

MOTIVATING A CONFLICTED ENVIRONMENTAL STATE: COMMUNITY-DRIVEN REGULATION IN VIETNAM

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*“Without the support of the public, even the easiest task cannot be accomplished.
With the support of the public, even the hardest task can be fulfilled.”*
Vietnamese Communist Party slogan

I. Introduction

The Vietnamese government, like many countries, faces significant conflicts between developmental goals and environmental protection. Although the government has proclaimed a commitment to protecting the country's ecosystems, workers, and urban environments, and has recently created national environmental institutions and provincial enforcement agencies, Vietnam continues to experience problems in the implementation of its environmental laws. A lack of funds, trained personnel, and political influence severely constrain the effectiveness of state environmental agencies. More importantly, contradictions and conflicts within the state – between developmentalist and environmental concerns – create disincentives for enforcement of environmental regulations.

While certainly common in developing countries (and many industrialized countries as well), these conflicts are particularly stark in Vietnam. Vietnam appears to combine the worst of both Soviet-bloc environmental callousness with East Asian development-at-all-costs. Beginning from a base of 1950s-vintage highly polluting heavy industry, adding the recent expansion of export-oriented light industry, and acknowledging the state's limited capacity for environmental regulation, the country seems destined for rapid urban and environmental degradation. Recent assessments of Ho

Chi Minh City conjure an image of an ecological nightmare combining Warsaw with Bangkok; the worst of the socialist world as a starting point for unbridled capitalist development.

Local environmental bodies remain weak and conflicted. These agencies are rarely proactive, seldom technically competent, and even less often carry much weight in internal government debates. Agencies have inspectors who virtually refuse to leave their offices, staff who are getting rich off of kick-backs, and personnel who lack the basic technical capacities to conduct the inspections for which they are responsible.¹ Even committed staff face significant pressures against enforcement from other state agencies, powerful state enterprise managers, and foreign investors.

However, despite all of these weaknesses and conflicts, research conducted in Vietnam over the last four years indicates that local agencies (and in particular province-level regulatory bodies) do sometimes respond to public complaints and regulate industrial pollution. Under specific conditions, when they are appropriately motivated, environmental agencies can become effective regulators.

This paper examines the challenges (and anomalies) of environmental regulation against the odds. Specifically, I will try to elucidate what drives these regulatory processes, and more broadly, what motivates and constrains state actions around the environment in a rapidly developing country.

The evidence for this argument is based on an in-depth study of Vietnam's national regulatory system and local enforcement procedures for pollution control. Research involved semi-structured interviews with factory managers, workers, community members, and government officials. Media reports, environmental impact assessments (EIAs), inspection documents, fines, compensations, and other government actions were reviewed. The cases I will discuss provide a

¹ This critical assessment is based on direct work with officials in four government agencies over a four year period.

wealth of evidence regarding processes of state and community action around pollution issues, when these processes are effective, and why. Despite broad variation, the diverse cases point towards a number of interesting dynamics.

This paper both confirms the constraints and contradictions of state environmental enforcement in a developing country, and shows that certain processes can motivate state actors to take measures to control pollution. In the cases I will discuss, community pressures served to tilt the balance in conflicts around the environment, motivating local state responses to specific pollution incidents, pressuring environmental agencies to improve their monitoring and enforcement capabilities, leveraging different state agencies off against one another, and raising broader public and elite awareness of environmental issues. This paper seeks to explain these processes, and to make an argument about how a process of “Community-Driven Regulation” is working in Vietnam. As I will explain, Vietnam’s system of laws and institutions has fostered a dynamic in which local environmental agencies can be surprisingly responsive to community complaints. The trick however, is motivating these conflicted state agencies to act.

II. Theories of State Environmental Enforcement

Political scientists, policy analysts, economists, sociologists, and even environmental scientists have described the challenges of environmental enforcement around the world, and proposed theories of why states do, or do not, effectively implement environmental regulations (see Cohen 1998 for a review). This literature ranges from simple assessments of state agency capacities, to more complex theories of bureaucratic behavior, to agency strategies for maximizing net political support.

At the most general level, environmental enforcement is considered simply a question of state capacity. Essentially does the state agency have the funds, trained staff, and technical capacity to monitor and enforce its laws? Studies in developing countries in Asia, Africa, Eastern Europe, and

the Americas repeatedly discuss the problems of inadequate staffing and funding, lack of scientific knowledge, lack of professionalism, lack of institutional capacity, lack of coordination and cooperation, limited independence, and the over-centralization of environmental responsibilities in weak national environmental bureaucracies (Desai 1998, Eder 1996, Dwivedi and Vajpeyi 1995, Sapru 1998).

Capacity, however, is more than just staffing and funding. Other characteristics are also critical to environmental enforcement such as state coherence (the degree to which agencies and actors in the state agree to work toward shared objectives), autonomy (the extent to which the state can act independently of external forces), legitimacy (the strength of the state's moral authority), reach (the state's ability to get things done in society), and responsiveness (the extent to which polices meet the needs and grievances of citizens) (Barber 1997).

Coordination and decision-making between agencies and departments can also be critical to the implementation of environmental policies. Decision-making authority can be both too highly centralized or too fragmented (Desai 1998). Centralization can lead to problems when regulators don't fully understand problems on the ground, trade-offs that need to be taken at the local level, or the power of local vested interests. Rigid hierarchies are also less capable of learning from local experiences and experiments in implementation. On the other hand, completely localized policy implementation can lead to problems of limited capacities, corruption, and poor coordination between locales.

