

**Community-Driven Regulation:
Towards an Improved Model of Environmental Regulation in Vietnam**

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1. Introduction

Vietnam aspires to follow in the footsteps of the “Tiger” economies of Asia. Over the last 10 years, the government has focused significant financial and political capital on advancing rapid economic development and on building modern, job-providing cities. But even with a strong development bias Vietnam has been forced to recognize that rapid growth can have potentially ominous environmental implications – as seen quite clearly in the neighboring cities of Bangkok and Taipei (see chapters by Douglass et al, and Hsiao and Liu). While representing the potential for successful development (although even this has been called into question recently), countries like Thailand and Taiwan also represent urban environmental problems to be avoided. And as Vietnam begins along this development path 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, Vietnamese cities have the potential to be not just as bad as Bangkok and Taipei, but perhaps even worse.

Currently, Ho Chi Minh City and Hanoi are growing much more rapidly than either Bangkok or Taipei. While Vietnam as a whole has experienced GDP growth of over 8 percent per year, with industry growing by 13 percent per year throughout the 1990s, Vietnam’s urban centers have grown at twice that rate (EIU 1997). Even amidst the Asian economic crisis, when overall GDP growth slowed to approximately 5.8 percent in 1998, Vietnamese industry continued to expand by over 11 percent, slowing only to approximately 8 percent in 1999 (EIU 2000, Vietnam News 8/19/99). A massive inflow of foreign direct investment (which also slowed in 1998) has been driving a process of rapid urbanization and industrialization concentrated primarily around Hanoi and Ho Chi Minh City. Much of this investment focuses on the crude exploitation of natural resources and cheap labor, leading to pollution intensities that are predicted to increase faster than industrial growth (World Bank 1997).

Past policies to control urban growth, such as restrictions on migration, planned decentralization of industry, and the development of New Economic Zones in the periphery, are becoming less effective or being abandoned altogether. Rapid population growth in cities is overwhelming existing infrastructures and exacerbating environmental problems. Vietnam's urban population is currently estimated at 15 million people, or 20 percent of the total population. However, urban populations have been growing by 4.5% per year, more than triple the rural population growth rate. Traffic congestion (and the associated air pollution), residential overcrowding, unplanned land uses (including the siting of highly polluting factories next to residential areas), uncollected municipal solid waste, and polluted rivers and lakes, are the most visible signs of infrastructural inadequacy and regulatory breakdown.

These trends would seem to indicate that Vietnam is on the path to repeating the same unsustainable development patterns as its Asian neighbors. But are there forces that might move Vietnam's cities in the direction of greater livability? Is for instance, the government applying international lessons to prevent Ho Chi Minh City from becoming another Bangkok? Are international financial institutions or NGOs pressuring for more "sustainable development" practices? And what about other potential actors? At first glance, the picture would appear grim.

The persistence of single-party, communist rule in Vietnam raises the specter of the environmental disasters perpetrated by state-socialist governments of Eastern Europe and the Soviet Union (see chapter by Gille). Can the Vietnamese state be expected to do better? In many ways it might be expected to actually do worse. It lacks the economic base that Eastern European states had to work with. A lack of funds, trained personnel, and political influence severely constrain the effectiveness of environmental agencies. The continued failure (or more optimistically, the high costs and slow pace) of traditional environmental policies and regulations highlights the limits of simple command-and-control (CAC) strategies for environmental

protection in Vietnam. State environmental agencies on their own simply have not been able to control adverse impacts of industrialization and urbanization.

What about other actors that might contribute to livability – communities, NGOs, or social movements? Again, at first glance the prospects seem grim. Communities cannot count on competitive electoral politics to give them leverage in demanding action from the state. Essentially all protests in Vietnam are illegal. There are no truly independent Vietnamese NGOs, and the NGOs that do exist are severely limited in the roles they play, appearing much weaker vis-à-vis the state than NGOs in other countries in Asia. Linkages between NGOs and communities are also relatively underdeveloped.

Surprisingly however, research on this challenging (and somewhat depressing) situation has revealed some promising strategies for responding to environmental impacts of industrialization and urbanization, and for achieving a better balance of development and livability. Over the last five years, I have analyzed existing processes for mitigating adverse environmental impacts of industrial development in Vietnam. This research shows that dynamic processes do exist which can motivate pollution reduction. In the cases I analyzed, community actions played a key role in pressuring the state to take action against polluting firms. Of course not all communities were able to mobilize effectively and when community pressures were absent, traditional regulatory policies were largely ineffective in reducing pollution. Nonetheless, some communities were able to mobilize, pressuring firms and the state, and securing important pollution reductions.

Cases in Vietnam point toward the outlines of an improved model of environmental regulation which I call *Community-Driven Regulation* (CDR). Under CDR, communities directly pressure firms to reduce pollution, monitor industrial facilities, prioritize environmental issues for state action, pressure state environmental agencies to improve their monitoring and

enforcement capabilities, and raise public and elite awareness of environmental issues and the trade-offs between development and the environment. CDR represents the conjunction of local-level social networks and state-level agencies, advancing potential synergies between communities and state actors. With a clear focus on local pollution reduction, the different actors in CDR represent examples of Evans' "agents of livability."

The cases I use to illustrate the CDR model are focused on questions of combating industrial pollution. While the outlines of the CDR model might be applied to questions of reducing household pollution or improving the delivery of collective goods such as sewers or waste collection, my research is more specific. The cases consist of struggles between six firms and the communities that are affected by their pollution. These firms vary in size, location, technology level, and ownership, including: a Taiwanese joint-venture textile firm; a state-owned fertilizer plant, a state-owned chemical plant; a state-owned pulp and paper mill, a locally-owned chemical factory; and a Korean multinational shoe factory producing Nike shoes.

Research involved semi-structured interviews with factory managers, workers, community members, and government officials. Waste audits were conducted to assess factory environmental impacts and sources. Media reports, environmental impact assessments (EIAs), inspection documents, fines, compensations, and other government actions were also reviewed. The cases provide a wealth of evidence regarding processes of state and community action around pollution issues, when these processes are effective, and why. Despite broad variation, including cases which highlight how these actors are often "imperfect" agents of livability, the diverse cases point towards a number of interesting dynamics. Before turning to the individual cases, however, it is worth elaborating the CDR model.

2. The CDR Model

The basic premise of the CDR model is that community action can and does sometimes drive environmental regulation. While my research sought to examine three dynamics – state pressures, market pressures, and community pressures on firms – as the research unfolded, it became clear that community action was the key dynamic underlying both state actions and firm initiatives to reduce pollution in Vietnam. While communities are the key actors in this model, the state is also crucial. It is the ability of communities to pressure the state which creates incentives for firms to reduce pollution. 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 three of the most important environmental regulatory agencies – the Departments of Science, Technology and Environment (DOSTE) in Ha Noi, Dong Nai, and Phu Tho – admitted that all inspections to date have been driven by community complaints. Representatives of the National Environment Agency (NEA) similarly acknowledged that the inspections conducted up to the time of my interviews 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 a situation of essentially community-driven inspections.

