Like many other cities straddling the divide between the developed and developing world, the capital city of Delhi—which includes New and Old Delhi and its surrounding metropolitan area—has suffered for decades from declining air quality. In the early 1990s, despite a plethora of environmental laws and numerous government-initiated policies to combat pollution, India’s capital gained the dubious distinction of being the fourth-most polluted city in the world.1

In recent years, however, there have been some significant changes. In response to a public interest lawsuit filed in 1985, the Indian Supreme Court issued a series of orders, the best known of which required tens of thousands of commercial transport vehicles to switch to compressed natural gas (CNG) rather than use more highly polluting fuels. Under the Court’s supervision, Delhi has been able to break through seemingly impervious bureaucratic and institutional logjams to put in place a number of measures to reduce harmful emissions.

The city’s apparent progress in improving its air has been noted by its neighbors in the developing world, many of which face the same challenges: high levels of pollution and disappointing legal and policy implementation. Similar lawsuits have been filed in Pakistan and Bangladesh, and Malaysia, Indonesia, Nepal, Sri Lanka, and the Philippines, among others, have identified the Delhi experience as a model.2

A story that has been commonly repeated in India and around the region is that M. C. Mehta, a lawyer and head of a local nongovernmental organization (NGO), filed a “public interest litigation” before the Indian Supreme Court invoking fundamental constitutional rights against the failure of the government to protect Delhi’s environment. An activist Supreme Court took charge when legislative and regulatory agencies would not. One of several remedies imposed by the Court was the conversion to CNG. Often the impression is left that much of this happened in a very short time.

Is the story so straightforward? What specifically was the role of the Supreme Court in the effort to put the reins on environmental pollution in Delhi, and did it act alone? Was it appropriate for a judicial body to make environmental regulatory decisions that are normally reserved to legislators and specialized regulatory bodies in the executive branch? If, as is commonly assumed, the Indian Supreme Court did play a central role, what are the long-term consequences when judicial bodies make and implement regulatory policy? What impact will this have over time on governance structures in India and on future efforts to regulate pollution? Will the Court’s efforts embolden regulatory bodies or relieve them of the charge to develop their own competency?

The short answer to the first of these questions is that the Supreme Court did play a central role, especially when it directed the conversion to CNG. But the
Judicial Activism in India: Transgression of Boundaries and Enforcing Limits

The Indian Supreme Court’s actions can be seen in the context of Indian history. India became independent in 1947, and its governmental structure included a Supreme Court and the British tradition of Parliamentary supremacy. The constitutional drafters had to decide whether the constitution would contain a declaration of fundamental rights to safeguard the minority and their freedoms or leave the decision to Parliament. The Court, authorities in Delhi, and the government apparently lacked the political will to undertake the bold action necessary.

Under pressure from India’s Supreme Court, authorities in Delhi enacted a rule to follow through, the Court forced it to undertake the bold action necessary. CNG thus became, by process of elimination, the most efficient option.

The Court also liberalized the rules of compliance and reduced that Parliamentary ability to override the Court and use it as a court to determine the constituptions of fundamentals or to adjudicate on them. This allows litigation in the Supreme Court against the government for social policy. Since 1994, the Court increasingly came to be seen as the defender of ordinary people or unpopular causes and politically powerless minorities.

Delhi’s Pollution Load

The proliferation of laws in the mid-1900s apparently had little impact on the actual state of pollution in Delhi. In particular, air quality began to decline in this same period. This is a common pattern: Practically every country in the world today has environmental laws, but they have very poor compliance. A 1995 World Bank study estimated that the annual health costs of ambient air pollution in India were about $10 billion.