As numerous analysts have argued, the state is often an arena of competing interests seeking to advance different goals and objectives. Gould et al. (1996) argue that the state continually faces conflicting interests and goals around environmental issues. At the most basic level, the state must both facilitate capital accumulation and protect society's living conditions. This means both promoting industrial expansion and trying to protect air and water quality. Sometimes this takes on

a “zero-sum” competition for access to natural resources (such as use of forests for timber companies and national parks). Other times the state simply is not capable of effectively enforcing environmental regulations in the face of powerful corporate interests. As Evans (forthcoming) argues, “within any jurisdiction, and often cutting across them, agencies are divided by sector and function and have competing responsibilities and interests. The role of the state consists then of a variety of roles played out in contradictory ways.” State action around the environment in Vietnam clearly shows this contestation.

III. The Environmental State in Vietnam

Vietnam is in the process of establishing essentially a command-and-control system of environmental regulation (although modified to the Vietnamese political context), with an extensive system of standards, monitoring, and enforcement. The Law on Environmental Protection (LEP), promulgated in December 1993, is the umbrella environmental law for Vietnam (SRV 1994). Since the passage of the LEP, the government has issued a wide range of decrees, directives, and circulars that flesh out the law, and create implementation instruments to realize the goals of environmental regulation and enforcement. In 1995, the Vietnam Standards Institute within the Ministry of Science, Technology, and Environment (MOSTE) issued national environmental standards, including standards on: ambient air quality; maximum allowable concentrations of hazardous substances in ambient air; inorganic and organic industrial emissions; pesticide residues; surface water quality; coastal water quality; ground water quality; industrial wastewater discharge; and maximum permitted noise levels. While this list is impressive for its comprehensiveness, it may actually be too detailed for most agencies to implement. Local regulatory bodies simply don't have the equipment or training to monitor and enforce this range of standards.

An important component of Vietnam's system of environmental laws involves the rights of citizens to complain about environmental problems. Article 33 of the LEP states that people who detect signs of pollution must immediately notify the local People's Committee. Article 43 states that the

public has the right to complain or “denounce” state management of environmental problems. And Article 49 and 52 establish that polluters must compensate those people who suffer impacts from pollution. These statements of environmental rights, while still fairly vague, have served to legitimate public complaints and created a small window of opportunity for public participation in environmental issues.

The government has also passed a decree on environmental fines (known as Decree 26). However, actual implementation of this system of penalties varies widely in different locales, and the entire system of fines seems to have had little impact on pollution levels. As one factory manager explained, “Fines only serve as a kind of warning not to pollute,” while a local government official complained that, “Fines go to the state treasury. Losses are born by the local communities.” Based on their current levels, fines don’t even appear to be much of a warning. The highest fine in 1997 and 1998 in the four provinces I studied was approximately \$380 for a foreign firm and only \$170 for a state enterprise. Clearly fines of this size have little economic impact on firms with multi-million dollar budgets.

While fines are extremely low, compensations to impacted communities are sometimes set high enough that they can influence firm decisions. Community demands for compensation have been increasing steadily since the passage of the LEP. Communities now feel that they have legal rights not to be polluted, or at the minimum to be compensated for the economic impacts of pollution. The system of compensations, however, is hardly ideal. Compensations are usually only paid after economic damages have occurred, and only if the community members can prove that a specific factory caused the damage.

As I will discuss below, actual enforcement is usually more a matter of local politics and negotiation than a function of strict adherence to official policies. The LEP grants local authorities the power of setting and enforcing local regulations. Implementation thus remains the critical issue.

Structures, Hierarchies, and Coordination

The National Environment Agency (NEA), within the Ministry of Science, Technology and Environment (MOSTE), is officially responsible for environmental management in Vietnam, and in particular for the implementation of the Law on Environmental Protection. However, the NEA and MOSTE are only two players in an extremely complicated patchwork of ministries, departments, and agencies operating at multiple levels who are responsible for regulating pollution. In each of the country's 61 provinces and its three largest cities (Hanoi, Ho Chi Minh City, and Haiphong), the government has established Departments of Science Technology and Environment (DOSTE), which are responsible for monitoring and enforcing the nations' environmental standards and regulations. These departments are largely responsible for influencing whether or not laws are implemented and whether or not the environment is protected. Table 1 lists some of the agencies involved in different aspects of environmental policy development and implementation.²