While it might be expected that communities will complain about pollution and that these complaints will sometimes motivate the state to take action, it is not at all clear why certain communities mobilize (when others do not), and why some mobilizations are effective (while others fail). Reality is much more complicated than a simple linear model of community-state-firm pressure. And community mobilizations alone do not explain pollution outcomes. Environmental processes are influenced by pollution impacts, community strategies and actions, state interests and actions, and firm responses. The state is clearly not monolithic, with agencies varying in level of authority and interests. Internal state conflicts and contradictions often

influence regulatory implementation. Other actors are also involved, including local and international NGOs, the scientific community, consumers (who may be local or international), and the media. These actors make up a complex “ecology of agents” around pollution controversies.

Community mobilizations influence both the occurrence of state regulatory actions, and the effectiveness of these actions. Community pressures (combined with extra-local pressures) have contributed to the generation of new environmental laws in Vietnam, and the practical implementation of these laws. Analyzing the relations between community actors and state agencies, among state agencies, and between state agencies and firms, is critical to specifying how agents of livability interact and how Community-Driven Regulation really works.

The CDR process leads to more than just pro forma state actions. Community members in general are much more interested in results – that is, pollution reduction – than in inspections, reports, EIAs, or even agreements to build treatment plants. Mobilized communities thus serve as an expansive team of monitors to follow-up on inspections and promises of improvement. This is particularly important as monitoring and follow-up are the Achilles' heel of traditional top-down environmental regulation.

CDR can also help overcome the common limitations of traditional environmental regulation. Tensions always exist within the state regarding environmental regulation. The most basic being the conflict between the desire to promote accumulation (either by attracting foreign firms or supporting state-owned enterprises (SOEs)) and the countervailing pressure to regulate the adverse impacts of industry. On a micro-level, there are significant incentives (both direct and indirect) for government inspectors to *not* enforce environmental regulations. There are also often severe constraints on staff and funds which make regulation difficult even for the most committed inspectors. Community participation in the regulation process helps to tip the balance

in this equation towards enforcement. At a minimum, community actions make it more difficult for firms to bribe local officials or to falsely claim problems have been solved.

While CDR is quite dynamic and varied, successful cases follow a generally similar pattern: (1) communities identify 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 firms; (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 pollution is not reduced the community escalates its pressure on the firm and challenges the state to fulfill its legal mandate, often turning to extra-local actors such as the media, NGOs, or higher governmental bodies to support their claims.

This pattern of environmental regulation differs from both traditional command-and-control (CAC) regulation and simple public participation models in a number of regards. Under CAC, a “patrol” model¹ is employed in which the state sets environmental standards, establishes inspection systems, patrols for violators, and then enforces its solution (Gottlieb 1995, Fiorini 1995, Kraft and Vig 1990). The CAC system assumes that the state can patrol firms effectively. Even when CAC works, which it often does not in developing countries, it has many limitations, the most important being monitoring and enforcement (Afsah et al. 1996, Desai 1998). Under CDR, the community in essence determines its own set of environmental priorities and inspection needs, serves as additional inspectors, monitors progress, and increases the accountability of state-firm negotiations.

In traditional public participation programs government agencies allow communities to provide input into environmental issues, however, the state sets the agenda for discussion and

creates the forums of participation (Canter 1996, Fiorini 1995). Governmental agencies also sometimes use participation as a means to protect firms and the state from outside pressures (Taylor 1995). Vietnam has a complex and often indirect process for public participation. There are no procedures for public review of EIAs, new legislation, or state environmental reports. However, communities have been granted formal rights to demand protection from pollution under the Law on Environmental Protection (passed in 1993).

Community efforts – to monitor factory performance, target problems, demand results, and verify improvements – support actors within the state interested in implementing effective environmental policies. A unique feature of Community-Driven Regulation is that although the state may set minimum environmental standards, community members are interested in continuously lowering emissions to the point where their lives and health are no longer impacted. This combination of a baseline standard with continuous improvement has numerous advantages over command-and-control regulation. In the best case, CDR can result in a “virtuous circle” whereby community actions pressure an environmental agency to take action, which results in pollution reduction, bolstering community demands and agency capacities, which leads to further community actions and state responses.

For CDR to be effective, community, state, and firm actions must converge in a synergistic manner. Communities must mobilize effectively, there must be a point of leverage within a state agency, and firms must be responsive to state and community pressures. These characteristics and actions are influenced by history, political openings, and existing structures of mobilization and regulation, as well as by the relations developed between firms, communities, and the state.

2.1 The Actors in CDR

There are four key actors in Community-Driven Regulation: (1) community members affected by the pollution from a factory; (2) officials within state agencies responsible for regulating and promoting a factory; (3) extra-local actors such as the media, NGOs, and consumers; and, (4) the decision makers within the factory. The characteristics of these actors, their interests, and their interactions shape the effectiveness of environmental regulations. This “ecology” of actors and interactions is critical to whether environmental regulation is effective in Vietnam.

In this chapter I seek to move beyond the general model laid out in the introductory chapter and to specify of the dynamics which characterize the interactions of these four kinds of actors when environmental conflicts are focused on degradation caused by factories. While the concrete sequences that characterize my cases are obviously specific to the Vietnamese context, the analytical dynamics of these cases are potentially relevant well beyond Vietnam. Before going into the six specific cases, it is useful to present some of the analytical characteristics and interactions central to the model and the conditions under which these actors combine to advance pollution reduction and livability.

2.1.1 Communities

Community characteristics and their relations to firms and the state determine whether communities mobilize, how they mobilize, and whether their actions are effective in pressuring for pollution reductions. To begin with, communities have different **capacities**. They have different levels of understanding of impacts of pollution, their legal rights, and even knowing where to direct complaints. These basic capacity issues have been observed by a number of analysts, who have thus hypothesized the influence of general education and income levels on community mobilization around environmental issues (Afsah et al. 1996).

In order to understand whether capacities are likely to be effectively utilized we have to start by recognizing that communities are not monolithic. Even in the small communities, which were the focus of this analysis, people living in direct proximity to a factory could be both cohesive groupings of individuals with similar interests and goals, and arenas of conflict where individuals with different levels of power, wealth, and education, battled to advance their interests. The question of whether divisions or cohesion predominates when communities confront other actors is therefore crucial to the CDR model. Strong social ties within the community help overcome collective action problems and aid in the mobilization of resources for action. Vietnam's socialist past, and the system of local People's Committees, has strengthened this social cohesion. As Fforde and de Vylder (1996: 49) argue, "It is almost impossible to overestimate the importance of [the local collective] to Vietnamese society."

