

# THE ROLE OF ENVIRONMENTAL REGULATORY AGENCIES IN THE MANAGEMENT OF HAZARDOUS INDUSTRIES IN INDIA

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## Introduction

The hazardous industry sector in India constitutes an important part of the industrialization process and plays a crucial role in the industrial and economic growth of the nation. The sector is one of the most important foreign exchange earners in India but it has invited severe environmental problems in recent years.<sup>1</sup> With

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<sup>1</sup> Due to liberalization of trade in India, factories that produce pesticides, agro-chemicals, dye, and dye intermediates have increased in number and they regularly dump their untreated effluent in rivers. Inferences drawn from the various statistics provided by the Ministry of Trade and Commerce, India and

the growing number of hazardous industries in India, there is a simultaneous growth of toxic hazards in the environment.<sup>2</sup> For example, industrial effluents in the form of toxic gases contaminate the atmosphere by spreading air pollution and pose long term risks to human health.<sup>3</sup> In addition, the improper disposal of hazardous waste, including certain organic compounds, adversely affects soil productivity.<sup>4</sup> Moreover, hazardous industries also discharge acidic and alkaline waste that severely affects surface waters and soils and may reduce the number of species.<sup>5</sup> In short, the growth of hazardous industries in India is directly linked to degradation of the surrounding environment.

This article will first examine the growth of the hazardous industry sector in India, the environmental laws currently in place, and the agencies responsible for enforcement. Secondly, it outlines the extent of the pollution issue due to industrial growth in the hazardous industrial sector and the lack of sufficient environmental protection laws. Thirdly, the article discusses the various issues and challenges around the effective implementation of these laws by the pollution control boards in India. Finally, the article proposes various suggestions to for the adequate enforcement of the relevant laws.

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have been correlated with the statistics provided by the Ministry of Environment and Forests. E.g., *Chemicals*, DEP'T OF CHEM. & PETROCHEMICALS, (Mar. 3, 2008), <http://chemicals.nic.in/chem1.htm>; *Environmental Information System – ENVIS: India*, ENVIS <http://envis.nic.in/>.

<sup>2</sup> *More Hazardous Industries, More Deaths*, INDIA ENVTL. PORTAL (Aug. 30, 2008), <http://www.indiaenvironmentportal.org.in/content/more-hazardous-industries-more-deaths>.

<sup>3</sup> *Id.*

<sup>4</sup> *Waste Management*, DEP'T OF ENV'T, STATE OF TAMIL NADU, 121–123, <http://www.environment.tn.nic.in/soe/images/WasteManagement.pdf>.

<sup>5</sup> *Id.*

## I. India's Hazardous Industry Sector and Regulatory Regime

The hazardous industrial sector, in comparison to other industrial sectors, rose impressively during the last two decades. The sector's total exports have increased from US \$36,715 billion in 2005 to US \$44,761 billion in 2006.<sup>6</sup> Due to the growth of the exports and imports in the hazardous industrial sector, industrial activities have similarly grown.<sup>7</sup> With the growth of hazardous industrial activity, more hazardous waste and pollutants have entered India's environment.<sup>8</sup> India's Central Pollution Control Board (CPCB) has classified seventeen categories of industries as "highly polluting industries."<sup>9</sup> Hazardous Industries<sup>10</sup> are a subset of "highly polluting industries" that use chemicals above the quantities or limits prescribed in the Environment Protection Rules for hazardous chemicals identified by the government of India.<sup>11</sup> Hazardous wastes and micro-organisms are included as "hazardous chemicals."<sup>12</sup> Based on information provided by India's State

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<sup>6</sup> Foreign Trade, India Economy Review 26 (Nov. 2006).

<sup>7</sup> *Id.*

<sup>8</sup> *Id.*

<sup>9</sup> *Frequently Asked Questions*, CENTRAL POLLUTION CONTROL BOARD, <http://www.cpcb.nic.in/faq2.php> (last visited Jan. 4, 2011).

<sup>10</sup> *Classification of Industries*, DELHI POLLUTION CONTROL BOARD, <http://www.dpcc.delhigovt.nic.in/catgrd.htm> (last visited Jan. 4, 2011) (These are the red category of industries that cannot be permitted in the Municipal area at all. These can however be set beyond the municipal limits and could be permitted if they comply with proper environmental assessment and adequate pollution control measures as have been approved by the Ministry of Environment and Forestry).