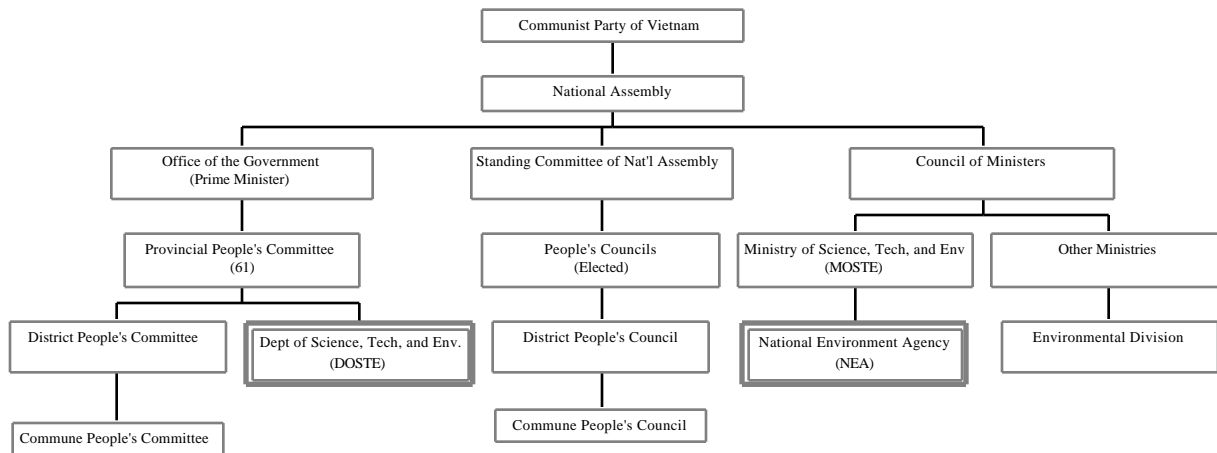
Table 1 – Agencies Involved in Environmental Policy

Environmental Activity	Government Organization
Policy Making	Communist Party of Vietnam Prime Minister National Assembly Provincial People's Councils National Environment Agency
Planning	Ministry of Planning and Investment Ministry of Finance Provincial Departments of Planning and Investment Line Ministry Planning Departments Ministry of Science, Technology, and Environment Universities and Institutes
Oversight	Ministry of Science, Technology, and Environment (MOSTE) National Environment Agency Provincial People's Committees Line Ministries
Implementation	National Environment Agency Provincial Departments of Science, Technology, and Environment (DOSTEs) Line Ministry Environment Departments

Source: Adapted from UNDP 1995.

The Law on Environmental Protection also requires line ministries to establish their own environmental management divisions. Most ministries have thus created nominal environmental divisions, some of which are much stronger than others. The Ministry of Construction for instance, has a much more developed environmental unit than the Ministry of Industry. The Ministry of Agriculture and Rural Development now has expansive environmental programs under its control (primarily relating to green-side issues such as forestry and rural ecosystems). And the Ministry of Planning and Investment (MPI) now has a powerful environmental unit within its Department of Science, Education and Environment (DSEE). DSEE is the counterpart to NEA and MOSTE on foreign development projects which have environmental components. Figure 1 shows a basic schematic of the government structure on environmental management, and Figure 2 shows the key ministries involved in environmental issues.

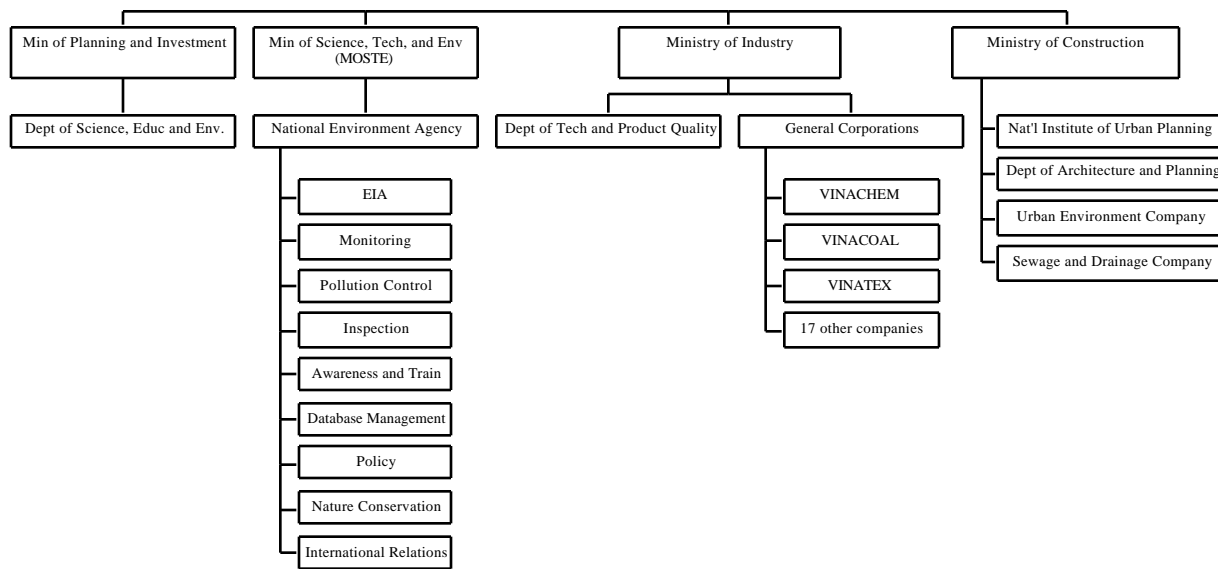
Figure 1 - Government Structure for Environmental Management



Source: Adapted from UNDP 1999

² These institutional arrangements continue to evolve with the political and economic reforms underway in Vietnam.

Figure 2 - Ministries Involved in Industrial Environmental Issues



Source: Adapted from UNDP 1999

This dispersal of environmental responsibilities to the line ministries has both positive and negative implications. One major problem is the overlap of responsibilities and competition between ministries and agencies to control decision-making over environmental planning, EIA review, and policy formulation. This dispersal of responsibilities without attendant mechanisms for resolving inter-ministerial disputes remains a problem for many areas of environmental management.