Linkages, meaning external ties to state agencies and extra-local actors, are also critical if community mobilizations are to be effective (c.f. Portes, 1995; Woolcock, 1998). The establishment of the National Environment Agency in 1993 and the provincial Departments of Science, Technology, and Environment (DOSTEs) in 1994 created a focus for community efforts to influence state environmental decisions. The DOSTEs in particular not only implement national policy, but have also become "targets" for community demands, and thus are pressured to communicate demands back to state decision-makers. Linkages to extra-local actors (such as media contacts) are also useful for advancing community demands and for reaching higher government authorities.

In short, if communities are endowed with a certain amount of capacity, cohesiveness, and linkages the prospects for Community-Driven Regulation are much greater. Even though in practice most communities are only partially in possession of these resources, my cases show a

clear relationship between relative endowments along these dimensions and relative success.

2.1.2 State Environmental Agencies

State environmental agencies are both coherent actors and arenas for competing interests² and there are many reasons these agencies do not regulate forcefully. Environmental agencies have internal political conflicts, must cooperate with other state agencies and higher authorities, and must respond to external pressures. Questions of capacity are as crucial for state agencies as they are for communities. They need to have the basic organizational, fiscal, and human capital to enforce environmental laws. Unfortunately, most environmental agencies are under-funded and understaffed. Relative to the firms that they are trying to control, environmental agencies are weak, and they know it. What then can push these imperfect agents to take action to protect the environment?

Clearly, finding points of leverage and applying pressure on the state is critical to advancing environmental protection during rapid development. Here again linkages are key. By linkages I refer to the social and political connections between state officials and civil society actors which foster effective communication and feedback. Social relationships are at the heart of regulation. State agencies operate at many levels and interact with civil society actors in diverse ways.³ Because of the important role of linkages, local-level agencies (particularly those that have strong community ties) are more successful in implementing state policies. Of course, social relationships can also be sources of pressure that impede an agency's effectiveness. Factory managers interested in protecting their interests will also attempt to build and activate ties to the local agency. Linkages must therefore be balanced by state autonomy.

2.1.3 Extra-local Actors

Extra-local actors also influence environmental regulation. At the local level, it is common for community members to lose in political battles. In these situations, effective communities often turn to extra-local resources to strengthen their campaigns. The most obvious of these are the media and environmental non-governmental organizations (NGOs). Vietnam is somewhat unique in the kinds of extra-local resources that are available to communities. There are still essentially no truly independent NGOs working on pollution issues in Vietnam. Given the limited presence of NGO's and other independent intermediary organizations in Vietnam, one might argue that this category of actor could be dropped from the analysis. My final case, however, demonstrates that translocal NGOs can have a substantial impact, even in Vietnam. The key to their impact is connectedness – or linkages once again. NGOs can be embedded not just in a set of provincial or national connections, but in a set of global networks which can, under certain circumstances provide extraordinary leverage on behalf of local livability, and create a window of opportunity for local regulation.

2.1.4 Firms

Finally, of course, there are the firms themselves. In my cases, the firms are primarily agents of degradation, but they are also potential agents of livability. It is, therefore, crucial to try to conceptualize the characteristics that make firms more or less likely to respond positively when they are put under pressure by communities, state agencies or extra-local actors to reduce their pollution. Having the capacity – in the form of technological and fiscal resources – to reduce pollution creates the possibility for firms to become agents of livability, but motivation is usually more important than capacity.

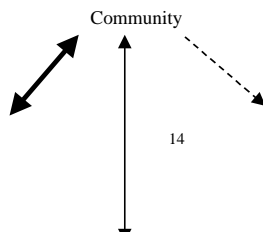
Linkages, particularly in the form of social ties between a firm and the community, can be instrumental in motivating a firm to take action on pollution problems. How a firm is

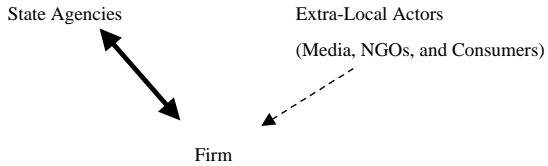
connected to the local community, such as through workers, consumers, suppliers of inputs, or just as neighbors, influences how the firm responds to community complaints about pollution. In cases where local community members can influence decisions which affect the firm, such as approving use of local water supplies, firms become particularly responsive to local demands. As in the case of state agencies, however, close ties can work both ways. For instance, in a “company town” or when many jobs are at stake, threats of capital flight, lay-offs, and loss of tax revenues, can protect firms from community and state demands. Linkages to other groups may be equally important in determining firm responses. Linkages to the state can increase the firm’s willingness and ability to resist community pressure. On the other hand, connections to environmentally sensitive customers can increase the price of pollution, if consumers become aware of the firm’s behavior.

2.2 A Schematic of the CDR Model.

The simple schematic (below) of relationships between key actors shows that a number of routes can be taken to influence firms to reduce pollution. Communities can pressure firms directly. Communities can work with the media and NGOs to pressure firms. The state can pressure firms on its own or extra-local actors can pressure firms on their own.

Figure 1: SIMPLE SCHEMATIC OF THE CDR MODEL:





In my cases, the most effective process involves a dynamic in which communities pressured the state to pressure a firm. In the most successful cases, communities are cohesive and connected; agencies are capable and responsive to community pressure; and firms are accountable to consumers or the state and in a strong market position to respond. There are also cases where communities are divided and isolated from state authorities; state agencies are insulated and unresponsive to community needs and corrupted by ties to firms; and firms are insulated and motivated only to externalize pollution costs. Nonetheless, it was most often pressure from communities, exerted via the state, that produced results. The conclusion is easy to state, but the complex dynamics that lie behind it can only be appreciated by examining individual cases.

3. Six Case Studies of Community-Driven Regulation.

Specific case studies are the best way to understand the complexities of the process of Community-Driven Regulation. The cases that follow are drawn from a larger investigation which involved reviewing data from a wide sample of factory/community relations, conducting over 150 interviews and making site visits to 40 different factories. The six cases were selected in order to illustrate what I considered to be a good range of outcomes in instances of community efforts to force factories to change their polluting behavior.

All of the cases must obviously be situated in the context of the particularities of

Vietnam's history and the current structure of political and economic power. Vietnam's political system, in which the government is controlled by a single party, influences the way community members access and pressure the state. The country's socialist past has left important marks on the landscape of industrial environmental issues, from the mechanisms which have evolved for responding to community demands (through the People's Committee system), to the development of a strong state role in production (through state enterprises), to land use rights and land tenure. Vietnam's recent transition to the market, and the internationalization of the economy has also altered opportunities open to firms and the state.

The table below summarizes the basic features of the case study firms. Cases are drawn from both the north and south of Vietnam, which have had historically very different political systems. State-owned enterprises and foreign multinationals are analyzed, as are both centrally- and locally-managed firms.