CNG case was further extended by a Court-protected fundamental rights to life and personal liberty as articulated in Article 21 of the constitution. In 1975, the Supreme Court increased the size of the Indian lower courts (see the box on page 25) or legal framework for managing environmental pollution (see the box on page 26). However, it can be said that the Court acted with restraint. Its reliance upon independent committees was admirable and a good model for future such deliberations that are placed before a court of law. Perhaps the most difficult question is whether courts—rather than technical experts in the executive branch—should be making these kinds of decisions at all. In the case of Delhi’s pollution, the Indian Supreme Court apparently was the only authoritative body willing to take these hard decisions and make them stick. One can also speculate that perhaps something is at least better than nothing. However, the jury is out on whether the Court’s pervasive presence will ultimately encourage more future actions by environmental regulators.
It is clear that India has not lacked for environmental authority to attack its growing pollution problem. The authority starts in the Indian Constitution, which gives the relationship and relative authority of the parts of India’s government Constitutionally. In the case of a Union Territory, the India has legislative authority over functions such as defense, foreign affairs, and interstate transport and other issues that are considered to transcend state interests. The states, however, have exclusive power to legislate on local issues. A “Concurrent List” encompasses matters for which central and state legislatures have overlapping and shared jurisdiction. The city of Delhi is a “Union Territory,” which is governed by seven territories administered by the Union government. In 1991, the 69th Constitutional amendment gave Delhi a Legislative Assembly. India’s earliest air pollution legislation, the 1981 Air (Prevention and Control of Pollution) Act, is rooted in the central government’s power to make laws implementing decisions taken at international conferences, in this case India’s participation at the United Nations Conference on the Human Environment held at Stockholm in 1972. The 1981 Air Act created central and state pollution control boards and gave them authority over air pollution. The initial concept of a pollution control board was found in a 1974 act, but the central board set up in that act was limited to water issues. The 1981 act broadened the discretion of the Central Pollution Control Board (CPCB) to “lay down standards for the quality of air,” advise the Central Government on any matter concerning the improvement of the quality of air and the prevention, control, or abatement of air pollution, and “perform such other duties as may be assigned.”

In the mid- to late 1980s, the Indian Parliament enacted a number of other laws that gave the government further authority to enact policies to curb air pollution. These included the Environmental (Protection) Act of 1986, the 1987 Air Act and the 1989 Motor Vehicles Act, and the 1989 Central Motor Vehicle Rules. The 1988 Motor Vehicles Act, and the 1989 Central Motor Vehicle Rules, gave the government the authority to set standards for vehicular emissions for manufacturers and users.

Delhi alone were on the order of 3.5-14 billion Indian rupees (Rs.), or approximately US$100-400 million. 1 Industrial, residential, and transportation sources all contribute to the problem. But in recent years the largest share of the responsibility—60–70 percent of total pollution—has been attributed to transportation, reflecting Delhi’s considerable population growth. 2 When India won independence from Great Britain in 1947, Delhi’s population was about two million. Today, Delhi is the world’s 20th largest city in population, based largely on the form of foot, bicycle, or animal-drawn conveyance. Recent data shows the population has swelled to 14 million and is still growing. The number of motorized vehicles has also skyrocketed. In fact, from 1980 to 2000, motor vehicle registrations increased three times in a single generation. The mix of vehicles in recent years includes buses, taxis, large numbers of two-stroke auto-rickshaws and three wheelers (small vehicles used as taxis or for light hauling), two-stroke scooters, and privately owned automobiles. Buses are used so heavily that Delhi was ranked in the world’s top 20 of public transportation in 2002. But, as in the West, everyone aspires to own his or her own vehicle, and increasing affluence means that many can achieve this goal.

The air quality deterioration is usually attributed not just to the number of vehicles, but also to the way they have been built, maintained, and fueled. Air pollution by two-stroke engines illus-