The organizational relations between the central government and the provinces around environmental management is also quite complex. The NEA is a division of the Ministry of Science, Technology, and Environment (MOSTE). Ostensibly the Departments of Science, Technology, and Environment (DOSTE) are the provincial versions of the MOSTE. However, the DOSTEs do not report directly to, or take instructions from, the MOSTE. Rather, the DOSTEs are managed by the People's Committees of each province or city, which report directly to the Office of the Government and the Prime Minister. The NEA does attempt to guide the DOSTEs on implementation of national environmental policies, and occasionally hires them to carry out national

inspection programs or EIA reviews. However, the DOSTEs remain primarily responsive to local People's Committees.

As figures 1 and 2 should indicate, environmental institutions in general are organized along vertical hierarchical lines, and as such transmit information and orders up and down along these vertical chains of command. The different organizations and institutions responsible for environmental issues seldom pass information or coordinate action among institutions horizontally. So for instance, the provincial and city DOSTEs don't generally coordinate well with the National Environment Agency, and the NEA doesn't coordinate well with the Ministry of Planning and Investment's Department of Science, Education, and Environment.

In a multi-year study of environmental issues in Vietnam, the World Bank (1994) made one of its highest priority recommendations the coordination of environmental policy and implementation through "the establishment of a supra-ministerial body or council to be chaired by at least a Deputy Prime Minister with MOSTE serving as the secretariat." Three years later, in another report, the World Bank (1997: vii) again put the establishment of a cross-ministerial consultative committee to coordinate between MOSTE, the Ministry of Planning and Investment, the Ministry of Finance, and the Ministry of Industry as its top priority recommendation. However, to date, no such coordinating committee has been established, and lines of decision-making around pollution issues remain unclear.

Conflicts in the State

State agencies face a range of costs related to environmental enforcement, including the financial costs of building agency capacity and carrying out inspections, as well as the political costs of challenging factory managers, other government officials, and local constituencies. There are major political and economic costs associated with closing down a polluting factory (which is why it is so rarely done). On the other hand, there are also political costs to ignoring community

complaints and allowing local environments to be degraded. In the long-term, government regulators face concerns about both “over-regulation” that scares off foreign investors or harms the economy, and “under-regulation” which allows destructive activities which undermine the local quality of life, resource base and political legitimacy.

These conflicts are particularly stark in regards to State-Owned Enterprises (SOEs). When the state is both the polluter and the regulator it is extremely difficult to overcome agency conflicts and advance normal regulation. The issue arises for example when the NEA has to deal with a pollution problem at a Ministry of Industry (MOI) affiliated factory. While MOSTE is on the same administrative level as the other line ministries, NEA is not powerful enough to force MOI, or even the environmental department within MOI to do something it opposes. And as mentioned there is no established system within the Vietnamese government for arbitrating inter-ministerial disputes around environmental issues.

The example of trying to shut down factories is particularly telling. In 1995, NEA released a “black list” of 13 state enterprises it felt should be shut down because of the severity of their pollution. These firms were very clear polluters, with little hope of ever improving to the point of being in compliance. The reaction from other ministries and agencies however, was so strong that NEA’s plans were completely blocked. To date, not one of the factories on NEA’s black list has been shut down (UNDP 1999).

IV. Community-Driven Regulation

In the face of these conflicts and contradictions, state agencies must be motivated to enforce environmental laws. From my interviews with government regulators it is clear that the vast majority of regulatory actions in Vietnam occur only after community complaints. For instance, staff at the Departments of Science, Technology and Environment (DOSTE) in three provinces – Ha Noi, Dong Nai, and Phu Tho – admitted that all inspections to date have been driven by

community complaints.³ Representatives of the National Environment Agency (NEA) similarly acknowledged that all of the inspections conducted between 1996 and 1998 were instigated after community complaints. Staffing weaknesses in environmental agencies, the current absence of a system for prioritizing inspections, and the strength of community demands, has led to this situation of Community-Driven Regulation.

In the six case studies I examined, only when state actions were instigated by, and combined with community pressures, did a firm significantly improve its environmental performance. Without community pressure, existing policies achieved little in the way of environmental protection. Community actions that successfully drove a process of state legitimated regulation achieved environmental improvements. This process of Community-Driven Regulation (CDR) does not supplant so much as actuate and reinforce traditional regulation.

Successful cases of CDR follow a similar pattern: (1) communities identify priority environmental problems and instigate action to solve them – usually through complaint letters to a local government agency, letters to the firm, or protests; (2) the state responds by investigating, gathering data, and analyzing past performance and existing requirements on the firm; (3) the state may also set fines or require technical changes inside the factory; (4) the community monitors the state's actions and any changes in the performance of the firm (albeit through unscientific means); (5) if the pollution is not reduced the community escalates its pressure on the firm and challenges the state to fulfill its legal mandate, often turning to extralocal actors (such as the media or higher governmental bodies) to support their claims.