Overview of Cases

	Dona Bochang	Lam Thao	Viet Tri	Tan Mai	Ba Nhat	Tae Kwang
Product	Textiles	Fertilizer	Chemicals	Paper	Chemicals	Shoes
Ownership	Taiwanese Joint-Venture	Ministry of Industry	Ministry of Industry	Ministry of Industry	Ha Noi Dept. of Industry.	100% Korean
Pollution	Boiler gases Soot Dyes	Acids SO2 H2SO4	Cl gases NaOH	Black liquor Boiler gases Fibers, dust BOD, COD	CaCO3 dust Noise	Boiler gases Solvents
Location	Dong Nai New urban	Phu Tho Rural	Phu Tho Semi-urban	Dong Nai New urban	Ha Noi Urban	Dong Nai Industrial Estate
Established	1990	1962	1961	1963	1968	1995

3.1 Pollution in the Pews: Moral Organizing around Dona Bochang Textiles

Local regulators say the air pollution from the Dona Bochang Textiles factory is really not all that bad. The local community however, does not seem placated by the thought that other

communities have it worse. In their view, pollution from the factory (a joint-venture whose majority owners are Taiwanese) is a continuing assault on the neighborhood, affecting peoples' daily lives, disrupting special occasions, 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 make the factory a better neighbor or move it altogether.

As the Taiwanese managers 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 of these people have been living in this area for over 40 years, long before a school was torn down to make room for the factory. As Catholics they were first protected by President Diem, the former president of South Vietnam and himself a Catholic, and later politically marginalized after the unification of the country under the Communists in 1975. However, throughout Vietnam's political changes, they have retained a distinctive identity as Catholics in this overwhelmingly Buddhist country. 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 10 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.

With regular pollution incidents affecting the church, the tight-knit community has a focal point for discussing and organizing around pollution issues. While the parish priest claims he does not organize community actions, he admits that the community cannot help but discuss the pollution while at the church. In church, affected families have a chance to mention their concerns to the chairman of the local *Phuong* (or ward) People's Committee, who also happens to be Catholic and lives near the factory.

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. In many ways, they seemed fearless in their quest to end the pollution, a quest they have yet to finish.

After years of having their complaints ignored, an incident served to ignite community actions in 1993. On the day of a local wedding (for a different family), pollution from the factory coated trays of food laid out for the reception in a layer of black soot. A large number of 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 Department of Science, Technology, and Environment (DOSTE) and the media. After newspaper reports questioned the failure of the government to regulate the 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.

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 (according to the firm and the Dong Nai DOSTE).

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 a majority foreign owned may have worked to the community's advantage. Vietnamese government agencies appear extremely sensitive about public perceptions that the state is privileging foreign capitalists over common people.

The Dona Bochang case is a demonstration of the importance of community capacity and cohesiveness. 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, it should be noted that 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. For instance, during my research it was common to read headlines in the Vietnamese press such as "Dona Bochang Factory Continues to Generate Pollution." The community's linkages to local government officials and extra-local reporters were critical to generating this kind of attention and to its ultimate success in motivating state action.

The Dona Bochang case represents a clear success of CDR. 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, capable community was able to exert significant influence over pollution issues.

3.2 Lam Thao's Bitter Tea: The State as the Polluter

A woman in her 60's led me and a group of neighbors to the wastewater canal they said was the source of many of their illnesses. With the skill and strength of a lifelong farmer she dug down several feet into the soil to expose a leaking pipe. Further on, several men used a crowbar to pry open the cement cover of the wastewater pipe to show more leaks and to illustrate how the wastewater had literally burned away the cement cover. Acid in the wastewater, which often has a pH as low as 1, had contaminated the community's drinking water. Even their tea, the lifeblood of the Vietnamese day, is now bitter. The positive side, one woman joked, is that they don't have to add any spices to make sweet and sour soup.

Unfortunately, acid in the wastewater is only one of the environmental problems faced by the community living around the Lam Thao fertilizer factory. Lam Thao, built with Russian assistance in the 1960's, stands as a monstrous example of disregard for the environmental impacts of industrial development. Air pollution from the production of sulfuric acid and superphosphate fertilizer rains down sulfur dioxide, sulfuric acid, hydrochloric acid, hydrogen fluoride, and other toxins on the surrounding villages.

While community members complain that they have been living with the pollution of the factory since its opening in 1962, they assert that pollution increased substantially in 1992, after the plant was expanded. In one hamlet, the People's Committee (PC) chairman explained "We did not realize [how bad the pollution was] until the disease rates became high and some environmental organizations investigated." He asserts that the death rate in his hamlet doubled in 1992, the year the factory increased its output (personal interview, April 18, 1997).

Other health problems associated with the factory's pollution include "swollen skin, rashes, people losing teeth (they become loose and fall out from drinking the water), the rate of cancer has increased recently, and children have problems with their throats." A local nurse notes that air pollution caused high rates of lung illnesses, and "swollen throats are very common close to the factory" (personal interviews, April 18, 1997). Pollution from the factory also regularly damages crops. Water and air pollution kill rice, banana trees, and coconut trees. Fruit trees that survive gradually decrease their yield. Accidental leaks from the wastewater pipe regularly destroy nearby farmers' crops. One commune alone claims to lose 300 million dong (~\$22,000) worth of rice per year to pollution damage.

Communities around the factory have no problem identifying blame for the health and economic impacts they face. However, they differ in their strategies for bringing Lam Thao to task for its actions. Two communities (each containing several hamlets) are severely affected by Lam Thao's pollution. The factory's wastewater primarily affects the community living next to the factory. Air pollution affects the community across the Red River. Despite similarities in terms of cohesiveness, differences in community capacity and linkages strongly affect each community's ability to counteract the factory's threats to local livability.

The community living next to Lam Thao is better educated, has regular meetings, and has applied direct pressure to the factory. The community across the river is made up of very poor farmers, with no electricity in their hamlet, a high incidence of child malnutrition, and few connections to the hierarchy of the district's People's Committee structure. The first community has been successful in getting Lam Thao to build a new wastewater canal, cover the canal with cement, then build neutralization tanks for wastewater. The second community has only been able to win small compensations each year which they claim pay for only about five percent of their crop loss.

Both communities appear to be relatively cohesive. The second community is in fact more tight knit, with less migration in or out, and a higher percentage of farmers. However, despite divisions in the first community, which has members who work in the factory, it has been much more successful in pressuring Lam Thao to change. They have for instance, pressed the factory to pay compensation for crop damage caused by the pollution, amounting to over \$80,000 in compensation in 1996 alone. The first community is also much more sophisticated about its legal rights, recognizing the power of the Law on Environmental Protection in guaranteeing the legitimacy of community demands to be protected from pollution or at least compensated for its impacts, and focusing pressure on the state to enforce the law. The first community benefits not only from its sophistication but also from its greater linkages, in this case its more developed ties to provincial authorities. The second community on the other hand, is both physically and politically cut off from provincial decision makers.

Conflicts within the state also influence the Lam Thao case. Two ministries are responsible for promotion and regulation of the factory – VINACHEM – the Vietnam Chemical Corporation, which is a division of the Ministry of Industry, owns and operates the factory, while the Ministry of Science, Technology, and Environment (MOSTE) is responsible for regulating it. MOSTE's lack of autonomy vis a vis the Ministry of Industry seriously hampers enforcement. The Ministry of Industry is strong enough to effectively veto environmental regulation that MOSTE attempts to advance. Community members have thus focused their complaints on the provincial People's Committee and the DOSTE, demanding local protections from centrally controlled industry.