<sup>11</sup> *Notification, Ministry of Environment and Forests*, (amended Feb. 24, 1999) <http://envfor.nic.in/divisions/iass/notif/dahanu.htm> (last visited Jan. 4, 2011).

<sup>12</sup> The Factories Act (Act No. 63 of 1948 as amended by Act No. 20 of 1987), Schedule 1 (India), *available at* <http://www.dgfasli.nic.in/html/factoryact/cschr1.htm> (The category of industries such as petroleum, chemical fertilizers, distilleries, cement, pesticides are designated hazardous industries. To

Pollution Control Boards (SPCBs)/ UT-Administrations<sup>13</sup> a total of 1,551 large and medium units<sup>14</sup> have been identified in the country in the seventeen highly polluting industrial sectors and twenty-four environmental problem areas.<sup>15</sup> According to a 2006–2007 report

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summarize, hazardous industries are the industries that deal with hazardous substances, but also as a preparation, which by reason of its chemical or physio-chemical properties or handling is liable to cause damage to human beings and other living creatures, plants, micro organisms etc).

<sup>13</sup> *States and Union Territories*, NATIONAL PORTAL OF INDIA, [http://india.gov.in/knowindia/state\\_uts.php](http://india.gov.in/knowindia/state_uts.php) (last visited June 2, 2010) (UT stands for Union Territory. India, a union of states, is a Sovereign, Secular, Democratic Republic with a Parliamentary system of Government. The President is the constitutional head of Executive of the Union. In the states, the Governor, as the representative of the President, is the head of Executive. The system of government in states closely resembles that of the Union. There are 28 states and 7 Union territories in the country. Union Territories are administered by the President through an Administrator appointed by him/her).

<sup>14</sup> *Environmental Compliance and Enforcement in India: Rapid Assessment*, Organization for Economic Co-operation and Development (“OECD”), 11 (Dec. 4–5 2006), available at <http://www.oecd.org/dataoecd/39/27/37838061.pdf>. See *Heavy Industry*, BRITANNICA ONLINE, <http://www.britannica.com/EBchecked/topic/258921/heavy-industry> (last visited Jan. 10, 2011) (Units means the number of Large and Medium scale industries. “Large-scale industry generally requires heavy capital investment in plants and machinery, serves a large and diverse market including other manufacturing industries and has a complex industrial organization”); Yogendra Maity, *New Definition for Medium-Scale Sector Finalised*, INDIA COMPANY NEWS (July 1, 2010), <http://www.indiacompanynews.com/post/view/630/New-definition-for-medium-scale-sector-finalised/> (A medium-scale industry will be one “with investment in plant and machinery of Rs 1 crore to Rs 10 crore.” A small-scale industry is defined as “those units that have investment in plant and machinery of up to Rs 1 crore.” The small scale industries have not been taken into account because of the non-availability of the data).

<sup>15</sup> *MoEF Annual Report 2001–2002*, MINISTRY OF ENVIRONMENT AND FORESTS, <http://envfor.nic.in/report/0102/chap05.html> (last visited Jan. 10, 2011).

by the Organization for Economic Co-operation and Development (“OECD”), seventy-three percent of the 2,672 units under seventeen categories of highly polluting industries were in compliance, which is a decrease from 2004, when the rate was eighty-four percent.<sup>16</sup> The major non-complying sectors are chlor-alkali, thermal power, copper, iron and steel, and pharmaceuticals.<sup>17</sup> The compliance rate of small and medium-sized enterprises (“SMEs”) is much worse. According to the Ministry of Environment and Forests (“MOEF”), SMEs account for forty percent of industrial production, employ limited pollution control technologies and are responsible for an estimated seventy percent of the total industrial pollution load nationwide.<sup>18</sup> The sugar sector has the largest number of units at 392, followed by pharmaceutical, distillery, cement and fertilizer sectors.<sup>19</sup>

The Ministry of Environment and Forests regulates India’s environment through agencies like the CPCB and SPCBs.<sup>20</sup> These agencies also enforce various laws relating to the environment. The pollution control boards were established under the Water

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<sup>16</sup> *Annual Report 2006-2007*, CENTRAL POLLUTION CONTROL BOARD, 11, available at [http://cpcb.nic.in/upload/AnnualReports/AnnualReport\\_34\\_Annual-Report-06-07.pdf](http://cpcb.nic.in/upload/AnnualReports/AnnualReport_34_Annual-Report-06-07.pdf);

*Environmental Compliance and Enforcement in India: Rapid Assessment*, *supra* note 15.