When the CDR process is successful, the community performs activities which complement state functions and actions. Community efforts to monitor factory performance, target problems,

³ There is one recent exception to this pattern. The National Environment Agency instigated a nationwide program in 1997 to “inspect” firms for compliance with the EIA law. This program was simply an attempt to assess how many firms had conducted EIAs, and whether firms were complying with the terms of their EIAs.

demand results, and verify improvements, actually support state efforts to establish and implement a broader legal framework. My cases show that while it is by no means perfect, CDR is functioning and is helping to realize the formal environmental regulations that are on the books in Vietnam. Bringing community action into the regulatory dynamic has achieved environmental gains where the state alone had not. The surprising success of community action in a largely unsupportive legal environment raises a series of questions about how these actions work.

V. Community-Driven Regulation in Vietnam

The frontline environmental agencies – the provincial Departments of Science, Technology, and Environment (DOSTEs) – face a continuous struggle to enforce Vietnam's environmental laws and decrees. Agency staff that are committed to enforcing the law face internal and external pressures against enforcement. Weaknesses in capacities and motivations of agency staff further impede enforcement. However, under certain conditions these barriers can be surmounted.

The Dona Bochang Factory and the Dong Nai DOSTE

The Dong Nai province DOSTE (an industrial province just outside of Ho Chi Minh City) received roughly 60 complaints about pollution problems per year between 1994 and 1996. However, in 1997, the DOSTE inspection division reported receiving over 100 complaint letters in the first six months alone (Mr. Tien – personal interview – 4/9/97). Complaints have streamed in at this rate ever since. One community has been particularly vocal and persistent with their complaints about a factory called the Dona Bochang Textiles Plant.

Community members have argued in their letters that this Taiwanese joint-venture is an insult to the neighborhood, affecting peoples' daily lives, disrupting special occasions, and even defiling their center of worship – the local Catholic church. Pollution impacts such as respiratory problems, corroded roofs, and blackened plants have led to an escalation of community actions that have included regular complaint letters, throwing bricks at the factory, working with the media, and

developing a long-term campaign to pressure the DOSTE to either regulate the factory or move it altogether.

As the Taiwanese managers and government officials soon found out, the people living around Dona Bochang are a tightly knit community. Approximately 95 percent of the population are Catholics who moved to the area in 1954, fleeing the Communist victory in the north. Many have been living in this area for over 40 years, long before a school was torn down to make room for the factory. The community's solidarity and internal social capital has been strengthened by over 40 years of church organizing. The residents along the factory's back wall live together, work together, socialize together, and worship together. Each time I went to interview an individual household, within a few minutes, 15 to 20 people would be gathered in the house telling their stories.

Locating a highly polluting factory in this community is a glaring example of unplanned urban development and the absence of zoning in Vietnam. The factory and the local residents are separated by no more than a three meter-high wall and a dirt road that runs along the perimeter of the factory. People live cramped together in small houses along the back wall of the factory. The community's church is located along another of the factory's walls. The factory's air emissions when not blowing across the back wall into the residential area, often blow directly into the church. Unfortunately for the parishioners, the church is an open air building with little more than a roof, an altar, and rows of pews.

In my interviews, one family stood out as leaders of community action. This family seemed fairly well educated and quite well off for the community, running their own small household enterprise finishing wood furniture. Living and working just a few feet away from the factory wall, the family had collected a thick file on the factory's pollution, including press clippings, letters they had sent to various government agencies, the responses they had received, and photographs of

pollution impacts. They regularly drafted letters for others to sign. They had been on the official delegations to the factory and to government meetings. They had even made a video of the pollution.

After years of having their complaints ignored, an incident served to ignite community actions in 1993. On the day of a local wedding, air pollution from the factory coated trays of food laid out for the reception in a layer of black soot. Community members considered this the last straw and marched to the front gate and threatened to tear down the wall and shut down the factory if the manager did not come out to talk to them. Some young people went so far as to throw bricks at the factory, highlighting how serious the community was in their determination to force a response.

On that day a factory representative asserted that the factory was doing all they could and promised the problems would be solved. The community forced the manager to sign a statement attesting to the level of pollution. Photographs were taken. Several months later, when nothing had changed, the community brought their complaints, the pictures, and the signed statement, to the Dong Nai DOSTE and the media. After newspaper reports questioned the failure of the government to regulate the pollution, with articles such as “Dona Bochang Factory Continues to Generate Pollution,” the DOSTE agreed to take action.

The DOSTE responded to the community complaints by organizing an inspection team and several meetings between community members and the factory. The community however, criticized the inspection process, charging that because it was a planned inspection, the factory was able to turn off the polluting equipment before the inspectors arrived. Community members argued that their daily experiences were more accurate than the data collected from the inspection. Later, when pollution levels resumed, the community sent more written complaints to the government and the media. This renewed pressure motivated more meetings, and finally resulted in the factory agreeing to install equipment to reduce its emissions.

The head of DOSTE's inspection division confirmed how important these public complaints are to their regulatory process, "If the complaints of a community are very strong, that factory will be inspected first. We have too many factories to inspect, so we prioritize based on complaints" (Mr. Tien – 6/9/97). The director of the environmental management division agreed, asserting that "Every normal inspection in Dong Nai is preceded by a complaint" (Mr. Het – 8/1/98).

By the fall of 1997, the neighbors of Dona Bochang had achieved a qualified victory over the factory. Since the wedding party incident, the factory had made three changes to reduce its air pollution. First, it built a taller smokestack – the classic solution to local environmental problems. When this did not reduce the local impacts, the factory changed its practice of "blowing the tubes" from its boiler, which was a major source of the black soot people complained about. Finally, when this still had not resolved the problems, the factory installed an air filtration system to capture the pollution. This process took several years, but resulted in a significant reduction in air emissions.