The Lam Thao case demonstrates that community cohesiveness is by no means enough to win environmental improvements, particularly in regards to state enterprises. The community that is more cohesive lacks capacity and linkages, and ends up losing in its struggle against a

well-connected factory. Only the community that combines cohesiveness with capacity and linkages (in the form of connections to higher authorities) is successful. The divisions within the state (central versus local, industry versus People's Committee) highlight how the state can be pressured to take action, but only when the community can find a point of leverage in the state to counter pro-industry interests.

3.3 Growing Up with Pollution: Environmental Change at Viet Tri Chemicals

Viet Tri City rises up out of the Red River Delta as a testament to Vietnamese industrial development. The town was created 35 years ago as a base for industry away from the obvious wartime target of Hanoi. Virtually everything had to be imported to make Viet Tri into an industrial center. Technicians from China and Russia designed and built the factories. Workers came from around the Red River delta to begin the process of proletarianization. Raw materials were floated down to the confluence of the Lo and Red Rivers where a town was quickly being constructed. Viet Tri is an example of intentional government policies meant to decentralize the location of industry, while continuing central management.

In the rush to create an industrial complex in Viet Tri – which came to include a paper mill, a sugar mill, a beer factory, a woodboard factory, a nearby fertilizer plant, and the Viet Tri Chemical factory – little attention was paid to the environmental impacts of industrial activities. Soon, Viet Tri became known as the most polluted city in Vietnam. Stories of the dusty, dirty town spread throughout the country. By the end of the 1980s, Viet Tri's factories had gained well-founded reputations for being major polluters. Viet Tri Chemicals became known as one of the most egregious polluters in this increasingly “unlivable” city. City authorities went so far as to petition for Viet Tri Chemicals to be shut down in 1988.

With this past, it is surprising to learn that by 1993, Viet Tri Chemicals had been

“recognized as having made the most positive contributions to [a] cleaner environment” of any chemical plant in Vietnam (VIR 9/13/93). During tough economic times, the factory management succeeded in securing a loan from the central government that allowed them to significantly upgrade their sodium hydroxide production equipment, plant 230,000 trees near the factory, institute an emissions monitoring program, and train their workers in better environmental practices. While the factory had by no means solved all its environmental problems, it significantly reduced emissions in four short years.

Asked why these actions were taken, the Vice-Director of the factory explained simply that the changes were necessitated by community pressure. This is likely an oversimplification, but it does highlight the importance of community pressures in the transformation of this seemingly insulated state enterprise. Capital investments in equipment changes were justified by both environmental and economic benefits. Switching from graphite to titanium electrodes in the electrolysis process helped the factory substantially reduce its energy costs, thereby lowering overall production costs. At the same time, the change reduced lead emissions and accidental releases of chlorine gas. The company then established an emissions monitoring program after a round of particularly vocal community complaints.

In 1995 the factory took another step that no factory in Vietnam had ever taken, giving tours of the factory to concerned community members. These tours were prompted by community complaints at a meeting of candidates for local elected office.⁴ The candidates turned the idea of touring the factory into a campaign promise that has since been honored by tours once or twice per year. The factory has also set up a program to reward workers for coming up with ideas to reduce waste or improve the environment. In 1996, the factory awarded workers a total of 50 million dong (~\$3600) for ideas that were implemented.

Living with pollution over the last 30 years, the community around Viet Tri has

developed a strong awareness of environmental issues. Half of the workers from the factory live nearby, raising the awareness level and technical knowledge of the community. The acting Director lives only 200 meters from the factory gates. Community members, including some who work in the plant, have written numerous complaint letters about the pollution problems. The community around Viet Tri Chemicals thus has a very high level of capacity for responding to environmental issues.

Because of the gravity of pollution problems from Viet Tri Chemicals workers and managers seem to take these issues quite seriously. As the factory used to have frequent releases of chlorine gas, the workers became intimately aware of the health impacts of the factory's pollution. Groundwater pollution was also hard to ignore as it contaminated the wells of many of the workers who lived nearby. The community around Viet Tri – although including groups with very different interests – workers, managers, farmers and other residents – is fairly unified on pollution issues. Awareness, and close connections to the impacts of emissions, has led the community to exert significant pressure on the factory over the years.

In 1996, when a late-night spill from the factory's detergent line killed fish in a cooperative fish pond, community members were at the factory gates the next morning with evidence, and demands for compensation. Several government officials mentioned these spontaneous “gatherings in front of the factory” as a major pressure on Viet Tri Chemicals.

There are however, divisions within the state regarding the factory, which is a centrally managed state enterprise. The profits from Viet Tri (if there are any) go to Hanoi, while the problems stay in the community. The few benefits from the factory accruing to local officials seem to be counter-balanced by community complaints, and the fact that the factory continues to stain the city's reputation. It is thus somewhat understandable that local officials would support the factory's closure or at least stricter regulation.

The very real threat of being shut down, driven by both local calls for the factory's closure and poor economic performance, has led the management to take seriously the need to change. One manager intimated that the factory's bad reputation was one reason they were not getting government loans. Viet Tri Chemicals thus did not respond to pollution complaints by simply building taller smokestacks or installing waste treatment systems, but instead chose to significantly upgrade their production methods. Changing the production process helped change the company's environmental reputation, which helped the factory in several other regards.

As in other parts of Vietnam, community members in Viet Tri submit complaints to the local People's Committee, which then forwards the complaints to the responsible agencies. However, two differences seem to be at work in this case. First, when community members complain about Viet Tri Chemicals it is the factory that has the burden of proof to show they are not guilty. This is the opposite of virtually every other case I examined in Vietnam. For example, in the fish kill from the detergent spill, it was the factory rather than the community that requested the DOSTE to inspect the situation. The factory felt they needed data to show they were innocent. Most factories would be presumed innocent until proven guilty. This shows the strong linkages and trust the community has developed with the state. Second, while Viet Tri Chemicals is a state enterprise, local government officials have made clear that they are willing to challenge the central government to resolve problems at the factory. Local elected officials appear to consider this an issue they cannot ignore. This cleavage between state agencies provides a political opening for community demands.

Viet Tri Chemicals shows that SOEs can be regulated under certain circumstances. A connected community with strong capacities was able over a number of years to put the factory on the defensive. Through changes in state concerns and conflicts between local and central agencies, a previously insulated factory became vulnerable to community complaints.

Community members were successful in establishing an effective system of alarms, and vulnerable factory managers then turned these pollution concerns into pollution prevention strategies that had both environmental and economic benefits.

