DOES PRIVATE REGULATION WORK IN DEVELOPING COUNTRIES?

Private Environmental Regulatory Programs in the Argentine and Brazilian Chemical and Forestry Industries

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Abstract:

Private regulatory regimes are central to current debates over the evolution of global governance and the effects of economic integration on the environment. Yet we know very little about their actual effectiveness in developing countries, where their potential effects are greatest. This paper examines two prominent global private environmental regulatory programs (the Forest Stewardship Council, and the chemical industry's Responsible Care) in Argentina and Brazil from 1992 to 2005. Analysis of demand and supply side factors that influence program effectiveness synthesizes research hypotheses from various theoretical approaches to private regulation. Findings suggest that, in contrast with research conducted in more developed countries, governments in these countries have little influence over these programs' effectiveness or local legitimacy. Also, while major U.S. and European corporations played an important role in introducing these programs, their enduring effectiveness depends on the capacities and strategies of local administrative institutions and advocacy networks. Also, the need to achieve credibility in the eyes of stakeholders is driving international convergence across different program types toward open, democratic participatory and procedural norms.

Dissatisfied with governments' efforts to address the environmental costs of globalization, private actors such as industry groups and nongovernmental organizations (NGOs) have created their own international initiatives to improve industrial standards and practices. Over the last two decades these global private regulatory programs have proliferated across markets and industries worldwide. Today labels from programs such as the ISO 14001 environmental management standards, the Marine Stewardship Council, and the Forest Stewardship Council, adorn thousands of products on store shelves around the world.

These private regulatory programs are central to several debates about contemporary global environmental politics. Do private regulatory programs infringe upon or complement traditional state regulation (Biersteker and Hall 2002; Kahler and Lake 2003)? Are they parts of the process by which liberalized trade and investment lead to the raising of international environmental standards of practice, or races "to the top" rather than to the bottom (Vogel 1995; Garcia-Johnson 2000)? Private initiatives should be especially welcome in many developing nations where governments have struggled for years to enforce their own environmental laws (Berman and Webb 2003). On the other hand, some view these programs as a new set of tools with which major transnational corporations (TNCs) stifle pressures for further regulation, and protect their dominance by raising the costs and requirements of market entry (Clapp 1998; Levy and Newell 2002).

Resolving these questions about the nature and effects of private regulation on global governance requires research at the local level. Are these programs effective, and if so, for whom, and when? Ultimately, these programs must benefit participating companies, consumers, and/or environmental advocates or they will atrophy and regulation will come via other sources. This is especially true in developing countries, where unfolding environmental catastrophes, such as the destruction of tropical rainforests, the

desertification of arable lands, and diminishing sources of clean water, are gaining domestic and international political salience. Yet we know very little about the effectiveness of these private programs within developing countries.

This project assesses the effectiveness of two prominent global private environmental regulatory programs—the chemical industry's *Responsible Care* program and the *Forest Stewardship Council*—in Argentina and Brazil. These countries share recent histories of state-managed industrialization, followed by democratization, neoliberal economic reforms, and export-based economic growth. Both have industrial sectors penetrated by transnational companies. The same foreign actors implemented these private programs in both countries at very nearly the same time. Yet in Argentina both programs have struggled to establish themselves and to grow, while in Brazil they have thrived and even developed in some aspects beyond those of their home countries in the North. Comparative analysis of this variation, and of the demand and supply side factors that have influenced program effectiveness in both cases, clarifies the properties and potential of private environmental regulation within developing countries more generally.

In addition, this project compares two programs that pertain to different industries and have distinct origins and core supporters (the FSC is administered chiefly by NGOs, Responsible Care by the chemical industry). By doing so, it synthesizes national-level and global program-level analysis, allowing comparison of the influence of variables at each level on program effectiveness. Thus it explores whether some types of programs, supported by different sets of actors, are more likely than others to be effective across different national contexts.