The state's role in this case is complicated. As this is a joint-venture, the Dong Nai People's Committee owns 10 percent of the factory. Community action is thus in conflict with the short-term economic interests of the provincial People's Committee (which controls the DOSTE). The community's perception that they had to overcome this conflict of interest led them to look to extra-local actors such as the National Environment Agency and the media to help address their problems. It also strengthened the community's resolve to keep pressure on the factory and the provincial authorities. Community members did not trust the state to take action without repeated pressure. However, at the same time, the fact that the factory was majority foreign owned may have worked to the community's advantage. While the Vietnamese government is largely concerned with attracting foreign investors, individual agencies are also sometimes sensitive about public perceptions that the state is privileging foreign capitalists over common people.

The improvements at Dona Bochang appear to be due in large part to the strength, organization, and persistence of a tight-knit local community. However, the community on its own, was not able to change Dona Bochang. Direct letters and meetings with the factory did not result in pollution reductions. Success came through pressure on local and national government agencies, exerted both directly and through the media. The community's linkages to local government officials and extra-local reporters were critical to its success in motivating state action.

The Dona Bochang case represents a success of Community-Driven Regulation. A cohesive and connected community was able to pressure a state agency to take action on a polluting firm. The community sounded repeated alarms, and monitored state and firm actions. By using official complaint procedures, as well as unofficial tactics (protests, threats, media pressures), a tight-knit community was able to exert significant influence over pollution issues.

The Ba Nhat Factory and the Hanoi DOSTE

The Hanoi DOSTE receives over 1000 community complaints about pollution each year. One of the longest lasting of these controversies has focused on the Ba Nhat Chemical factory. Ba Nhat has been producing chemicals in this area since the 1960s, when three small cooperatives were merged into a city-owned company. The Hanoi Department of Industry owns the small factory which employs 200 people. Over the years, output has grown, as has the pollution which rains down on the apartment buildings just 5 meters from Ba Nhat's walls.

Pollution has been serious since at least 1987 when the community began complaining in earnest about the impacts of the factory's production. During the last 12 years, community members have written over 100 letters to all levels of the government, including the National Assembly; submitted a letter to the courts, similar to a lawsuit demanding action on the factory; motivated journalists to write articles, and even written their own articles and paid to have them published. These actions

have been coordinated by the “Committee Against the Pollution of Ba Nhat” which meets regularly to strategize about the factory, and is headed by a retired professor.

Community members were successful in pressuring the government to commission a study on the factory's pollution. The results of the study by another university professor found that 3000 people were adversely affected by pollution that included: carbon monoxide emissions 70 times higher than the legal limit, dust 10 times higher, sulfur dioxide 4 times higher, and other toxic gases 5 to 7 times the permitted levels (Nguyen 1996). By the early 1990s, most people seemed in agreement that the factory was a problem. Every level of government imaginable had been contacted. Data clearly showed the factory in violation of environmental laws. Nonetheless, the factory continued with business as usual.

The community around Ba Nhat has a number of critical traits necessary to motivate action on environmental issues. They are cohesive, have high technical capacity, and have good connections to government officials. The community is the best educated of any I studied, made up of current and retired professors from the nearby Polytechnic University, as well as government employees. People are relatively well-off, solidly upper middle class in Vietnam. The community is in an urban area, close to the hallways of power. The community even has access to a wealth of damning environmental data. However, even with all of these critical characteristics, the community failed for year after year to win changes at Ba Nhat.

City government agencies are at the center of the Ba Nhat decision making. The Hanoi Department of Industry (DoI) owns and manages the factory. The Hanoi Department of Science, Technology, and Environment (DOSTE) is responsible for regulating Ba Nhat (although community members complain that responsibility for environmental management of the factory is not well defined). Both agencies report directly to the Hanoi People's Committee. Within this political system the

DOSTE is much weaker than DoI. In fact, the DOSTE has not shut down or moved any of DoI's 200 factories, despite repeated promises to do so.

For years the community failed to find any leverage over the DoI. For state-owned enterprises like Ba Nhat, environmental reforms necessarily involve one state agency pressuring another state agency to make a change. As the National Environment Agency does not have jurisdiction over city-owned factories, this case boils down to a political battle between the promoters and regulators of Ba Nhat within the Hanoi city government. Failing to motivate changes in the Hanoi bureaucracy, community members took their complaints to higher levels, petitioning the National Assembly and even the Prime Minister.

Finally, in late 1998, after more than 10 years of community complaints, the Hanoi government announced that it would physically move the factory out of the city to a rural area with an existing chemical complex. DOSTE staff explained in interviews that they had faced a series of battles over this decision. First, the DOSTE had to overcome the DoI's resistance to moving the factory at all. When DOSTE finally won approval to move the factory, they then had to begin the process of working with suburban and rural government officials and community members to convince them to accept the factory. These efforts were blocked twice before a rural community with an existing chemical plant finally agreed to accept the plant. Continued (and escalated) community pressures from the Ba Nhat community were critical to strengthening the position of the DOSTE, and I believe, ultimately tipped the scales towards moving the factory. As one government official explained, "Pollution was the key issue on motivating the move. There were many complaints from the public, and the National Assembly representative worked to push forward the decision. Ba Nhat is the first factory in Hanoi to be moved by force because of public pressure" (personal interview – December 26, 1998).