3.4 Living Off Pollution: The Divided Community around Tan Mai Paper Mill

Just meters beyond the outer wall of Tan Mai Paper mill, a thriving industry exists in the shade of coconut trees. In ponds where rice fields used to lie, local villagers stand chest deep in wastewater from the factory. Young men strain to lift nets out of the ponds, filled to the brim with the catch of the day: paper fiber emitted in the mill's wastewater.

As one part of this community literally lives off wastewater, selling recovered fiber to low-grade paper makers in nearby Ho Chi Minh City, other people pay the price of damaged crops, polluted drinking water, and dead fish. Tan Mai is an example of a divided community that both depends on the factory's pollution for income and is injured by its activities. Some community members work in the factory. Others complain of losing entire years crops with no compensation.

Although Tan Mai had been causing pollution since the 1960's, it was not until the factory increased its production in 1992 that community members organized as a group to demand recourse for dead fish and damaged crops. Between 1992 and 1996, community members wrote letters to the DOSTE, the media, and to the factory management. The DOSTE investigated the claims of the community, but never showed the results to community members, and never awarded compensation for lost crops or fish.

Few people argue that Tan Mai does not have serious environmental impacts. The factory managers acknowledge that they need a new waste treatment system. Even the people who make their living off recovering fiber express their concern about the impacts of the

factory's pollution. Local farmers cannot eat the rice they produce, instead using it only to feed to their pigs. Community members complain of nausea from air pollution, undrinkable well-water, nose, eye, and skin problems, and lower yields from their fruit trees.

However, the community around Tan Mai is both physically and emotionally divided. One group of families lives next to the factory's back wall, collecting the paper fibers, another group grows rice in fields nearby, a third group lives in company-built apartments on the urban side of the factory, and a fourth lives in fish-raising houseboats on the river into which Tan Mai discharges its wastewater. The *Phuong* (or ward) has a young and dynamic chairman, who is quite open about the environmental impacts of the factory on the community, and equally open about his frustration with not being able to change the situation. Through this local official, the community has submitted formal complaints to the factory and to provincial authorities. But as he explains, "The people in this area have children working in the factory. They can use electricity and water from the factory. So of course there are losses and benefits from the factory, so they don't want to complain much" (personal interview – June 6, 1997).

Tan Mai is owned and managed by central state authorities, and is at the same time under the regulation of the National Environment Agency. Either through corruption or a concerted policy, the state has worked to block criticisms and demands for environmental improvements at factories such as Tan Mai. For instance, after complaints from the community, the DOSTE took measurements of water pollution at Tan Mai. However, these measurements were taken in a way that covered up the real pollution levels (for example, some samples were actually taken upstream from the factory, where the water was relatively clean). The DOSTE then issued a formal memo stating that the factory was in compliance with environmental standards. Everyone involved in this case recognizes that Tan Mai is nowhere near compliance with environmental standards, yet this document is now accepted as proof of Tan Mai's performance. Once Tan Mai

received the DOSTE memo, neither the community nor local government authorities were able to fine or seek compensation from the factory.

Community members have thus resigned themselves to the factory's continued pollution, seemingly giving up on further complaints. Community members gave different reasons for no longer writing complaint letters, including: "they have no effect," "they only result in DOSTE coming out, measuring, and then disappearing" and "they get you noticed by the authorities." This discouragement is not uncommon. Other communities I studied also feared that complaints would be ignored or cause more trouble than they were worth. Nonetheless, other communities persevered and were sometimes successful.

The community around Tan Mai however, has been unable to overcome internal divisions and resistances. The community is in fact endowed with a reasonable level of capacities, including a mix of educated young members and industrial workers. The community even has some connections to local government representatives. Nonetheless, they have not been able to forge broader state or media linkages, and their internal divisions have weakened their ability to pressure environmental agencies to take action against a centrally managed, Ministry of Industry factory.

Tan Mai is for a number of reasons an extremely well insulated company. The government has targeted the paper industry for expansion and is aggressively promoting the three largest pulp and paper mills in the country (including Tan Mai). Promotion and protection of Tan Mai thus wins out over other interests (including tax collection), and blocks local regulation of pollution. The firm in this case has such strong linkages with the state that virtually no amount of local pressure can motivate stricter regulation. Recognizing this, community members have given up even submitting formal complaint letters.

3.5 Owner as Regulator: The Frustrated Community around Ba Nhat Chemicals

When Mr. Tien leaves his window open, as people without air-conditioning are forced to do on hot summer days in Hanoi, within an hour much of his one-room apartment is coated with a fine layer of white powder. For Mr. Tien, a retiree from the government, living next to the Ba Nhat Chemical factory means living with calcium carbonate dust, noise of grinding rocks at all hours of the day and night, and the respiratory problems that haunt the neighborhood.

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 a university professor found that 3000 people were adversely affected by pollution that included: carbon monoxide emissions 70 times higher than permitted, 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, everyone 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 all of the 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 center to a rural area with an existing chemical complex. DOSTE staff explained in interviews that they had faced a series of battles to win this decision. First, the DOSTE had to overcome the DoI's resistance to moving the factory. When DOSTE finally won approval to move the factory out of the city center, 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 from Hai Ba Trung 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. This is by no means an isolated community, 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 connections that were able to invoke a state agency or power above the Hanoi People's Committee, and extensive public pressure through the media, was ultimately able to overcome the dominant position of the Department of Industry.

3.6 Global Production, Global Communities: Nike Shoe Manufacturing in Vietnam

In a single room the size of a football field, 2000 women sit hunched over sewing machines stitching sports shoes. Row after row of young women, with only the occasional Korean manager in sight, work 11 hours per day, 6 days per week at the production lines of the Tae Kwang Vina company. Most of the factory's workers (90 percent of which are women) have traveled from northern and central Vietnam in search of these jobs. Trading rural ricefields for the new Bien Hoa 2 Industrial Estate, the women have left their homes and families for the prospect of \$40 per month in the factory, and a better life.

The vision of a better life is hard to conjure walking through this factory of 9,200 workers. During the summer months the workers sweat in hundred degree-plus temperatures at their assembly lines. Workers are exposed to toxic solvents and glues that often make them dizzy or nauseous (and which would be much more strictly regulated in countries like the US). Respiratory ailments are common, as are accidents in some of the more hazardous sections. And then there is the repeated verbal and physical abuse they experience at the hands of foreign managers.

More than seven thousand miles away, in cities such as Portland, San Francisco, and New York, human rights and labor activists have been strategizing on how to change the conditions inside factories like Tae Kwang. While the activists might not know the name of this factory, who its manager is, or who even owns it, they are clear on who is responsible for the poor labor and environmental conditions in the factory: Nike Inc.

Nike is the world's leading producer of sports shoes and apparel, with \$9.6 billion in sales in 1998. Nike is also one of the world's leading innovators in global out-sourcing. Nike owns none of the factories that produce its famous sports shoes. The five Nike factories in Vietnam which employ 35,000 workers are owned by Korean and Taiwanese subcontractors. Nike still designs its shoes in Beaverton, Oregon, but prototype shoes are produced in Seoul or Taipei, and

a final production run is likely to be done in China, Indonesia, or Vietnam.