<sup>17</sup> *Id.* (This report “was prepared in the context of the OECD Programme of Environmental Co-operation with Asia and the OECD work on environmental compliance and enforcement in non-member countries. It was produced jointly with the Secretariat of the Asian Environmental Compliance and Enforcement Network (AECEN) and presented at the AECEN annual forum in Hanoi, Vietnam on 4–5 December 2006”).

<sup>18</sup> *Id.* at 12.

<sup>19</sup> *MoEF Annual Report 2001–2002*, *supra* note 16.

<sup>20</sup> Water (Prevention and Control of Pollution) Act of 1974, Act No. 6 of 1974, §§ 16–19 (India); Air (Prevention and Control of Pollution) Act of 1981, Act No. 14, of 1981, §§ 16–21 (India) (The SPCBs and Pollution Control Committees (PCCs) are government regulatory agencies responsible for area pollution control at the state level).

(Prevention & Control) Act of 1974 (Water Act).<sup>21</sup> Presently, twenty-five states have SPCBs that are mandated to enforce legislation to protect the environment.<sup>22</sup> These Boards have the power to govern all pollution regulations passed since then and any other future regulations.<sup>23</sup> Hence, the pollution control boards are the environmental enforcement agencies that are responsible for the monitoring and compliance of pollution control norms in the country and thus, are accountable throughout the country. The consent of SPCBs is necessary before establishing an industry, operation or process, which includes a treatment and disposal system and any modifications to it that might result in the discharge of sewage or trade effluents into streams, wells, sewers, or land.<sup>24</sup> In general, this means that state consent or a permit is required for any type of intake or discharge of liquid from a well or running stream.<sup>25</sup> Also, no person shall knowingly cause or permit any poisonous, noxious or polluting matter, determined in accordance with such standards as may be laid down by the SPCB, to enter directly or indirectly into any stream, well, sewer, or on land.<sup>26</sup> SPCBs may, from time to time, review any condition imposed under a consent pursuant to Section 25<sup>27</sup> or Section 26<sup>28</sup>

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<sup>21</sup> Introduction, CENTRAL POLLUTION CONTROL BOARD,  
<http://www.cpcb.nic.in/Introduction.php> (last visited Jan. 10, 2011).

<sup>22</sup> *Evaluation Study on the Functioning of State Pollution Control Boards*,  
PLANNING COMMISSION,  
<http://planningcommission.gov.in/reports/peoreport/peoevalu/peopoll1.htm> (last  
visited Jan. 10, 2011).

<sup>23</sup> Water Act §§ 16–19 (India); Air (Prevention and Control of Pollution) Act of  
1981, Act No. 14, of 1981, §§ 16–21 (India).

<sup>24</sup> Water Act § 27.

<sup>25</sup> Harish Sharma, *Pollution Control Acts and Regulations of India*, 2, available  
at  
[http://www.petroleumbazaar.com/Admin%5CActsandControls%5CPollution\\_co  
ntrol\\_act.pdf](http://www.petroleumbazaar.com/Admin%5CActsandControls%5CPollution_control_act.pdf).

<sup>26</sup> Water Act §24(1)(a).

<sup>27</sup> State Boards can lay down restrictions on new outlet and discharges. *Id.* §  
25A.

<sup>28</sup> *Id.* at § 26 (“Where immediately before the commencement of this Act, any  
person was discharging anysewage or trade effluent into a stream or well or

of the Water Act and may serve a notice on the person to whom a consent is issued, making any reasonable variation or revoking any such condition.<sup>29</sup> SPCBs can also impose various penalties for non-compliance including cancellation of a consent already issued. The SPCBs are the enforcement agencies.<sup>30</sup> These penalties range from a three-month imprisonment and fine to a seven-year imprisonment and fine.<sup>31</sup> In short, the Water Act contains all the provisions relating to water pollution, but the responsibility of implementation lies with the CPCB and SPCBs to control any hazardous activity in a particular state.