2. J. A. B. Sinha and B. B. Basu, Environmental Laws and Policy in India: Cases, Materials, and Statutes, 2nd Edition, 2002, 246. The delegation of executive functions to the central and state pollution control boards ( paragraphs 235–236) requires the central government to compensate the states for the cost of carrying out these delegated functions. 3 In general, the Indian central government is relatively weak “weaker” than its state governments. This is in part because the Indian judicial system is relatively independent and has been traditionally more lenient than an initial proposal for a new air pollution policy. However, when the Court issued an order in June 1998 that would be put into place in 1995 and 2000, but the emissions standards that were eventually notified were a degraded version of the committee’s recommendations and more lenient than an initial proposal for consideration put up by the Central Pollution Control Board. Under pressure from the automobile industry, MoEF extended the deadline for the diluted standards for a year, to April 1996. Press reports from this period indicate that the automobile industry continued to lobby to further relax the emissions standards set for 2000. 4 Source was the Asian Development Bank. 5 The Court can also push the government to act, however, it did not start with vehicular pollution. The first interventions by the Court were to force relocating the Red Fort, the宝贵, heavy, and large polluting industries, also called “category H” from Delhi. The relocation policy came out of the second master plan for Delhi, a planning document that was prepared by the central government in August of 1990. 6 This plan identified “category H” industries for removal from Delhi within three years, by 1993. The deadline passed but the industries stayed put. With the Court’s persistence, category H firms were finally moved out of Delhi in 1997. 7

With respect to vehicular pollution, the Court managed three separate reform efforts in the time period 1994–1998, each deriving advice from various bodies that had originated in the government but had died on the vine. These were the phaseout of leaded gasoline, introduction of pre-mixed fuels for two-stroke engine vehicles, and the phaseout of 15-year-old commercial vehicles. The policies regarding leaded gas and premixed fuels met with some resistance, but were adopted with relatively few problems. The history of the phaseout of 15-year-old vehicles, however, was more troubled and was a good example of the complicat-

Effects to limit vehicular pollution were either slowed or watered down to the point of being ineffective.

For the sake of completeness, the term “PHE” refers to the Pollution and Health Education program of the World Bank, which was implemented in a number of developing countries in the 1990s. The program aimed to reduce vehicular pollution by promoting the use of public transportation, encouraging the use of low-emission vehicles, and raising awareness among the general public about the health effects of pollution.

The Supreme Court began in 1986 to press Delhi’s government to implement the 1981 Air Act in Delhi. In October 1997, after much profuding from the Supreme Court, the Delhi government announced that 15-year-old and older commercial vehicles would be phased out by March 1998. But only four months after this announcement, facing parliamentary elections and pro-

The Delhi government’s action plan called for the construction of a Mass Rapid Transport System (MRTS) 8 and a high- way bypass around Delhi. 9 MRTS would deal with the growing need for transportation and help reduce the use of private vehicles. The bypass would reduce exposure to out-of-state trucks and buses forced to pass through Delhi. The plan also called for improved vehicular technology and fuel quality, increased use of CNG and propane (and the financial incentives and construction of necessary infrastructure to make CNG and propane available), and restrictions on excessively polluting in-use vehicles, further landscape “greening” of Delhi, and a program for public awareness. Once again, with one exception—a regulation for stricter vehicular emissions norms—good intentions faded into bad practices. In early 1997, the Delhi government announced that it would introduce new vehicular norms in the capital in 1998 instead of 2000. The new norms were not-

The apparent perception of certain Delhi NGOs was that these measures were not enough to bring about the needed changes in the automobile industry. The Delhi government had announced that the 1981 Air Act would be implemented in stages, with the implementation of the first stage expected to begin in 1995 and the second stage in 1997. The third stage was expected to begin in 2000. However, the Delhi government did not implement the first stage of the 1981 Air Act in 1995, and the second stage was not implemented in 1997. As a result, the Delhi government was found in violation of the 1981 Air Act. The Delhi government claimed that it was not able to implement the 1981 Air Act due to lack of resources and technical expertise. However, the Supreme Court was not convinced and ordered the Delhi government to comply with the 1981 Air Act. The Delhi government then appealed the Supreme Court’s order, and the case was heard by the Supreme Court of India. The Supreme Court ultimately ruled in favor of the Delhi government, and the Delhi government was found in violation of the 1981 Air Act.

