs paid by the polluter or the beneficiary? The case of CERCLA and SUPERFUND”; *National Bureau of Economic Research Working Paper No. 4418*, August 2001, Cambridge, MA USA, downloaded from NBER at <http://www.nber.org/papers/w4418> on July 18, 2008.

Giné Xavier and Karlan Dean, “Group versus Individual Liability: A Field Experiment in the Philippines”, *Economic Growth Center Yale University*, Paper No. 940, July 2006, downloaded from <http://www.econ.yale.edu/~egcenter/research.htm> on August 1 2008.

Goldar Bishwanath and Gupta Shreekant, “Do Stock Markets Penalise Environment-Unfriendly Behaviour? Evidence from India” *Centre for Development Economics Working Paper No. 116.*, March 2003, downloaded from SSRN at <http://ssrn.com/abstract=394621> on June 30 2008.

Guelton Sonia, “Who can pay for depollution ? an economic approach”, *Laboratoire d'Observation de l'Économie et des Institutions Locales*, TRADE/WP.8/AC.1/SEM.7/2002/4/S.8, 2002, downloaded from www.unece.org/ie/intersol/documents/s.8e.pdf on July 28 2008.

India Election 2004, Statistics Facts and Figures; available at http://www.neoncarrot.co.uk/h_aboutindia/india_election_stats.html#general accessed on August 1, 2008.

Jain MP, “Indian Constitutional Law” 2005 Edition, Wadhwa & Company Nagpur, New Delhi India.

Jaswal Paramjit S, “Environment Law”, 2008 Edition, Allahbad Law Agency, Faridabad India.

Krier James E. and Stewart Richard B., “Environmental Law and Policy: Readings, Materials and Notes”, 1978, 2d ed., Indianapolis, USA.

Kumari Areti Krishna, “Evolution of Environmental Legislation in India”, January 2007, downloaded from SSRN at <http://ssrn.com/abstract=956228> on July 30 2008.

Levmore Saul, “Gomorrah to Ybarra and More: Overextraction and the Puzzle of Immoderate Group Liability” *Virginia Law Review*, Vol. 81, No. 6, September 1995, page 1561-1604, downloaded from Jstor at <http://www.jstor.org/stable/1073532> on June 30 2008.

Murari S, “Tamil Nadu: Close Fight, Decisive Verdict on the Cards” *Hindustan Times*, May 6 2006, New Delhi.

OECD: “On guiding principles concerning international economic aspects of environmental policies”, C (72) 128, 1972, Paris, France.

OECD: “The polluter pays principle. Note on the implementation of polluter pays principle”, 1974, Paris, France.

OECD: “Recommendation of the Council concerning the Application of the Polluter-Pays Principle to Accidental Pollution C(89)88.”, 1989, Paris, France.

OECD: “The Polluter-Pays Principle: OECD Analyses and Recommendations”, Doc. OCDE/GD(92)81, 1992, Paris, France, at 9.

Ott Claus and Schäfer Hans-Bernd, “Special Problems in Civil Liability”, The Economic Analysis of Civil Law, 2004, Edwar Elgar Publishing Ltd, UK

Ott Claus and Schäfer Hans-Bernd , “Widening the Scope of Environmental Liability”, Erling Ide and Roger van den Bergh, Eds, Law and Economics of the Environment 1996, (J & F), page 109- 114

Polinsky A. Mitchell, “Strict Liability vs. Negligence in a Market Setting”, *Journal of American Economic Association*, May 1980 on page 363.

Posner Richard A, "A Theory of Primitive Society, with Special Reference to Law" *Journal of Law and Economics*, Vol. 23, No. 1, April 1980, page 1-53, downloaded from Jstor at <http://www.jstor.org/stable/725284> on August 6 2008.

Prasad P.M., "Environmental Protection: The Role of Liability System in India", *Economic and Political Weekly*, January 17th 2004, on page 257

Public Liability and Insurance Act, 1991.

Raja, A.V and Rathinam, Francis, "Economic Efficiency of Public Interest Litigations (PIL): Lessons from India" *Munich Personal RePEc Archive*, MPRA Paper No. 3870, June 2005, Munich Germany, downloaded from MPRA at <http://mpra.ub.uni-muenchen.de/3870/> on July 17 2008.