Under the Air (Prevention and Control of Pollution) Act of 1981 (Air Act), the state governments are given power to declare air pollution control areas and take all necessary pollution control measures, in consultation with SPCBs.<sup>32</sup> The SPCBs may require industries to implement technologies related to emissions control and may renew the consent for the operation of the industry.<sup>33</sup> A consent order is valid for fifteen years or until a significant change occurs in either the manufacturing or production process for the discharge of effluent/sewage.<sup>34</sup> Additionally, “[a] consent order

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sewer or on land the provisions of section 25 shall, so far as may apply in relation to such person as they apply in relation to the person referred to in that section subject to the modification that the application for consent to be made under sub-section (2) of that section shall be made on or before such date as may be specified by the State Government by notification in this behalf in the Official Gazette”).

<sup>29</sup> *Id.* at § 27(2)(a).

<sup>30</sup> *Id.* at § 17; Air Act § 17.

<sup>31</sup> Water Act §§ 43, 44, 45, 45A.

<sup>32</sup> Air Act § 19.

<sup>33</sup> *Consent Management*, KARNATAKA STATE POLLUTION CONTROL BOARD, [http://www.kspcb.gov.in/consent\\_management.htm](http://www.kspcb.gov.in/consent_management.htm) (last visited Jan. 11, 2011).

<sup>34</sup> *Environmental Regulations*, DEVELOPMENT COMMISSIONER, MINISTRY OF SMALL, MICRO, & MEDIUM ENTERPRISES, <http://dcmsme.gov.in/policies/central/envior.htm> (last visited Jan. 10, 2011) (Clause (a) of Section I of Section 18 of the Water (Prevention and Control of Pollution) Act, 1974, [states] that for the units of small scale sector except 17 categories which are heavily polluting, the acknowledgement of the application

cannot be provided provisionally and is obtainable only when all the pollution prevention requirements are adopted.”<sup>35</sup>

To prevent air, water and soil pollution arising out of industrial projects, the industrial licensing procedure requires that entrepreneurs obtain clearance from the CPCB and SPCBs before setting up an industry.<sup>36</sup> The CPCB and SPCBs stipulate that air (gases) and water (effluents) emanating from an industry must adhere to certain quality standards. However, these stipulations do not prevent an industry from affecting the total environment by wrongful siting.<sup>37</sup> Also, the cumulative effect of a number of industries at a particular location is not studied, resulting in an industrial area that, over a period of time, could cause significant damage to the environment and ecological features.<sup>38</sup> Firms planning to establish new plants in the seventeen highly polluting industrial sectors require prior environmental clearance by the pollution control boards.<sup>39</sup> To date, only a few hundred such firms

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by the Board would serve the purpose of the consent and that the consent granted shall be valid till 15 years or till such time as the industry modifies or changes its process or any treatment and disposal system or brings into use any new or altered outlet for discharge of effluent/sewage or begins to make any new discharge of effluent/sewage whichever is earlier. However, the concerned State Pollution Control Boards/Committees specified by the Central Government (for UTs) may conduct random checks or call for information from any unit and make a formal consent order prescribing conditions etc., as required). *Regulations*, Laghu Udyog Bharti, <http://www.lubindia.org/government-policies/regulations.php> (last visited Jan. 10, 2011).

<sup>35</sup> *Environmental Regulations*, DEVELOPMENT COMMISSIONER, MINISTRY OF SMALL, MICRO, & MEDIUM ENTERPRISES, <http://dcmsme.gov.in/policies/central/envior.htm> (last visited Jan. 10, 2011).

<sup>36</sup> *Siting Guidelines for Industries*, MINISTRY OF ENVIRONMENT AND FORESTS, <http://envfor.nic.in/citizen/specinfo/siguin.html> (last visited Jan. 10, 2011).

<sup>37</sup> *Id.*

<sup>38</sup> *Id.*

<sup>39</sup> SHREYASI JHA & SHANTI GAMPER-RABINDRAN, ENVIRONMENTAL IMPACT OF INDIA'S TRADE LIBERALIZATION 3–4, *available at* <https://www.gtap.agecon.purdue.edu/resources/download/1690.pdf>.



have submitted their petitions for clearance.<sup>40</sup> The relative lack of petitions is sufficient evidence that these policy-making bodies have failed to highlight the importance of environmental issues in economic policy design.<sup>41</sup>

## II. The Growth of Hazardous Industries Endangers India's Environment

In spite of stringent environmental regulations and enforcement authorities in place, hazardous industries have continued to grow haphazardly, leading to many environmental problems in India. The immense growth of hazardous industries in the states of Maharashtra and Gujarat has resulted in particularly severe environmental pollution. Both states claim that industrial growth has allowed the region to prosper.<sup>42</sup> Although, their statistics incorporate development and growth, there are no figures telling the true story of the impending danger to environmental health.<sup>43</sup> For example, in the state of Maharashtra, hundreds of industrial units using hazardous chemicals dump their sludge along the roadside of the Mumbai-Pune highway.<sup>44</sup> Another industrial town, Dombivili in the Thane district of Maharashtra, contains fifty chemical units that manufacture dye intermediaries and emit noxious gases at night.<sup>45</sup> The chemical units discharge effluents openly in a drain that passes through a residential area.<sup>46</sup> As a result, the town has become a large dumping ground for all the

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<sup>40</sup> *Id.* at 20–23.