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but its main focus was on transportation. Some of its proposals were very similar to ideas in the Delhi government’s action plan: a phasing out of old vehicles; a possible phasing out of two-stroke vehicles, including two and three wheelers; improved traffic flow; a bypass around Delhi; a mass rapid transit system; improved fuel quality; and the introduction of CNG-fueled buses. In addition, MoEF offered a timetable for achieving the proposals. The Court used the release of the MoEF white paper to step up its pressure on India’s central government. Most importantly, it directed MoEF to use its authority under Section 3(3) of the Environment Protection Act to establish a committee to monitor the implementation of the white paper and to suggest other policies to control pollution. This committee was called the Environment Pollution (Prevention and Control) Authority (EPCA).

However, the emergence of EPCA marked a major turning point. While the Saikia Committee is widely regarded as having been ineffectual, EPCA proved to be a major powerhouse. It is thought that this was because it had a clear mandate from the Supreme Court. The Court needed EPCA because the issues before it were too complex and due to the fact that the entire bus fleet be shifted to a single fuelfuel—CNG—by 31 March 2001. Previous plans would only have encouraged the use of clean fuels in public transportation. The Supreme Court adopted EPCA’s recommendation as a mandate in its seminal 28 July 1998 order.

For the most part, the Court stayed faithful to the recommendations of EPCA—on which it relied heavily for technical support—and closely tracked its orders with existing government policy. Over the next few years, on EPCA’s suggestion, the Court ordered improvements in emissions standards and fuel quality. But the shift to CNG proved to be the most controversial change.

The Shift to CNG

A review of the record would appear to refute the popular belief that the idea of using CNG for transportation originated with the Supreme Court. The actual circumstances illustrate a complex process of writing solutions and working out agreements.

In fact, discussions about vehicular applications of CNG started at least as early as 1988, growing out of a World Bank study. At that time, the state enterprise Oil and Natural Gas Commission introduced CNG on an experimental basis in its own vehicles. In 1992, the Gas Authority of India Limited (GAIL) and the Indo-Burma Petroleum Company Limited attended the suggestion of CNG in Mumbai, Bareda, and New Delhi. GAIL floated long-term plans to convert bus fleets to CNG in cities along the main?]s, and the number of CNG outlets. As it became clear that few private operators had converted their buses to CNG mode, the Supreme Court mandated the Delhi government to register only CNG buses.

In 1994, the Delhi government said it would open more CNG outlets and possibly subsidize the cost of CNG conversion kits.

In the early 1990s, the Saikia Committee also suggested CNG as an alternative vehicular fuel on the basis that it was less polluting, cheaper, and more widely available than that of the country than petrol or diesel. In response, the Supreme Court ordered that all government cars switch to CNG. But the Saikia Committee recommendations illustrate process obstacles that became apparent as ideas started to be translated into policy and then implemented. The initiative short-circuited when it became clear that there were not enough CNG conversion kits or retail outlets. None of the early proposals took into account the sequential phasing problem, evident in introducing new technology: Increased demand for CNG could only be satisfied with in-place CNG infrastructure in the form of pipelines and filling stations, which were difficult and expensive to install, and manufacturers were unlikely to produce new CNG vehicles without demonstration of increased demand.

Even the Court’s 1998 order did not turn things around. Despite the clarity of the order, response to it was no less crisp. In the first year following the order, the Delhi government did not even have the initiative to make to the Court but little happened beyond a single CNG bus trial. The experience gained in previous CNG trials had done little in 1990s to make things better, and it was attributed to a change in government: The Indian National Congress party (the Cong—gress party) defeated the incumbent Bharatiya Janata Party (BJP) in November 1998 to form a new government in Delhi. India’s central government also announced its support for the Court’s directive but did little to help implement it. Very little happened for the better part of two years, despite EPCA’s continued efforts to monitor progress in the implementation of the Court’s order and coordinate among different government departments to try to move the process along.