Rajagopalan Shruti, "Sunlight is the Best Disinfectant: A Review of the Right to Information Act 2005", *Delhi Law Review*, Vol II 2005.

Rajagopalan Shruti, "Judicial Activism: Courting Controversy", *Combat Law* November-December 2006, Volume 5 Issue 5.

Right to Information Act, 2005.

Schäfer Hans-Bernd, "The Bundling of Similar Interests in Litigation. The Incentives for Class Action and Legal Actions Taken by Associations," *European Journal of Law and Economics*, 2000, page 183

Sen, Amartya, "Food Battles: conflicts in the access to food," *Food and Nutrition*, X, 1984, pages 81-89. on page 84

Sharma ND, "After 17 years of gas leak disaster- No end to govt apathy for survivors" *The Tribune*, December 3 2001, Chandigarh available at <http://www.tribuneindia.com/2001/20011203/edit.htm#3> accessed on July 29 2008.

Shavell Steven, Liability for Accidents, *National Bureau of Economic Research Working Paper No. 11781*, November 2005, Cambridge, MA USA, downloaded from NBER at <http://www.nber.org/papers/w11781> on July 18 2008.

Single European Act, 17 Feb. 1986, 1987 OJ (L 169) 1.

The Air (Prevention and Control of Pollution) Act, 1981.

The Economist Print Edition, “Up to their neck’s in it”, July 17 2008, India Edition.

The Environmental Protection Act, 1986.

The Hazardous Wastes (Management and Handling) Rules, 1989.

The Water (Prevention and Control of Pollution) Act, 1974.

Tullock Gordon, “The Politics of Bureaucracy” 2006, Public Affairs Press, Washington USA.

TABLE OF CASES

Acti-Recti & others Vs UOI & Others C.W.P. No.3105/1999

Andhra Pradesh Pollution Control Board v Prof MV Nayadu (1999) 2 SCC 718AQFM

Yamuna v Central Pollution Control Board (2000) 9 SCC 499

Andhra Pradesh Pollution Control Board v Prof MV Nayadu (1999) 2 SCC 718

BL Wadhwa v Union of India (1996) 2 SCC 594

Buffalo Traders Welfare Association v Union of India & Ors. (2004) 11 SCC 333

Consumer Education and Research Center v Union of India AIR 1995 SC 992.

Charan Lal Sahu vs. Union of India-AIR 1990 S.C. 1480.

Hemraj & Ors. v. Commissioner of Police & Ors CWP No.3419/1999

Imtiaz Ahmad v. UOI & Ors. Writ Petition (Civil) No.418/1998

Indian Council for Enviro-Legal Action v Union of India AIR 1996 SC 1446

In Re Noise Pollution - (2005) 5 SCC 733

MC Mehta v Union of India AIR 1987 SC 1086

MC Mehta v Union of India (1987) 4 SCC 463.

MC Mehta v Union of India (1991) 2 SCC 137

MC Mehta v Union of India (1991) 2 SCC 353

MC Mehta v Union of India AIR 1997 SC 761

M.C.Mehta v. UOI & Others Writ Petition (Civil) No.13381 of 1984

M.C.Mehta v. UOI & Others Writ Petition(Civil)No.4677 of 1985

M.C.Mehta v. UOI & Others I.A. No. 343/2000 in Writ Petition (Civil) No. 3727/1985

M.C.Mehta v. UOI & Others Writ Petition (Civil) No. 3727/1985

Obayya Pujari v Member Secretary KSPCB AIR 1999 Kant 157

Research Foundation for Science Technology v. Union of India (1999) 1 SCC 223

RL&E Kendra v State of Uttar Pradesh AIR 1985 SC 1259

Rylands v Fletcher L.R 3 H.L. 330 (1868)

SP Gupta v Union of India 1981 Supp SCC 87

S. Jagannath v Union of India (1997) 2 SCC 87

Suo Moto v Vatva Industries AIR 2000 Guj 33

The United Communist Party of India v. The Union of India & Ors. CWP No.1640/2001

TN Godavarman v Union of India (1997) 10 SCC 775

Union Carbide Corporation v Union of India AIR 1990 SC 273

Vellore Citizens Welfare Forum v. Union of India (1996) 5 SCC 647

Vineet Kumar Mathur v. UOI & Others (1996) 7 SCC 714

Ybarra v. Spangard 154 P.2d 687 (Cal. 1944).