<sup>41</sup> *Id.*

<sup>42</sup> Ashwini Kumar, *Gujarat Most Polluted State in India, Maharashtra 2nd*, [http://www.mynews.in/News/Gujarat\\_most\\_polluted\\_state\\_in\\_India,\\_Maharashtra\\_2nd\\_N41318.html](http://www.mynews.in/News/Gujarat_most_polluted_state_in_India,_Maharashtra_2nd_N41318.html).

<sup>43</sup> *Industry At Any Cost*, RAINWATERHARVESTING.ORG, <http://www.rainwaterharvesting.org/crisis/Industrial-pollution.htm>.

<sup>44</sup> Apoorva Gupta, *Industrial Wastes: An Environmental Hazard*, <http://theviewspaper.net/industrial-wastes-an-environmental-hazard/>.

<sup>45</sup> Sasidharan Nair, *Peril Uninterrupted*, [http://issuu.com/premlal/docs/flash\\_march15](http://issuu.com/premlal/docs/flash_march15).

<sup>46</sup> *Industry at Any Cost*, *supra* note 46.

chemical units operating in the area.<sup>47</sup> Rural residents are worst hit by industrial pollution because of a lack of awareness of pollution's effects.<sup>48</sup> However, in light of recent stories of environmental pollution, the question of whether SPCBs and the CPCB are properly fulfilling their role in controlling and monitoring industrialization and protecting the environment is becoming a significant issue.

In the case of the village of Bichhri in the state of Rajasthan, five small chemical industries operated without effluent treatment plants.<sup>49</sup> Toxic effluents from the industry entered the ground water and the wells of fourteen villages became contaminated as a result.<sup>50</sup> After six years of battle in the court system, the Supreme Court delivered final judgment in 1996.<sup>51</sup> This judgment directed the closure of the factories attached to the property of the polluter and directed the Ministry of Environment and Forests of India to recover the cost of eco-restoration from the industries held liable.<sup>52</sup> In another instance, the Supreme Court directed the Deputy Commissioner of Police to close 168 hazardous industries operating in the city of Delhi.<sup>53</sup> In spite of the stringent environmental laws in force at the time, these industries managed to operate within the city limits.<sup>54</sup> In the case of *M.C. Mehta v. Union of India*, the Supreme Court categorized 513 industries in Delhi as hazardous and ordered their closure, effective

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<sup>47</sup> Indira Gandhi Institute of Development Research, *State of Environment Report: Maharashtra*, available at [http://www.soeatlas.org/PDF\\_Map%20Gallery/SoE%20report%20of%20Maharashtra.pdf](http://www.soeatlas.org/PDF_Map%20Gallery/SoE%20report%20of%20Maharashtra.pdf).

<sup>48</sup> *Industry at Any Cost*, *supra* note 46.

<sup>49</sup> *Indian Council for Enviro-Legal v. Union of India*, AIR 1996 SC 1446, (1996) 3 SCC 212, <http://www.indiankanoon.org/doc/1818014/>.

<sup>50</sup> *Id.*

<sup>51</sup> *Id.*

<sup>52</sup> Areti Krishna Kumari, *Evolution of Environmental Legislation in India*, SOCIAL SCIENCE RESEARCH NETWORK, 12 (Jan. 11, 2007), [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=956228](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=956228).

<sup>53</sup> *Union of India*, AIR 1996 SC 2231.