This paper presents the results of field research conducted in both countries in 2004 and 2005. Data includes information from primary and secondary sources, including

industry journals, government and NGO reports, and interviews with regime administrators, corporate managers, auditors and certifying agents, and representatives of environmental NGOs and government agencies. Though not aimed at definitive hypothesis testing, the analysis is oriented by insights and propositions derived from theories of institutions, club goods, stakeholder relations, and organizational dynamics, as well as by previous research on these programs in other nations. With only four cases,[1] any inference drawn from this analysis about universal patterns must be cautious. Still, the findings call into question some assumptions common to the political economic literature on global private regulation.

First, in Argentina and Brazil transnational corporations (TNCs) do generally promote the diffusion of superior environmental practices from their home countries to their host countries, as proponents of the "races to the top" thesis argue. However, the degree to which they do so varies considerably across industries and companies. In fact in some cases, foreign TNCs are among the staunchest opponents of more demanding private regulatory programs and have used their influence to limit their effectiveness.

Second, contrary to cases in industrialized countries where governments have been key players in granting or undermining local program legitimacy, Argentine and Brazilian government agencies have had little influence over program effectiveness. Because governments are viewed as feckless and/or corrupt, companies and consumers often view private certification as more meaningful than legal compliance. Government agencies often show support or opposition toward these global initiatives, but their actions are largely irrelevant. State capacity and the legacy of state-industry involvement are important

[1] The unit of analysis is program/country. The four cases are: Responsible Care in Argentina, FSC in Argentina, Responsible Care in Brazil, FSC in Brazil. The analysis includes independent variables at the industry and national levels. International level variables, such as the characteristics of these programs' global administration, are not included unless they pertain to industry or national level variables, such as an industry's export profile or the effects on a nation's policies from its international commitments, such as the implementation of mechanisms from the Kyoto or Montreal Protocols.

secondary, or contextual, variables, but direct state action has little influence on program effectiveness.

Third, to be effective, programs must achieve both internal legitimacy (in the eyes of participating firms and others that may participate) and external legitimacy (in the eyes of external stakeholders). These cases indicate that a form of isomorphism is taking place in the direction of increased transparency and multi-party participation, regardless of the program's original administrative form. This supports those who argue that democratic processes and open participation are becoming increasingly institutionalized across a range of instruments for international governance (Bernstein and Cashore 2005).

I. The Research Design

Assessing effectiveness, and the logic of demand- and supply-side analysis

The term *effectiveness* is conceptually and methodologically complex. The environmental "performance" of a company in terms of reduced impact (or increased positive impact) over time is difficult to define, much less to measure consistently. This seems to be true for environmental managers and policymakers as well as social scientists, and is particularly the case in cross-country research. Quantitative indicators, such as emissions and energy use relative to production and to the local area's receiving capacity, are scarce and often unreliable, especially in developing countries.

In this study effective programs are those in which a significant share of companies to whom the program is available participate and, because they participate, modify their practices to reduce the environmental impact of their operations. Effectiveness is estimated across two dimensions: First, the number and diversity of participating firms (in absolute number and in terms of their share of the industry's total production, and as a portion of the

total number of potential participants); and second, the difficulty and cost of the reported changes in practice or management compelled by participation in the program.

What influences a program's effectiveness?

This study divides the various factors and conditions that may potentially influence effectiveness into two groups: demand-side and supply-side. Without sufficient demand for private regulation on the part of firms, adequately met by some form of supply through the actions of industry groups or NGOs or multi-party coalitions, these programs would not exist. This categorization of variables helps to identify in individual cases at what point(s) in their development do these programs gain or lose effectiveness in terms of members and their influence over members' behaviors.[2]

Several studies of private regulation emphasize the dynamics of legitimization or the gaining of authority as critical tests of a regime's development (Cashore 2003, Cutler 2002). This is an ongoing process, often involving strategic relations among coalition members. These are supply side dynamics, involving the degree to which local actors are capably of providing and administering effectively a local chapter of the program. A program that is poorly administered, and that does not achieve legitimacy in the eyes of local stakeholders such as government regulators or environmental advocates is of reduced benefit to its member firms and is likely not worth the costs of maintaining it.[3]

[2] This demand side and supply side analytical approach is based on a similar conceptualization by Aseem Prakash in his study of the U.S. chapter of Responsible Care. See Prakash 2000.