For 20 years, this subcontracting arrangement was a win-win situation for Nike. The company was able to create competition between subcontractors, push down production costs, shift risk, and avoid the difficulties of managing hundreds of thousands of workers. Nike was also able to use the subcontracting system as an excuse to avoid responsibility for environmental and working conditions in the factories that produce its shoes. As Nike neither owned nor managed the factories, they argued they could not be held responsible for day-to-day conditions. Never mind that Nike staff are in the factories every day monitoring what is produced, how it is produced, and the quality of the final products.

Managers at Tae Kwang are careful to explain that they don't just sell shoes to Nike, they are “strategic partners” with the global powerhouse. T2, the parent company of Tae Kwang, has been producing Nike's in South Korea since the early 1980s. When labor costs began rising in South Korea, T2 set up shop in China and Vietnam.

Although Tae Kwang is one of the newer factories in Dong Nai province, it is already known as a bad place to work. In general, people from Dong Nai (a province next to Ho Chi Minh City) avoid jobs at Tae Kwang if they can help it. Huge numbers of migrants thus serve as the labor pool for the factory. Tae Kwang is also known by government agencies as “uncooperative.” Officials in the Dong Nai DOSTE say they get little response to their requests from Tae Kwang. The factory seems to have learned a lot about navigating local labor laws and environmental regulations from its experiences in South Korea and China. For instance, the company has been able to avoid complying with national requirements for a wastewater treatment plant without suffering any consequences. The company recently hired the son of the Chairman of the Communist Party of the province to help them with these kinds of issues and to be a “problem solver” with the government.

Regulation of companies like Tae Kwang is currently very difficult for the Vietnamese government. The state is in the bind of desperately trying to attract foreign capital (competing with countries like China and Indonesia where the bulk of Nike production currently occurs) while at the same time attempting to establish regulatory policies and mechanisms of enforcement. Clearly, a company responsible for over 35,000 jobs and fully four percent of Vietnam's total exports in 1998 carries a fair amount of influence with government officials.

Environmental laws are one example of policies that have been selectively enforced in Vietnam. For instance, Tae Kwang currently burns all of the scrap rubber from its production process in order to generate steam, and in the process creates thick black clouds of pollution. Despite requests by the NEA and DOSTE to reduce this pollution, last year Tae Kwang actually purchased additional scrap rubber from other Nike plants in Vietnam to feed its boilers, thereby increasing the pollution. Because Tae Kwang is in the middle of an industrial estate, officially no one lives near the factory, so there is no community to complain about these problems. The people most affected by Tae Kwang's pollution – the workers – have little power to influence the company. The company union is controlled by managers, with all union representatives hand-picked. The community that does exist around Tae Kwang has little capacity, cohesion, or linkages to external actors. The majority of the factory's workers are recent immigrants to the province, often straight off of farms, who rarely stay more than a year or two at the factory before moving on. The residents of the area appear to feel few connections or allegiances to these workers.

Local efforts to influence Tae Kwang, by either government officials or community members, have thus had little effect. However, powerful external pressures do appear to have influenced the company. NGOs in the US and Europe have been successful in pressuring Tae Kwang to change its production practices and have helped to actually build the capacity and

linkages available to workers and community members. Activist campaigns regarding labor conditions in Nike plants have gained worldwide media attention. In October 1997, groups in over 10 countries organized protests, pickets, and informational campaigns regarding Nike's production practices. In April 1998, protests and pickets expanded to even more cities and countries across the US and Europe. NGOs in the US (such as Global Exchange, the Campaign for Labor Rights, Vietnam Labor Watch, and Press for Change) have coordinated to pressure Nike to force its subcontractors such as Tae Kwang that are dispersed across Asia to improve their performance. These groups have used the media to educate the public about conditions inside Nike plants, some have called for boycotts of Nike products, while others have begun lobbying government bodies to force Nike to change (Benjamin 1998, Bissell 1998, Shaw 1999). My own research on Tae Kwang has been used by these groups to pressure Nike to improve conditions in its Vietnamese plants (O'Rourke 1997, Greenhouse, 1997).

For Tae Kwang, extra-local pressures have led to regular visits from Nike's labor and environmental inspectors, as well as monitoring by third-party accounting and health and safety firms. The first target of these inspections has been to reduce worker exposures to toxic solvents and glues. In May 1998, the company announced a major initiative to eliminate the use of organic solvent-based cleaners and glues, pledging to comply with US workplace laws in all of their factories. By December 1998, workplace health and safety conditions had been substantially improved at Tae Kwang (O'Rourke and Brown 1999). Pressure from Nike – which has been driven by media and NGO pressures back in consumer markets – is now having more impact on the reduction of air pollution and workplace hazards than local government or community pressures could have on their own.

The Tae Kwang case is obviously quite different than the other five cases. There are no neighbors living next to the factory, and the workers have no independent union to represent

their environmental and health concerns. Instead, a network of NGOs and individuals has worked to pressure Nike, and to indirectly pressure the Vietnamese government to increase enforcement. This coalition of international actors has then worked to build links to local community members and workers. In this way, extra-local actors are actually working to support and build the capacity of local community members, and providing room for state agencies to more effectively regulate a multinational corporation.

This last case demonstrates that even in an environment that leaves little space for NGOs and other intermediary organizations, they can play an important role. Taking advantage of linkages that are global, they can exercise leverage on behalf of local livability that “trumps” the power of firms like Tae Kwang, that appear invincible in the local context.

3.7 Summary of the Cases

The six cases presented above offer compelling evidence of the importance of community capacity, cohesiveness, and linkages in solving pollution conflicts in Vietnam. Table X summarizes the key characteristics of the cases and their outcomes.

Summary of Cases

	Dona Bochang	Lam Thao		Viet Tri	Tan Mai	Ba Nhat	Tae Kwang
		I.	II.				
Key Dynamics	Capacity	Little Capacity	Little Capacity	Capacity	Some Capacity	Capacity	No Capacity
	Cohesive	Divisions	Cohesive	Fairly Cohesive	Strong Divisions	Cohesive	Divisions
	Linkages	Linkages	No Linkages	Linkages	Some Linkages	Linkages	External Linkages
Outcomes	Success.	Partial Success (\$)	Failure	Success after many years.	Failure	Success after many years.	Partial Success

In the cases where the communities had basic capacities, were relatively cohesive, and

had linkages to the state (Dona Bochang, Viet Tri, and Ba Nhat) the community was successful in pressuring for pollution reductions. However, even with these characteristics, changes can be blocked or delayed for many years by powerful state interests. Linkages alone can win partial victories (Lam Thao community 1 and Tae Kwang). However, even a lack of cohesion (Tan Mai) or linkages (Lam Thao community 2) can block a community from successfully organizing for pollution reductions.