The Ba Nhat case shows clearly that community capacity and cohesion alone are not enough, and at the same time illustrates the subtleties of linkages to the state. The community around Ba Nhat is by no means isolated, but its connections with the state were frustrated by other powerful interests for 10 years. With no autonomy and little capacity, the Hanoi DOSTE is almost powerless to regulate polluting state enterprises that provide jobs and tax revenues to the Department of Industry. Only extensive public pressure through the media, and connections to power above the Hanoi People's Committee, was ultimately able to overcome the recalcitrant position of the Department of Industry.

VI. Pathways to Environmental Enforcement

Vietnam now has essentially a complaint-based environmental protection system. Public pressures appear to be the primary means to motivate state agencies to pressure firms to reduce pollution. Because agency capacity is so weak, virtually the only time these agencies go out and actually enforce is when they are pressured by community members. Ironically, this public pressure also strengthens the agencies, giving them cover to regulate, and supporting their internal requests for more resources from the state.

Obviously, there are many weaknesses and problems with a complaint-driven inspection system. With little data and no training, community members often end up only complaining about pollution problems that they can see, smell, or feel. This results in a focus on purely localized, short-term, acute impacts of pollution. This type of pollution likely accounts for a significant percentage of industrial pollution in Vietnam at present. Nonetheless, this focus severely limits the range of environmental issues that become priorities for state action. With no knowledge of technical alternatives, communities tend to push for pollution control rather than prevention simply because their main concern is stopping local emissions. Another potential problem with CDR is that stronger communities may force factories to clean up or move, and will scare off dirty factories from siting in their area, gradually shifting pollution to areas with the weakest communities.

The clear limits of community capacity and the potential equity implications of a system driven purely by community pressures, underscores the importance of strengthening the capacity and roles of allies within the state apparatus. At present, environmental agencies at all levels in Vietnam are very young and very weak. Strengthening basic environmental procedures at the national level, such as national ambient environmental monitoring of visible and invisible pollutants, national collection of environmental data, and state-sponsored research on environmental priorities, thus remains extremely important. More fundamental however, is the political position of environmental agencies within the state. Simply put, in internal government battles, environmental agencies generally lose. One of the optimistic implications of the CDR model is that community actions may actually help state environmental agencies to overcome these weaknesses.

As I have mentioned, a somewhat unusual feature of Vietnamese environmental institutions is that the provincial DOSTEs have very weak formal ties to the MOSTE or the NEA. This is particularly unusual because all of the other line ministries have formal relations with the equivalent departments at the provincial level (e.g. the Ministry of Agriculture to a provincial department of agriculture). As it turns out, this is actually a critical institutional factor for environmental policy implementation in Vietnam.

Some communities have been able to advance their interests for better environmental protection within this institutional structure. There appear to be a number of reasons for this. First, because the DOSTEs report directly to provincial People's Committees, which report directly to the Office of the Government and the Prime Minister, complaints that make it to the DOSTE and PC, can have a much greater effect on government action than if they went through the MOSTE bureaucracy on their way to top decision-makers.

Second, while MOSTE is in theory equal to other ministries, in fact it is much weaker and generally loses debates in the Council of Ministers which affect the interests of the Ministry of Planning and Investment (such as foreign investors) or the Ministry of Industry (such as State-Owned Enterprises). MOSTE is thus rarely able to advance environmental concerns through the political structure. As I have noted, the NEA and MOSTE for instance, are not powerful enough to shut down a factory. However, provincial and city DOSTEs have been successful in getting factories shut down or moved by pressuring local People's Committees. This seems to be due to the fact that the NEA and MOSTE have more potential blockages on their way to policy implementation.

Third, the NEA and MOSTE are much less responsive to public complaints and concerns than are local officials. Sitting in Hanoi, the NEA and MOSTE are largely insulated from local political pressures. DOSTEs are better "targets" for local complaints. Local community members can complain directly to local officials, going to their offices, or writing letters to officials or to local newspapers, and hounding officials to implement the laws. And so even though the DOSTEs may have less capacity and official power than the NEA, because of their responsiveness to local demands, and their connections to provincial decision-makers, they are more likely to enforce environmental regulations than national officials.

The vulnerability of local government officials to public critique and the broader struggle of the state for legitimacy has opened up space for community action around environmental issues. Vietnam's socialist legacy has essentially provided a window of opportunity for community participation, and civil society more broadly, to play a constructive role in pollution issues. And through this small window, many Vietnamese community members have jumped. As Roodman (1999b) argues, and my research confirms, "two main sources generate public pressure on industrial polluters and the officials who regulate them: citizen complaints and media coverage."

Vietnamese citizens now literally file thousands of complaints against industrial polluters each year, and journalists produce hundreds of stories (Roodman 1999). The Ho Chi Minh City's DOSTE reports receiving over 1000 complaints per year. As mentioned, the Hanoi DOSTE similarly receives around 1000 complaints per year, while Dong Nai receives approximately 200 complaints per year. The DOSTEs also appear particularly sensitive to media criticisms for failures to enforce pollution laws. Perhaps it is because these critiques conjure an accusation of corruption and incompetence, that DOSTEs sometimes respond so strongly to media reports.