[3] Firms could, theoretically, demand a program that does not necessarily aim to achieve wide public legitimacy. The potential benefits in terms of public outreach may be less important to them than others, or not worth the costs of increasing the transparency of their operations. Examples of such a preference, however, are hard to find.

Demand-side factors. Demand for private environmental regulatory programs arises as a response to either market- or nonmarket-based pressures on producers (Barron 1996). Currently the largest markets, by far, for environmentally certified products are in Europe and North America. This is the basis for the claim that increased South-North free trade, or increased production in developing countries aimed at developed markets, tends to lead to higher environmental standards of operations. Just as it is geographically concentrated in wealthy, urban areas, market demand for environmentally "friendly" goods is also highest in specific types of products. Market-based demand is stronger in end products where consumers choose among brands according to criteria other than price alone, and weaker in commodities. Another type of market demand comes from client pressures. Major retailers or producers may impose standards of environmental management across their supply chains, as major car companies have done by mandating independent environmental certification of their suppliers. Most research regarding environmental management systems in developing countries points to the presence of TNCs as a major mechanism for the diffusion of higher standards, often through supply chain pressures (Utting 2002, Rhys Jenkins 2000). Client based market demand is most common in industries of high asset specificity where suppliers cannot easily shift to less demanding clients (Reinhardt 1999; Kahler *Modeling*).

The most common sources of nonmarket demand for regime participation are the threat of further state regulatory action or negative campaigns by environmental or community activists. The credibility of a regulatory threat depends on the estimated rigor with which enforcement will be carried out, while the threat of public scrutiny depends on the capabilities and legitimacy of local activists. As with market-based pressures, some industries are more vulnerable than others to nonmarket-based pressure. Firms with high

brand recognition and that are publicly owned are more promising targets than smaller, privately held firms. Industries that involve hazardous or toxic materials, or that are based on resource extraction, are also exceptionally vulnerable to nonmarket pressures.

> ***Research propositions****: All other things being equal, demand for a private environmental regulatory program within a domestic industry should correlate positively with: 1) the quantity and value of exports, particularly to Europe or North America; 2) the presence of TNCs as program advocates and as clients; 3) the stringency and rigor of the local regulatory environment; and 4) the degree of local environmental activism.*

Supply-side factors. Supply-side factors that promote the provision of effective private regulatory programs involve the capacity for collective organization and the formation of partnerships at the industry level. Administrating organizations must grapple with collective action dilemmas such as free-ridership, and must establish program rules that lend credibility to the program but without excessive rigidity (King and Lenox 2000, Prakash and Potowski 2005). As programs grow, administrators may face efforts by rivals to undermine their credibility or to put forth an alternative program (Cashore, et al. 2004). A capable administrative organization plays an important role in steering a program through these institutional challenges (Reinhardt 2000). Collective action theory suggests that industry organization should work best in industries that are highly concentrated (Rees 1994).

For outside stakeholders to view them as credible, programs often require partnership with organizations independent from firms and industry influence, such as

auditing agencies, community organizations, or NGOs. Some programs feature rule-making based on "multi-sector" consensus among industry representatives, environmentalists, and community members. If properly incorporated, these measures significantly improve the program's credibility in the eyes of the public and regulators. They come at the cost, however, of firms' control over information and, to some degree, management autonomy (Garcia-Johnson, Gereffi, and Sasser 2000).

Although private programs operate without direct state involvement, governments can influence their effectiveness from the supply-side by showing support, toleration, or opposition (Falkner 2003). For example, governments can make certification a licensing requirement, subsidize program participation, or promote participation through their procurement policies or by applying program standards to their own practices (for example, as stewards of public forests). Governments may also withhold their support or oppose a program, for example by creating or supporting rival programs viewed as more friendly to the interests of local industry (Cashore, et al. 2004)

> ***Research propositions:*** *All other things being equal, the supply of a private environmental regulatory program within a domestic industry should correlate positively with: 1) the degree of local industry concentration; 2) the capacity of the administering agency; and 3) the availability of independent stakeholder groups such as NGOs for collaboration. Also, 4) government endorsement or opposition can be key to a program effectiveness and local legitimacy.*