As the CNG conversion deadlines approached and the Supreme Court made clear the seriousness of its orders, a furious debate and blame-game ensued. Some key stakeholders became active for the first time. Private bus operators claimed in interviews that they had not previously known about the litigation or the Court’s orders. In January 2001, almost two-and-a-half years after the Supreme Court judgment, they asked the government to request from the Supreme Court an extension for bus conversion. Operators pointed out that CNG bus technology was untested and that CNG filling stations were not available in adequate numbers. The Supreme Court demanded additional affidavits from the parties and asked specifically what efforts had been made to date to carry out its orders. It told the Delhi government to file a status report detailing what had been done to implement the conversion order; had the CNG bus plan. Telco and Ashok Leyland to report on their ability to manufacture CNG buses; and directed gas supplier GAIL to report on the number of CNG outlets. As it became clear that few private operators had converted their buses to CNG mode, the Supreme Court mandated the Delhi government to register only CNG buses.

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Committee’s recommendations. From the Court’s point of view, this was too little, too late, and it failed to grapple adequately with the persistent problem of adulteration. Nevertheless, the Court agreed to extend the deadline to 31 March 2002, expressing concern about the adequacy of CNG supplies for the transportation sector and the impacts on commuters. On 5 April 2002, frustrated by delays, the Supreme Court scolded the Delhi administration for stalling and issued another important order. It directed the immediate installation of 1,500 CNG buses and the replacement of 800 diesel buses per month beginning 1 May 2002. It did so after confirming with the two main manufacturers of CNG-equipped buses, Ashok Leyland and Telco, that this schedule was feasible. Furthermore, the court ordered that the transport sector should have priority access to CNG supplies in case of a shortage. Any diesel bus that ignored the order was to be subject to a heavy, daily fine (500 Rs. (about US$47) per day for the first 30 days and 1,000 Rs. (about US$82) after until compliance. The Supreme Court also fixed the central government 20,000 Rs. (about US$476) for repeatedly delaying the process.24 (The converted figures above might be considerably larger when calculated at purchasing power parity.) Experts often calculate the purchasing power of the rupee to be between two and five times higher than its exchange rate value.25

On 6 April 2002, nearly 7,000 diesel buses, about half of Delhi’s bus fleet, went off the road because of the Supreme Court’s decision. However, in the following month, Delhi received an increased supply of CNG, and by December 2002 all diesel city buses converted to CNG. It is unclear why the government eventually got behind the Supreme Court’s orders and ensured their implementation. One high-ranking government official said the government did so once it realized that the Court was serious and was not going to change its order.26 At this point the government had the option to implement the order or face contempt of court proceedings. Another reason may be that overall public awareness and the public’s support for the Court kept the government from taking the unpopular step of defying the Court. The fines imposed (and collected) on public and private operators also helped to hasten the conversion.

The Role of Stakeholders and the General Public

The entire population of Delhi was affected by the Court’s decisions, but a relatively small number of stakeholders actually played a role in the deliberations. These included representatives of the NGO community who asserted themselves into the debate, some persons and industry groups affected in one way or another by the Court’s orders, and opposition political parties. But formal consultation with the public was not evident from the record, although the need to do so was remarked on at various times by members of EPCA and by the Court.27

Two NGOs were prominent players. Mehta, the public interest lawyer who started this process, played an active role in the litigation for at least 10 years. CSE entered the fray with the publication of Slow Murder. Thereafter, CSE monitored the Court proceedings, brought the issues into the public domain, and provided data and information at critical points. For example, during the debate about the adulteration of low- and ultralow-sulfur diesel, CSE deliberately adulterated diesel and sent the sample to labs that were tasked to monitor fuel quality. When the labs reported no adulteration, the technical difficulties of assuring that clean fuel would stay clean had been clearly demonstrated. But CSE also played an inside role; the head of CSE at that time, Anil Agarwal, was the “public” member of EPCA and participated in its deliberative process. (Agarwal died in early 2002, his successor at CSE, Sunita Narain, also took up his position on EPCA.)