<sup>54</sup> *Id.*

on January 31, 1997.<sup>55</sup> It is not surprising to see the highly polluting industries increasing at a higher rate in places where monitoring and enforcement is weak, as has happened in Karnataka. Although many industrial units have set up treatment plants, the plants do not operate throughout the year in order to save on energy costs.<sup>56</sup> There are several examples of the lax functioning of these boards. One important example, often quoted by the press, is the Bhopal gas accident. There, the SPCB of the state of Madhya Pradesh gave a pollution control clearance to Union Carbide's pollution control equipment just a few weeks before the accident.<sup>57</sup> These examples suggest that enforcement agencies in India need to perform their compliance and enforcement duties more diligently. Many of these problems could be avoided if these industries were sited on the basis of environmental considerations.<sup>58</sup>

### **III.SPCBs Face Significant Challenges to Effectively Enforcing Regulations**

The pollution control boards have powers under various statutes to enforce environmental laws. They may use their enforcement authority to cut off the power or water supply of a polluter.<sup>59</sup> The boards may also impose penalties by filing cases under the Water and Air Acts, as well as the EPA.<sup>60</sup> In addition,

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<sup>55</sup> *Id.*

<sup>56</sup> V. Santhakumar, *The Impact of Citizens Response to Weak Governance: The Case of Citizens' Suits and Actions of Civil Disobedience to Protect Environment in India*, 23,

[http://depot.gdnet.org/cms/conference/papers/3rd\\_day2\\_19\\_santhakumar.pdf](http://depot.gdnet.org/cms/conference/papers/3rd_day2_19_santhakumar.pdf)

<sup>57</sup> Veena Jha, *Investment Liberalisation and Environmental Protection: Conflicts and Compatibilities in the case of India*, OPENARCHIVE@CBS, 525 (Jan. 1999), <http://openarchive.cbs.dk/bitstream/handle/10398/7023/jah.pdf?sequence=1>.

<sup>58</sup> Ashwini Kumar, *supra* note 45.

<sup>59</sup> Air (Prevention and Control) Act of 1981, § 31(a); Water (Prevention and Control) Act of 1974, § 33.

<sup>60</sup> Air (Prevention and Control) Act of 1981, § 22(a); Water (Prevention and Control) Act of 1974, § 33.

the EPA allows the boards to seek the imprisonment of an alleged polluter.<sup>61</sup> Judicial Magistrates deciding environmental matters also have the power to order polluters to comply on an independent complaint.<sup>62</sup> However, pursuing cases through trial and appeals has proven to be an ineffective enforcement strategy because courts are overburdened, procedures are cumbersome, and the resources of state boards are overstretched. Several challenges hamper coordination between the state governments and the pollution control boards. Although India's environmental laws appear stringent at first glance, further study reveals that key terms necessary to enforce them are not well-defined. For example, the word "hazardous" was not well-defined until after the Bhopal gas incident of 1984<sup>63</sup> with the passage of the Environmental Protection Act in 1986.<sup>64</sup> The Environmental Protection Act laid down various standards for the discharge of environmental pollutants and procedures for handling hazardous substances. Section 2(e) of the Environmental Protection Act defines a

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<sup>61</sup> *Id.*

<sup>62</sup> See, e.g., *K. Ramachandra Mayya v. District Magistrate*, (1985) 2 Kar. L. J. 289289 (The H.C. approved of the magistrate's order shutting down a stone quarry, where the magistrate acted on complaints from neighboring residents that the blasting of rocks at the quarry caused damage from flying stone chips); *Nagarjuna Paper Mills Ltd v. Sub Divisional Magistrate, Sangareddy*, (1987) Crim.L.J 2071, 2071-2074 (A.P.) (The Andhra Pradesh High Court considered a petition against a magistrate's order that shut down a paper mill for failing to take pollution control measures. The mill challenged the order claiming that the State Pollution Control Board has the exclusive power to regulate air and water pollution. The High Court rejected this argument and upheld the magistrate's power to regulate pollution to restrain public nuisance).

<sup>63</sup> *The Legal and Regulatory Framework for Environmental Protection in India*, <http://envfor.nic.in/divisions/ic/wssd/doc2/ch2.html> (The Bhopal disaster is frequently cited as the world's worst industrial disaster. The Bhopal Gas Tragedy was an industrial disaster that took place at a Union Carbide pesticide plant in the Indian city of Bhopal, Madhya Pradesh. At midnight on 3rd December 1984, the plant released 42 tons of toxic methyl iso-cyanate (MIC) gas, exposing more than 500,000 people to toxic gases. The first official immediate death toll was 2,259. More generally accepted figure is that 8,000- 10,000 died within 72 hours, and it is estimated that 25,000 have since died from gas-related diseases).

<sup>64</sup> The Environment (Protection) Act of 1986, §2(e).