Table 1: Sources of demand and supply for effective private regulatory programs

	Institutional requirement

Demand-side factors	Market	Consumer preference	Competitive markets with environmentally conscious consumers (domestic or foreign)
		Client preference or pressure (supply chain pressure)	Asset specificity and/or coordination among clients (easiest under conditions of high industry concentration)
		Enhanced company image	Company or brand differentiation
	Nonmarket	Threat of further state regulation.	Competent state regulation
		Threat of negative public campaigns	Presence of activist groups and media for public dissemination
		Threat of litigation	Judiciary open to public claims against firms alleging environmental malpractice

		Institutional requirement
Supply-side factors	Organization and administration	Industry concentration, leadership by major firms, and capable administrative agency
	Availability of external support	Capable NGOs or other independent organizations willing to collaborate
	Government position relative to program	State legitimacy as a voice for public interest, credibility of government initiatives

The case study programs: Responsible Care and the Forest Stewardship Council[4]

Founded in 1993 in the United States by a coalition of NGOs, certification agencies, and wood products retailers, the Forest Stewardship Council (FSC) offers a set of core principles and an open participatory process for the formulation of local standards for sustainable forest management practices. Because FSC standards are based on performance, not management processes, they provide a basis for product labeling. Through forest management certification and chain of custody certifications for manufacturers and retailers, the FSC ensures that every wood product that carries its logo comes from a certified forest. The FSC is considered a pioneer of this market-based approach, empowering consumers to choose products according to the environmental costs associated with their production (Cashore, et al. 2004). FSC-International, based in Berlin, promulgates the ten global principles of the program, accredits certifying agencies, conducts regular international meetings, and oversees program operations around the globe.

[4] Appendix one presents an overview of these programs' global characteristics, such as their size, systems for verification and enforcement, and administrative designs.

However, actual forestry standards are defined locally, through regional multi-party negotiations organized by the national chapters.

Similarly, Responsible Care (RC) is a leading example of an industry-specific private regime. Responsible Care is an international initiative of the chemical industry promoting continuous improvements in the health, safety and environmental performances of chemical producers. Originating in the mid-1980s among Canadian and U.S. chemical manufacturers' associations, RC is coordinated globally by the International Chemical Councils Association (ICCA). Because it is based on system standards instead of actual performance requirements, RC provides no basis for product labeling. The regime offers its members a comprehensive risk management program, flexible verification procedures, and a tool for public recognition of the firm's commitment to addressing environmental and safety risks. In most countries, verification is based on company self-reporting. As with the FSC, the ICCA presents global guidelines and defines the program principles, but national chapters write the actual rules, codes of practice, and procedures of participation.

The regional political and economic context since the late 1980s

In the mid- to late 1980s, both Argentina and Brazil abandoned decades of import-substitution industrialization and undertook dramatic neoliberal reforms. Tariffs were lowered, restrictions on foreign investment were loosened or dropped, and their chemical and forestry sectors, among many others, were deregulated. These measures attracted significant foreign investment as companies capitalized on privatizations and undervalued local assets to improve their competitiveness in South America's increasingly integrated markets. Investment came not only from traditional sources in the North such as Europe

and the United States, but also from neighboring countries as economic integration advanced in the Southern Cone.

The chemical industry in the region experienced rapid concentration as large firms—many transnationals—expanded into new product lines and international competition forced local firms to grow and invest or to sell out. Many firms restructured their operations from a national to regional focus, and moved much of their administrative and higher value-added operations to Brazil, where a cheaper currency made exports more competitive. The forest plantations industry saw a similar process of concentration and investment, especially as large Chilean companies purchased forests in Argentina. Throughout the region, the production and value of wood and wood products, especially pulp and paper, increased significantly with new genetic lines and more modern, efficient forestry practices. Generally in both industries, the logic of regional integration, which coincided with an overvalued Argentine peso and industrial concentration in Brazil, squeezed Argentine producers and oriented them toward the export of commodity products, largely to Brazil, instead of higher end manufacturing (Schorr 2004, Chudnovsky and Lopez 1997).