The pressure each step of this process extensively. India has a large number of newspapers, published in Indian, Hindi, and other local languages. From time to time, newspapers identified pollution problems and criticized the authorities for failing to act decisively on them. But in the heat of the CNG battle—when bus operators were on strike or the number of available buses was reduced—the press lambasted authorities for inconveniencing commuters and school-going children. Some in private industry understood the importance of the case and monitored it from its relatively early stages. Some retained legal council throughout the proceedings. Other stakeholders, particularly the private bus operators, were late in joining the battle; they argued that they did not know earlier about the litigation or its potential impact. When they did engage, they felt frustrated by their lack of access to EPCA and the amicus curiae—a lawyer appointed by the Court to speak for the people. They also felt strongly that the Court did not appreciate their plight. Eventually, the bus operators hired counsel and appeared before the Court, but they continued to believe that they had been scapegoats for a wider problem. They argued that the contribution of private buses to pollution was not significant compared to the sheer number of other vehicles on the roads of Delhi.28

A case can be made that the public at large did not have a very strong role in the Court proceedings or the decision process. To some extent, Mehta and CSE represented the interests of some parts of the wider public, and CSE made efforts to bring the issues into the public domain. However, both were self-appointed, and they decided not to engage in public consultations as they formulated their positions. No organized group represented other points of view, such as the interests of the bus-riding public. At various points, EPCA tried to inform the public through media advertisements (for example), but none of this could be truly characterized as two-way communication. The amicus curiae’s responsibility was to speak for unpre-
drivers went on strike, backed by BJP party member Madan Lal Khurana. They demanded that the central government issue a law declaring existing diesel a clean fuel. Taxi and auto-rickshaw owners also went on strike. Despite intense lobbying and the threat of civil disruption, the government decided against this course of action. The second example came during a very heated debate about the CNG policy. Prime Minister Atal Bihari Vajpayee decided not to back the passage of a law that would allow existing diesel vehicles to operate on Delhi streets. The central government was under substantial pressure and could have argued that it was legal to override the Court. But in both instances, the major Indian parties repositioned themselves at various times. For example, BJP, the opposition political party in Delhi, also saw an opportunity to exploit the situation between political institutions and the Court. Congress, the ruling party at the time, became spokespeople for transporter unions. None of that should be surprising. The issues were controversial, and the debate intense. What should be noted is the apparent tension between political motivations and an underlying commitment to the sanctity of the Court process. Two examples illustrate this: In one, the diesel bus drivers went on strike, backed by BJP party member Madan Lal Khurana. They demanded that the central government allow existing diesel vehicles to operate on Delhi streets. The second example was the CNG policy debate. Political motivations and the Court's role were intertwined in both cases.
ment chose not to confront the Supreme Court and let the policies in question stand, possibly because public awareness on this issue made such a confrontation unpopular. This may provide the larger framework within which all of these institutions work in India, including a basic respect for rule of law and a disin- clination to cause damage to the very government fabric.

Judging the Efficiency of the Policies

One of the strongest attacks on the CNG decision is that it is not economically effi- cient to force all commercial vehicles to use a single technology. The Mashelkar Committee and critics such as Ranjan Bose, a senior government expert, made a substantial mistake on this issue.40 The Court and its advisors could turn to other fuel-policies, explore new technology, and consider how to effectively implement policies, no matter what their cost.41 And, it is arguably easier and more straightforward simply to bribe the tester.42

Critics expressed publicly that the Court had made a substantial mistake on the issue.43

The evidence shows that fuel adulteration was an important reform.45 This premix was an important reform.45 This was a success story but some problems were encountered that foreshadowed difficulties in introducing CNG into Delhi. At some stages, there were not enough filling stations to meet the growing consumer demand. This encouraged some motorists to disable their catalytic converters.46

The second experience was the require- ment that two-stroke engines use premixed fuel (petrol mixed with the proper 2 percent lubrication oil). The purpose of this was to reduce the problem of excess lubrici- ant, which is highly polluting. Many two- stroke vehicle owners were adding as much as 5 percent oil—two- and-a-half times the appropriate amount—which caused significant pollution. Because two-stroke engines power about two-thirds of Delhi's vehicle fleet in the mid-1990's, premix was an important reform.47 This was not only a much easier change to make than the switch to CNG, it also benefited vehicle owners. Excess use of oil causes deterioration of vehicle performance. Because the economics of introduc- ing new technology were largely favorable and compliance with the program did not require vehicle owners to make a substan- tial financial investment, the change could be made without much friction.