4. Conclusions

Vietnam offers a hard test of the ability of Community-Driven Regulation to push urban-industrial environments in the direction of livability. Regulatory allies within the state are much weaker than state agencies for whom accumulation is not just a priority but practically the only priority. The power of communities is circumscribed by legal rules and the non-electoral character of political power. NGO's and translocal social movements are largely excluded from the political landscape.

Given this context, the fact that three of my six cases (Dona Bochang, Viet Tri, and Ba Nhat) show substantial reductions in industrial pollution as a result of community pressure must be read as a strong endorsement of the efficacy of the CDR model. The cases are also useful in clarifying some of the broader characteristics of key actors within the Vietnamese context, and the sources of variation among particular struggles between communities and firms.

The first thing that is striking in terms of the overall landscape of the Vietnamese political context is the surprising vibrancy of communities as political actors, even among communities that have not been successful. For example, the community closest to Lam Thao exhibits a remarkable level of mobilization and fighting spirit, despite a clear appreciation of the odds against them. Overall, the picture of Vietnam is very much at odds with the stereotypical image of state-socialist societies in which “civil society” is crushed and moribund under the

overwhelming weight of the state. On the whole, Vietnamese communities appear just as mobilized and combative as their counterparts in ostensibly democratic Mexico or Brazil. Determining whether this is due primarily to historical traditions of community activism or to differences between the structure of Vietnamese political organization and the similar structures that formally existed in Eastern Europe and the Soviet Union lies beyond the scope of this chapter. What is clear, however, is that a close look at Vietnam demonstrates the importance of avoiding presuppositions about the consequences of macro-political regimes when thinking about potential agents of livability and local ecologies of political actors.

At the same time, the Vietnamese case does seem to confirm one of the standard disadvantages attributed to state-socialist regimes as far as environmental politics are concerned. The cases confirm that when regulators and industry managers are both part of the same state apparatus, regulators are likely to be hamstrung. Again and again in these cases, the state agencies that own and profit from the operations of industrial polluters negate the ability of state environmental agencies to work as allies of mobilized communities. In this respect at least, increases in private ownership in Vietnam should open up positive potentials for more effective regulation and greater livability.

Variations in success among the cases generally tracked well with my expectations from the CDR model. The cases show that when a community has strong internal social ties and external political linkages, it is much more successful in advancing environmental demands. When state agencies can act autonomously and are responsive to community needs, they are much more likely to enforce environmental laws. And when firms are both vulnerable to external pressures and in a strong market position, they are more inclined to reduce their pollution. The cases also show that community action is a necessary but not sufficient condition for pollution reduction in Vietnam. In more than one of the cases, mobilized communities that

had taken a wide range of actions against a local polluter still failed to motivate the firm to reduce its pollution.

While there is no proto-typical community that succeeds at CDR, a number of features of successful communities stand out, including: cohesiveness within the community; capacity as manifested both in strong leadership and an overall level of skills and sophistication; and linkages, particularly in the form of connections between the community and local government authorities. Essentially, successful cases involved communities with strong internal social ties and strong external political ties that forcefully and strategically pressured a state agency to take action.

While three of my cases indicate that CDR can work, all of the cases illustrate the variety of factors that can stand in the way of effective community action. Divisions within the community, poor organizing, and the inability to find leverage over a recalcitrant state agency, undercut possibilities for achieving greater livability. Sometimes, communities can be arenas of conflict, and otherwise incapable of mobilization. Firms and government agencies can then capitalize on these divisions.

Even when communities organize successfully, their capacity can limit what they demand and achieve. 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.

Public and media pressure regarding pollution issues is gradually raising the profile and the bargaining power of environmental agencies, and making the state a better agent of livability. Community pressures help overcome agency resistance to implement laws that impact other state actors (such as the Ministry or Department of Industry). Community pressure can also motivate inspectors to simply 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 also helps shine light on local-level corruption, and increases transparency in all state environmental actions.

At the same time, state actions help support community mobilization. For instance, passage of the Law on Environmental Protection served to legitimate community complaints regarding pollution, even while state agencies were unable to enforce the specifics of the law.

Creation of the National Environment Agency and the provincial DOSTEs provided a target for community complaints, even though these agencies initially couldn't do much. An emerging state environmental infrastructure thus serves to support community actions and demands.

Potentially, the CDR process can create a kind of “virtuous circle” of environmental regulation. As communities make demands on the state, environmental agencies are forced to improve their inspection and enforcement capacities (in order to retain legitimacy). As inspections and enforcement improve, communities are buoyed by successes to make greater demands on the state. In three of my cases, state agencies played pivotal roles in supporting and legitimating community demands for pollution reduction. Successful community action requires identifying and focusing pressure on the right actors within the state. When successful, this dynamic supports a process in which state agencies and civil society actors develop and grow and strengthen their roles as agents of livability along side one another.

Evans (1996) argues that “linking mobilized citizens to public agencies can enhance the efficacy of government,” and that synergy occurs when “civic engagement strengthens state institutions and effective state institutions create an environment in which civic engagement is more likely to thrive.” The outlines of CDR in Vietnam display this dynamic of mutually reinforcing interactions between organized communities and state environmental agencies. At the minimum, these cases point to the *potential* for state-society synergy in industrial environmental regulation.

Again, the Vietnamese case should be considered a hard test of the Community-Driven Regulation process. The successes that we see in Vietnam occurred in a context with no independent local NGOs, no free press, no vulnerable elected officials, weak environmental agencies, and significant poverty driving development imperatives. Under more supportive circumstances, CDR would have much greater chances of success.⁵ At the minimum, the cases in

Vietnam attest to the value of exploring the CDR model elsewhere.

While only in its embryonic phase, CDR already shows potential to significantly improve environmental regulation in Vietnam. Policies and programs that formalize mechanisms of community input into state environmental decision-making, create greater legitimacy for community demands, educate citizens about their rights, and support local monitoring efforts, would move Community-Driven Regulation forward, and go a long way towards meeting the challenge of balancing industrial development with environmental and livability concerns.

Notes for Chapter Four

¹ McCubbins and Schwartz (1984) discuss models of congressional oversight, which they call the “patrols” model and the “alarms” model. In the patrols model, Congress establishes systems to regularly evaluate implementation of legislation. Under the alarms model, Congress creates systems which trigger action such as monitoring by Congress.

² See Rueschemeyer and Evans (1985: 48) for a discussion of the tendency of states to be simultaneously corporate actors and arenas in which conflicts are played out.

³ As Ferguson (1998) points out, states should be viewed “not in opposition to something called ‘society,’ but as themselves composed of bundles of social practices, every bit as ‘local’ in their social situatedness and materiality.”

⁴ While Vietnam remains a one-party Communist state, the government has initiated “democratic” reforms including local-level elections of People’s Council representatives and National Assembly members. To date, little competition exists in these elections, however, the scope and power of elected officials (particularly National Assembly members) appears to be increasing.

⁵ Recent studies of environmental initiatives in the Philippines (the EcoWatch program), Indonesia (the PROPER program), and Mexico, indicate that there is significant potential for greater community participation and state-society interaction in pollution control programs.