One of the legacies of these countries' massive industrialization and development programs of the 1960s-80s was widespread, largely uncontrolled pollution and environmental degradation. Regional governments had turned a blind eye to the environmental and public health effects of concentrated chemical and petrochemical production, since these were deemed critical strategic sectors. Forests were traditionally treated by both governments as obstacles to economic production, and both for decades granted land use permits, ownership rights, and even subsidies based on the clearing of forest for pasture or agricultural use.

This willful disregard of the environmental externalities of development began to soften in the 1980s. The global environmental movement began to catch on in South America in the late 1980s, as democratization fuelled a wave a civil society organization and demands. Although the Brazilian government had taken a recalcitrant nationalist position at the UN Stockholm conference in 1972, accusing foreign interests of trying to seize control over the Amazon region, by 1990 its environmental record was so poor and defensive nationalism was so out of vogue that such as stand was untenable. The 1992 UN Conference on the Environment and Development, held in Rio de Janeiro, sparked the creation of hundreds of regional environmental NGOs. While this global pressure and rising local activism did not lead, immediately, to any significant legal or institutional reforms, they managed to place environmental concerns within the national consciousness.

The global financial crisis sparked in East Asia in 1997 hit both countries hard. In Argentina's case, the linkage of the peso to the U.S. dollar hampered its recovery. Both the chemical and forestry sectors found themselves in precarious times, and investment shrank. In December 2001 political and economic crises combined to topple the Argentine economy. Allowed to float, the peso lost 75 percent of its value over the following year. GDP fell by 13 percent, and by 2002 the share of Argentines below the poverty line surpassed 50 percent.

Since 2002 the Argentine and Brazilian economies have both experienced moderate growth with relative stability. In Argentina's case, the weaker peso has given exports a boost. Both nations have benefited from high international commodity prices. Foreign investment has begun to return, but not nearly at the levels of the early and mid-1990s. International markets view Presidents Kirschner and Lula as not entirely reliable, and the

outbreak of a major corruption scandal within Lula's Workers Party has undercut his power.

Both countries have traditionally given short shrift to natural resource management or environmental protections in their push for development. Despite growing public concern over environmental issues, especially in Brazil where the ongoing deforestation of the Amazon receives global attention, many environmental laws go unimplemented or are only weakly enforced. State spending on environmental and social programs is low and is typically funneled through Byzantine bureaucracies and federalist control sharing arrangements, limiting its effectiveness. As a result, environmental policymaking and industrial regulation often occurs reactively, in response to public outrage following toxic spills or other disasters. Both nations' environmental regulatory systems also suffer from their weak brand of federalism, within which laws, standards, and degrees of enforcement vary dramatically across states. Preventative measures and consistent enforcement seem beyond the capacity of many environmental regulatory agencies, especially at the state level, and corruption is endemic among low-paid local environmental regulators.

These conditions should favor private environmental regulatory programs. Governments that seek low cost, development friendly tools for improved environmental management should see much promise in these initiatives, especially considering their advocacy by international development organizations, business groups, and governments in Europe and North America (Berman and Webb 2003). However, as Table 1 demonstrates, a survey of program membership and numbers of certifications across Argentina, Brazil, and Chile show significant variation in program dimensions and properties.

Table 2: Global private environmental regulatory program implementation in Argentina, Brazil, and Chile

		Argentina	Brazil	Chile
***Responsible Care*®**	Year established:	1992	1992	1994

	No. of participating companies*	64 (70 percent of industry association members)	108 (100 percent of industry assoc. members)	80 (80 percent of industry assoc. members)
	Third-party verification of compliance?	Program has its own proprietary audit system, conducted by a government-linked certification agency. Results not publicly available.	As of 2004, audits are mandatory, including industry, independent certification agency, and community participation. This "VerificAR" system incorporates scoring for the achivement of ISO 14001 certification and participation in a national quality competition. Results not publicly available except in some cases.	Verification and audit system based on Canadian model, which includes community representation, but controlled by industry council. Government gives an annual prize to best performing company. Results not publicly available.
Forest Stewardship Council	Launch of national initiative	2000 (national standard for plantations is in early stages of preparation)	1994 (national standards are written for several native forest types and for plantations)	1999 (national standards for native forest and plantations expected in 2005)
	No. of certified forests/producers*	9 forests 7 chain of custody certifications	57 forests 177 chain of custody certifications	15 forests 24 chain of custody certifications
	Total hectares*	131,443	3,408,997	423, 553
	Hectares certified as % of total forest area*	.28 percent	6.50 percent	2.97 percent