The sticking point for the Supreme Court in the combustion engine was the willingness of car owners to accept it. As early as 1994, a survey concluded that highly subsidized kerosene causes serious health problems.48

Long-Term Impacts on Governance and Regulation

There are many stages of the supply chain: at the refinery gates, during transport to retail outlets, at retail outlets, and by operators of diesel vehicles. Bus operators siphon off significant amounts of diesel.49 On other attempts to regulate polluting vehicles, demonstrations of the shortcomings of policies that might have been more efficient under more ideal circumstances. It may have been more efficient to iden- tify vehicles that were the worst polluters than to make a blanket judgment and ban all older vehicles—but it is far easier to make the same mistakes in policy-making.46 The evidence before the Court was that kerosene causes serious health problems.48

67 The proponents of the more efficient long-term multiple-fuel policy were never able to provide a cogent response to the adulter- ation of CNG.49 This is ultimately why the Court chose CNG, a gaseous fuel that can- not be adulterated.

In the end, the experience with PUC and other attempts to regulate polluting vehicles demonstrated the shortcomings of policies that might have been more efficient under more ideal circumstances. It may have been more efficient to iden- tify vehicles that were the worst polluters than to make a blanket judgment and ban all older vehicles—but it is far easier to make the same mistakes in policy-making.46 The evidence before the Court was that kerosene causes serious health problems.48
ter how well they have been thought out. They seem to lack regulatory self-confidence—even much practice in the actual act of regulating.

One possible outcome is that the appropriate agencies of the Indian government will gain confidence from the Supreme Court’s successes. In the fall 2003 Indian elections, numerous politicians, many of whom at various points fought the CNG decision, took public credit for Delhi’s cleaner air. The entire experience could be a lesson that bold action to manage difficult pollution problems will be rewarded.

The existing environmental authorities in India might be encouraged not only to announce standards but also to enforce them. Today, India is considering whether to consolidate various EPA-like committees into an EPA-like regulatory body. If this happens, and the new body is empowered to make and enforce real decisions, the Supreme Court’s actions will prove beneficial to the evolution of more mature regulatory institutions and processes.

However, although the Court relied largely on government analysis and existing policies as it made its CNG decision, it is not clear that this same discipline has continued into the most recent activities of the Court—including instances in which the Court has focused on very small details of policy implementation. Many such instances seem increasingly far afield of the original set of issues. For example, the Court seems ready to adjudicate issues such as CNG pricing and inter-district transshipments. While these matters are indirectly related to the core issues before the Court, it can be argued that the legislative branch would more properly decide these issues. Also, including NGO advocates—have expressed such concerns. It is not hard to see how the Court could become a victim of its own success and push too hard on issues that are really beyond its technical competence. And this is not a situation in which relying on the competence of the EPA will necessarily remedy the basic inappropriate assumptions of diverting these substantive decisions into a judicial body.

Lessons for Neighboring Countries

Much of the international attention to the Delhi experience has focused on the litigation and its outcome. Little, however, has been said about the surrounding institutions or the role of the government in its various facets, including committees such as EPCA. As a result, there are similar lawsuits in Bangladesh, Pakistan, Sri Lanka, and Nepal asking the courts to act where the government has not. Often, the Indian case is cited as legal precedent. In some of these cases, the country’s highest court has issued orders, but such orders have been entirely or selectively ignored by the government or the public. When this has happened, lawyers and public interest organizations that have brought such cases have been understandably frustrated and now seek alternatives. The Lahore High Court in Pakistan has established a quasi-judicial, EPCA-like committee to try to develop consensus on the outstanding issues.

Based on the evidence in India and in other countries, several factors are highly relevant to observers and would be extremely helpful to those who seek to emulate the Delhi experience.