The passage of the LEP was a critical step in creating a legal opening for community complaints and demands. But even before the LEP was passed, citizens were granted the right "to lodge complaints and denunciations with the competent State authorities against illegal doings of State organs, economic bodies... or of any individual" under Article 74 of the Vietnamese constitution (SRV 1992). The constitution made clear that a "person who has suffered loss and injury shall be entitled to damages for any material harm suffered." This provision was translated into an environmental context via Article 43 of the LEP, which states that "Organizations, individuals have the right to complain, denounce to the State management agency for environmental protection or other competent State agencies about activities in breach of environmental protection legislation." As Roodman (1999) points out, this right of "complaints from people living near factories, along with media pressure, have perhaps played at least as significant role as conventional regulatory measures in driving industrial pollution reductions in Vietnam."

This opening and the right of citizens to criticize the government does of course have limitations. Community members allude to unstated lines that must not be crossed. For example, people generally avoid accusing high level officials of corruption directly or publicly. And the LEP itself is quite restrictive in how the public can participate in environmental decisions, essentially allowing only complaints after pollution has occurred, rather than broader public participation in development decisions.

VII. Conclusions

The Vietnamese state has been undergoing major institutional and administrative changes over the last 10 years. And although the Communist Party continues to affirm its sole control over the government, the roles and capacities of the state are nonetheless being transformed. Most importantly for this analysis, the state is being forced to develop new mechanisms and processes for dealing with industrial pollution problems. Based on recent high level policy statements, it appears that the state recognizes a number of weaknesses and problems in its environmental protection efforts. The government is thus working to shore up its environmental agencies and authority, and to move gradually toward more effective protection policies. However, this is a long and slow road.

At present, environmental agencies at all levels in Vietnam have very limited capacities for environmental regulation, and have limited political powers in internal government battles and day-to-day negotiations with other government agencies. Corruption among poorly paid inspectors only adds to the challenges of regulation. However, public and media pressure around environmental issues is gradually raising the profile, and the bargaining power of environmental agencies. Community pressures have helped to overcome agency resistance to implement laws that impact other state actors (such as the Ministry of Industry). Community pressures are motivating inspectors to do their jobs, a not insignificant feat as most inspectors are overwhelmed by their tasks, under-trained for their duties, and under-paid. Community action is also helping to shine light on local-level corruption, and increasing transparency in all state environmental actions.

Vietnam now thus has essentially a complaint-driven environmental protection system, what I have termed Community-Driven Regulation. Both inspections and sanctions are motivated largely by community demands. The state has played a central role in creating the legal structure for this system, and, perhaps accidentally, for creating the institutional arrangements which make the

DOSTEs an effective target for public pressure. To their credit though, these agencies have worked (since their creation in 1995) to build their own capacity to gather environmental information and to monitor compliance with the country's new laws and regulations. Several DOSTEs are now fairly effective in responding to specific community complaints when they feel impelled.

On the ground, when pressured to act, the DOSTEs can work to effect environmental enforcement. Sanctions, compensation, and compliance schedules are all being implemented, albeit through negotiated processes. Of course, Vietnam's complaint-driven, negotiated regulation looks much different in practice than the legal mandates for environmental regulation look on paper. This is fortunate, for although official regulatory processes remain largely ineffective, some community and state actors have hit upon alternative mechanisms and pathways to enforcement.

This process seems to work because of the institutional structure of DOSTE reporting and responsibility, and because of both the DOSTE's and individual firm's sensitivities to public criticisms. Media reports and public letter writing campaigns raise the implication of corruption or incompetence within the DOSTEs. This pressure from below, combined with the pressure from the hierarchy above, which reaches all the way to the Prime Minister and the Office of the Government, can serve to squeeze the DOSTEs into action. At the end of the day, the DOSTEs must respond to both competency concerns and larger questions of state legitimacy.

The two case studies presented (and four others from a larger research project) point to a number of general conclusions about the role of the state in this complaint-driven process. First, state agencies need a certain level of autonomy from industrial actors, otherwise economic interests take precedence over environmental concerns. If the state is too "close" to a firm, regulation becomes virtually impossible. This can occur in both state-enterprises and joint-ventures. Second, state agencies need a certain level of connectedness with the communities affected by the pollution. There needs to be some form or process of connection for communities to successfully impart their

complaints and goals. Here again, this is why the DOSTEs rather than the NEA seem to be so much more effective in environmental enforcement.

Community complaints and organized pressures are the key driver of this process. It should be noted however, that the state is by no means always happy to respond to community demands for stricter environmental protection. Despite positive examples, state agencies do regularly attempt to block community action. Essentially all protests in Vietnam remain illegal, and most SOEs continue to exist above the law. The range of community actions is thus circumscribed by state decrees and the unwritten rules protecting state enterprises. Vague legal rights create barriers for communities to complain and demand action against a firm.

However, if specific state agencies can be motivated to respond to community demands, Community-Driven Regulation can boost the capacity and effectiveness of local environmental regulators. In several of my case studies, state agencies played pivotal roles in supporting and legitimating community demands for pollution reduction. Successful community actions responded to these openings and focused pressure on the right actors within the state. With so many pressures against enforcement, Community-Driven Regulation may hold out the best hope for advancing environmental protection in Vietnam.

VIII. References

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