*as of August 2005.
Sources: Responsible Care® Global Status Report 2002 (*www.icca-chem.org/pdf/icca004.pdf*), and the FSC list of certified forests (*www.fsc.org/en/about/documents/Docs_sent*)

To understand these numbers and in particular to explore why Argentina seems such arid soil for private environmental regulation, while Brazil seems so fertile, we must look closer at the qualities of these country programs and the factors that have influenced their effectiveness.

II. Summaries of the case studies in Argentina and Brazil

The Forest Stewardship Council (FSC) in Argentina

Participation. Nine forests in Argentina have been certified compliant with FSC standards. All are owned by small or medium-sized companies. The majority are manufacturing companies that produce higher value-added wood products, such as moldings and floors

and medium- or high-density fiberboard. Most importantly, as of today none of the large plantation transnationals has certified through FSC.

The process of industry concentration and investment in the 1990s left three giant Chilean forestry firms in possession of most of Argentina's forest holdings and responsible for most wood production and exports. These firms produce mostly pulp and cut wood, product lines in which there is little demand for certification (Sánchez Acosta 2000). Along with these TNCs, a handful of medium-sized, relatively high capital firms also remained competitive, largely through exports (SAGPyA 2004). The rest of the industry consists of an estimated 2,200 local farmers and sawmill operators selling logs or cut wood, mostly for the domestic market (Braier 2004; República Argentina 2002). Collectives of small producers like these account for the two most recent FSC management certifications, but aside from these isolated cases this sea of largely informal producers are largely unaware of any demands or benefits from participating in the FSC.

Effect on certified companies' practices. FSC certification in Argentina demands appreciable modifications in management practices. Companies estimated that the costs of certification ranged from US$50,000 (for smaller operations) to over US$150,000. The challenges posed by certification varied across firms of different sizes and regions, but most reported that requirements for the legalization, training, and care of the workforce are the most difficult to achieve. The traditional informality of the forest sector poses problems in that FSC's requirement of full legal compliance raises costs significantly in a market where many competitors operate illegally.[5]

[5] Interviews with an official at a large Chilean-owned company in Corrientes province, and an official at a federal agency that promotes forestry certification, Nov. 12 and 17.

For some firms, the demonstration of compliance with all applicable local and national laws has proved the most difficult requirement. Different laws and requirements from federal and local agencies often overlap and differ in their details, and governments are typically unhelpful in resolving areas of conflict.[6]

The institutional mechanisms behind the reported "seriousness" of FSC certification are built into the regime at the international level. External verification is required, and can be conducted only by auditors accredited by the FSC.[7] Audits are required every six months for chain of custody certification, and annually for forest management certification during the first four years. Anyone, including community members or environmental advocates, can call for an investigation into the terms of an FSC certification. This process consists of an outside review, requiring reports from all major local stakeholders.[8] To date, however, FSC has not conducted any such review in Argentina nor has it reprimanded any certification agency.[9] The credibility of the FSC's enforcement threat is based on the transparency and openness of these processes, as well as its international status.[10]

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[6] In order to comply, one company was forced to build a special storage unit for the indefinite storage of packaging from chemicals used, because neither waste disposal services nor local chemical companies offered the type of treatment process required by law (Interview with an official at a forest services company in Corrientes province, Nov. 17). In the province of Corrientes, compliance with local law included registration on a government list that did not exist. So that registry had to be created, by provincial authorities, before two companies seeking FSC certification could register to comply with the law. Last time one official looked, after two years those two companies were still the only ones in the province in compliance with that law. (Interview with an official at an FSC-certified company, Nov. 11-12.)