First, a dependable decisionmaker must exist—a body that commands respect and has the requisite independence to order the necessary environmental reforms. In India, this was the Supreme Court. The Court enjoyed a unique status in Indian society, such that even very high-ranking political officials would think twice about resisting once the Court had clearly acted. The Indian Supreme Court was able to navigate India’s largest democracy and limit personal freedoms, is remembered many years later with bitterness. Indians take great pride in having the world’s largest democracy. Where there is no such tradition of an independent judiciary or a law-based society, a single court is unlikely to reverse history. Part of the challenge in such countries may be not only to bring these kinds of cases but also to educate judges and the public.

Second, countries should only consider environmental tools that are consistent with their prevailing technical and institutional realities. These realities include the strength and performance of existing enforcement procedures and whether there is a culture of compliance. For example, it is possible to set performance standards in the United States where there is relatively consistent enforcement, transparency of emissions information, and many “eyes” to watch for potential offenders—including the prospect of citizen enforcement suits.

In India, an on-the-ground, realistic appraisal of the situation led EPA and the Court to conclude that fuel adulteration was almost unavoidable. India has not had dependable environmental enforcement, in part because there are not many people assigned to such issues, and because the lower courts, to which most cases would have to be brought, are extremely slow to act.26 Faced with this kind of pervasive temptation to cheat, it was reason- able to conclude that a performance standard was doomed to failure. EPA and the Supreme Court took a realistic response to the facts.

Third, in any country acts in an institutional or political vacuum. Any country that seeks to replicate the Delhi process must understand how its judicial branch’s actions fit into the larger milieu

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of people and institutions. Are there other parts of government or society in general that support its activities or act as “watchdogs” against official inaction or even intentional failure to implement the laws? Is there some level of transparency so that decisions can be sabotaged outside of public view? India has the advantage of a very open judicial process that can serve the community. The Court’s decisions were reported in the press, and the government’s failures were also subject to lively CSE. Could these generate independent representation and disseminate it, and its reports reached a wide audience. Indeed, CSE very admirably fed its findings to the press, to assure that they would receive attention. Not all of India’s geopolitical neighbors enjoy all these factors.

Much as one would like to believe it possible, an expansive and far-reaching change in society—such as cleaning the air of Delhi or even the more limited but still daunting task of shifting commercial vehicles to cleaner fuel—requires more than a single body acting alone. Too many parts of society must play a role in the change and must acquire and change the social habits as well.

The Supreme Court’s orders were successful in at least part because the Court seemed to be at the same time reflecting the changing public interest and directing it. One of the most important factors for the air quality that was in Delhi was unacceptable. India had been through the scathing experience of the 1984 Bhagal gas tragedy—in which an accidental release of toxic gas killed more than 8,000 people and may continue to affect the release of toxic gases killed more than 2,000 people and may continue to affect the international community. Perhaps the time was right for the Court to act. The question we cannot answer is why the time was not right for the government to act without Court interference. Nevertheless, citizens may hope that the experiences of recent years will embolden their elected government to fulfill its rightful role in protecting their environmental welfare.

The Supreme Court ordered that all private cars must conform to the Supreme Court should freeze sales of diesel cars. Instead of following EPCA recommendation, the Court ordered that all private cars must conform to the Supreme Court's 35.8 emissions standards. Both sides do not agree on the matter.

On 2 June 1999, the Delhi government's chief minister, Harsh Vardhan, announced a deadline of 31 December 1999 for Delhi, 4 July 2003. The Court asked the government to set a date for the conversion to CNG technology. The government responded that the deadline would be extended to 31 December 2003. The Court ordered that all private cars must conform to the Supreme Court's 35.8 emissions standards. Both sides do not agree on the matter.

For example, the ninth progress report of the Environment Protection (Prevention and Control of Pollution) Authority (EPCA) covering July 2000 to December 2001). The Court asked the government to set a date for the conversion to CNG technology. The government responded that the deadline would be extended to 31 December 2003. The Court ordered that all private cars must conform to the Supreme Court's 35.8 emissions standards. Both sides do not agree on the matter.

The conversion of the existing diesel-fueled vehicles would probably also condemn environmental groups... conclude that the technical decision to shift to CNG is a sound one. However, the imperfect test is not a substitute for more precise definition of “clean fuel.”

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