“hazardous substance” as “any substance or preparation which by reasons of its chemical and physiochemical properties or handling is liable to cause harm to human beings, other living creatures, plants, micro organisms, property or the environment.”<sup>65</sup> However, the definition of the word “hazardous” remains ambiguous to some extent. For example, the Supreme Court in *U.P. Electricity Board v. District Magistrate* held that electricity was “hazardous” because it can be injurious to people if handled improperly.<sup>66</sup>

There is also insufficient coordination between the CPCB and SPCBs due to the double subordination of SPCBs and the administrative influence of state governments. SPCBs conduct most of the compliance, monitoring, and enforcement of pollution control norms in the hazardous industry sector. On the other hand, the zonal offices of the CPCB generally conduct the few direct enforcement actions taken by the agency. Yet, there is no CPCB guidance on how to establish accountability and measure SPCB performance. In addition, states do not collect and compile data in a uniform fashion.<sup>67</sup> Though the CPCB has issued guidance on monitoring and inspection to verify the compliance of the Red, Orange, and Green categories of industries, SPCBs do not follow CPCB guidance.<sup>68</sup> Instead, the SPCBs have developed and applied their own methods.<sup>69</sup> This lack of uniformity has resulted in differentiated compliance standards and enforcement procedures. Additionally, this development process is an inefficient use of limited agency resources. For instance, most of the SPCBs are understaffed and ill-equipped and, as a result, are unable to conduct extensive pollution-related investigations. The total staff strength in the Karnataka State Pollution Control Board at present

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<sup>65</sup> *Id.*

<sup>66</sup> AIR 1998 All.1, 1998 ACJ 721.

<sup>67</sup> *Environmental Compliance and Enforcement in India: Rapid Assessment*, *supra* note 15 at 17.

<sup>68</sup> *Id.* at 25.

<sup>69</sup> *Id.*

is 303 persons.<sup>70</sup> 178 of these employees are technical or scientific staff and 122 are administrative.<sup>71</sup> The board lacks technical and scientific staff because 124 posts are still vacant.<sup>72</sup> The total staff strength in the Maharashtra State Pollution Control Board is 684, out of which 372 staff are from accounts or administration and 312 are from the technical, scientific, or legal departments.<sup>73</sup> There are more non-technical staff than technical staff in the organizational structure of the Maharashtra Pollution Control Board. Thus, there are significant technical capacity constraints on the boards. These factors have a negative impact on the effective execution of all compliance and enforcement functions at the central, state, and local levels.<sup>74</sup>

Additionally, SPCBs are not free to take action because they are subordinate to the CPCB, as well as the central and state governments.<sup>75</sup> Issues become political where the government emphasizes economic growth and development rather than concentrating on the ill effects of the haphazard growth in hazardous industries. And the pollution control boards, as a part of the government, do not have the required independence to initiate action or enforce the provisions of the law.<sup>76</sup> The government's roles as both a promoter and regulator of economic activity compound these difficulties. There is often conflict between the two roles.<sup>77</sup> Because of that conflict, the pollution control boards

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<sup>70</sup> Karnataka State Pollution Control Board, *Annual Report 2007–2008*, 54, <http://www.kspcb.gov.in/Annual%20Report%202007-08%20English.pdf>.

<sup>70</sup> *Id.*

<sup>71</sup> *Id.*

<sup>72</sup> *Id.*

<sup>73</sup> Maharashtra State Pollution Control Board, *Annual Report 2005–2006*, 105, <http://mpcb.gov.in/images/pdf/annualreport0506c.pdf>.

<sup>74</sup> *Id.*

<sup>75</sup> *Performance of Functions by the SPCBs – Some Aspects*, 1-2, <http://planningcommission.gov.in/reports/peoreport/peoevalu/spcbchap5.pdf>.

<sup>76</sup> Himanshu Thakkar, *Water Pollution Control - Role of Community and Public Action*, in *MANAGING WATER SCARCITY : EXPERIENCES AND PROSPECTS* 255, 257 (A. Vaidyanathan & H.M. Oudshoorn eds., 2004).