[7] All eight certifications in Argentina have been and are audited by only three companies: SGS Certification Services, Inc., Scientific Certification Systems, and the non-profit *Smartwood* program of the Rainforest Alliance.

[8] See *www.fsc.org*.

[9] Interview with the FSC coordinator at the *Fundación Vida Silvestre*, Oct. 18.

[10] One observer stated: "The FSC is run by major NGOs and a bunch of European experts. Do you think they would risk compromising the international legitimacy of their program, which is huge in Europe and the U.S. and is talked about all the time, to take a bribe from some little businessman in Argentina, or to please the Argentine industry association?" (Interview with a professor of agricultural engineering in Misiones province, Nov. 12)

Factors influencing FSC effectiveness in Argentina: market demand. Gaining access to markets and clients in European and North American markets is the foremost incentive for firms to seek FSC certification. Firms that held FSC certification reported that the label had proved a key advantage in tapping those markets. There is no domestic demand for certified wood or wood products, nor do firms report any gains within main trade partner Brazil.

Market benefits from the FSC label are reported to be greatest in the refined wood products sector, where sales outside of Mercosur countries (i.e., to Europe, North America, or to Asia) were highest, and for companies that sell Eucalyptus wood products, in order to overcome the negative image associated with that tree among European buyers.[11] On the other hand, within the pulp and paper sector, or unfinished logs or cut wood, which are destined for domestic or regional markets, no producer has yet sought FSC certification.

For many, market benefits from FSC certification are more anticipated than assured. Only one company official interviewed stated that certification had brought improved profit. All others, certified and non-certified, claimed that no such price premium exists.[12] Many industry experts view certification as a gamble, especially for small companies, because it entails significant short-term costs for uncertain longer-term benefits of being a leader and innovator in penetrating markets for higher quality wood. For this reason, most producers are watching and waiting to see if the investment in certification will ever pay off for those already certified.

[11] Interviews with an official at an FSC-certified company and an official at a federal agency that promotes forestry certification, Nov. 11 and 17.

[12] One representative of a company with FSC certification expressed disappointment that, after two years, their offering of certified product had failed to have any significant impact on their sales. Still, the company planned to maintain its certification with the hope that this would change in the future and working with FSC would benefit them as it had similar companies.

The second potential area of market demand for FSC certified products comes from corporate clients. In the case of FSC-Argentina, no such product supply chain pressure exists. As of yet, only seven chain of custody certifications have been granted.

Transnational corporations currently dominate the Argentine forestry sector and are important as sources of both support and resistance to the FSC system. U.S. or European companies own two of the nine FSC-certified forests, though both tracts are relatively small and are not managed for production.[13] More importantly, the market draw of U.S. or European retail chains (especially Home Depot, which has flirted with opening a branch in Buenos Aires) is significant and viewed within the industry as likely to grow.[14]

These TNCs that support the FSC do so as participants more than public advocates. TNCs have not acted alone nor partnered with the *Fundación Vida Silvestre* to increase public awareness of eco-labeling or the benefits of certification. Industry and company officials often commented that this lack of advertising and consumer awareness was a significant shortcoming of the FSC, in foreign markets and especially within Argentina.

In contrast to this support from European and U.S. firms, Chilean transnational corporations are staunchly opposed to the FSC. Social rights and environmental groups have criticized aspects of their large-scale plantation operations in Chile, which are now applied in Argentina. As one Argentine industry consultant put it:

[13] In 2002 *Grupo Nueva*, a Swiss industrial group, purchased one of the three major Chilean forestry company's Argentine operations. Within a year of its taking control, *Grupo Nueva* had announced a pro-certification policy and had hired staff to manage the process of FSC certification, expected in late 2005 (Interviews with an official at a forestry services company in Corrientes province and an official at a federal research agency that promotes forestry certification, Nov. 17).

[14] Interviews with an official at a FSC-certified company and with the coordinator of the FSC, Nov. 18 and Sept. 29.