<sup>77</sup> *Id.*

lack the requisite authority and autonomy to curb pollution effectively.<sup>78</sup>

Nonetheless, the most significant challenge for the pollution control boards is funding. The variations in the financial status and sources of funding of the SPCBs lead to horizontally inequitable and unjustified spending.<sup>79</sup> SPCBs are overly dependent on daily fees that do not provide enough financial support to meet environmental expenses.<sup>80</sup> SPCB staff spend a disproportionately large amount of time issuing consent permits at the expense of their compliance monitoring and enforcement responsibilities. As the Supreme Court in *B. L. Wadhera v. Union Of India* said, the authorities charged with pollution control “have been wholly remiss in the performance of their statutory duties.”<sup>81</sup> The Court also stated that these authorities cannot absolve themselves of their duties under the pretext of financial limitations or other limitations, such as the inefficiency of staff.<sup>82</sup> In general, hazardous industries only comply with environmental laws to the extent that regulatory agencies enforce the law.

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<sup>78</sup> *Performance of Functions by the SPCBs- Some Aspects, 1-2,*

<http://planningcommission.gov.in/reports/peoreport/peoevalu/spcbchap5.pdf>

<sup>79</sup> *See Frequently Asked Questions: Whether SPCBs and PCCs are getting adequate financial support from State Governments and what is the financial status?*, AP POLLUTION CONTROL BOARD,

<http://www.appcb.ap.nic.in/faq/index.htm> (“The SPCBs receive funds from concerned state governments and from the Central Ministry of Environment & Forests through reimbursement of Water Cess (up to 80%) collected by the respective state boards. In addition, the state boards receive fees for processing applications from the industries and for issuing consent to allow the discharge of effluent and emissions”).

<sup>80</sup> *Environmental Compliance and Enforcement in India: Rapid Assessment*, *supra* note 15 at 24.

<sup>81</sup> AIR 1996 SC 2969, (1996) 3 S.C.R. 80.

<sup>82</sup> *Id.*

## CONCLUSION

Unregulated hazardous industries in India have seriously degraded various aspects of the environment, such as the air, water and land, and have diminished the health of the people in India. In *M. C. Mehta v. Union of India*, the Supreme Court observed the importance of appropriately zoning industries and providing green belts around hazardous industries.<sup>83</sup> Wherever the law prohibits the establishment of certain industries in a given area, a state government is prohibited from granting exemptions to industries.<sup>84</sup> Also, the state cannot direct the SPCB to prescribe conditions for granting “No Objection Certificates.” Consequently, it is very important for a state to develop policies that locate hazardous industries in areas where population is scarce and to prohibit further residential development in those areas. Under such a policy, the risk to the surrounding community is diminished. In addition, all hazardous units should have compulsory green belts<sup>85</sup> around them.<sup>86</sup>

The pollution control boards should issue and revoke consents with more care, conduct inspections, and order compliance whenever necessary. All of the boards should take the initiative to improve their human and technical capacity. Improving both human and technical capacity will lead to the more orderly enforcement of pollution control norms in the hazardous industries sector. The SPCBs cannot enforce “on-the-spot” fees for continuously non-compliant units.<sup>87</sup> In the absence of such

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<sup>83</sup> AIR 1987 SC 965, (1986) 1 S.C.R. 312, 324–325.

<sup>84</sup> Bhat Sairam, *Green Decisions: Summary of Some Important Judgments*, <http://www.nls.ac.in/CEERA/ceerafeb04/html/documents/greensummaries.htm> (The term “greenbelt” refers to any area of undeveloped natural land that has been set aside near urban or developed land to provide open space, offer light recreational opportunities or contain development).

<sup>86</sup> Surendra Kumar Pachauri, *The Impact of Environmental Laws on Industry*, 27 (2006).

<sup>87</sup> *Chapter V: Performance of Functions by the SPCBs – Some Aspects*, 6, <http://planningcommission.gov.in/reports/peoreport/peoevalu/spcbchap5.pdf>.



power, the state boards either hope for the non-complying unit to abide by their directions or the state boards file a case with the Court of Justice against the unit and wait for a verdict. Low penalties and lengthy prosecution procedures make it easier for a polluter to pay a fine than to install pollution control measures. A combination of reward and punishment policies will best ensure the interests of the environment.<sup>88</sup>

Enforcement authorities, such as pollution control boards, must be independent of the government so that they may take necessary actions against polluters. To provide the citizens of India a pollution-free environment, India's regulatory agencies must enforce pollution control norms effectively against the hazardous industry sector. They should encourage industries to adopt environmentally sound technologies and monitor these industries to ensure compliance with environmental laws.

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<sup>88</sup> Sanjay & Videh Upadhyay, *Environmental Protection, Land and Energy Laws*, Vol. III, 10 (2002).