> "When [one of these large Chilean firms] came here, they told everyone here that they're not fools like the people who cave in to pressure and certify [with FSC]. They've gone almost ten years, they said, and despite all the pressure there was no reason at all to certify. There were no market returns. They said they'd wait another ten years to see if it's worth it then. … This was the attitude these companies brought to Argentina."[15]

Nonmarket demand. Industry officials interviewed consider nonmarket demands in the form of pressures from state regulators, NGOs, or threats of litigation as insignificant or absent. State regulations and enforcement over forestry practices are extremely weak and easily avoided. Moreover, FSC standards are far above legal demands, so certification requires a level of commitment significantly beyond compliance. Aside from the FVS, Argentine environmental advocacy groups focus more on stopping deforestation, or on urban and public health issues, than on sustainable forest management.[16] Despite constitutional protections for public natural resources, the law does not permit collective injury claims in lawsuits, which complicates litigation against companies over forest degradation.[17]

Supply-side factors. FSC-International is coordinated by and housed within the *Fundación Vida Silvestre*, the Argentine partner of the World Wildlife Fund. With only one full-time staff person (though others help on specific projects), FSC-Argentina is sorely taxed to manage six different regional standards-writing initiatives as well as to coordinate information dissemination and public outreach.

[15] Interview with an industry consultant in Misiones province, Nov. 15.
[16] Interview with Greenpeace forestry division director.
[17] Interview with an attorney specializing in environmental law.

One impediment to the spread of FSC certification is that one of the core principles of the FSC-International is a prohibition against any cutting of native forest. FSC refuses certification to any plantation established after 1994 upon land that previously was native forest. Two of the large Chilean firms have cut native forest for their plantations in Argentina as well as in Chile, and their participation in the FSC program is largely precluded by these past practices. This is one important reason why they support an alternative national forestry standard, because FSC certification is not available for much of their forests.

Environmental and social rights NGOs in Argentina tend to be regionally and topically specific, which complicates the efforts of FSC administrators to lead a constructive dialogue at the national level. Participation is sometimes beyond the resources of small environmentalist or community groups, yet without their representation the process cannot move forward. Without national coordinating organizations, the FSC must cobble together new negotiating councils for each new regional standard.

The Argentine government is divided in its attitude toward the FSC. The Ministry of the Environment, responsible for conservation, supports the FSC as a standard for managing native forests. This Ministry, however, has little resources or political leverage.

Two government-sponsored programs are underway that would create national forestry management standards to rival that of the FSC. The Secretary of Agriculture, Ranching, Fishing, and Food (SAGPyA) announced in 2004 that it would begin the process

of writing a national standard for sustainable forest management to cover cultivated forests aimed at providing market benefits for exporters similar to those of the FSC.[18]

At nearly the same time, the national institute for standardization, IRAM, commissioned by law to write national technical and operational standards, undertook a similar project to write a national forestry standard. These initiatives vary in two significant ways. The Secretary of Agriculture's program, which would be modeled after Chile's *Certfor* system, enjoys institutional and financial support from the European Union, and intends to base its certification on flexible system standards similar to those supported by the EU's Programme European for Forestry Certification program (PEFC). The IRAM, on the other hand, intends for its standards to converge, when possible, with the performance standards of the FSC and aims ultimately to create a standard with mutual recognition from the FSC.[19]

These initiatives have made little splash within the industry, due to the extremely low credibility of government programs related to the forestry sector. The Secretary of Agriculture's national standards initiative is viewed as closely aligned with the interests of the largest forestry companies (the largest Chilean forestry firms are chief advocates of the initiative).[20] Also, industry officials and environmental experts are cynical of the capacity of federal bureaucrats to coordinate the creation of a legitimate national standard. Since liberalization, federal initiatives related to the forestry industry as well as environmental

[18] Interviews with the official at the SAGPyA Forestry Division who is coordinating the national forestry standards initiative, and with an industry consultant active in national standards programs, Oct. 29 and Nov. 19.
[19] Interviews with the official at the SAGPyA Forestry Division coordinating the national forestry standards initiative and with an official at the national institute for standardization, Oct. 29 and Nov. 4.
[20] Several industry and company officials who do not work for one of these firms attribute the competition between two government agencies to pressure from TNCs, which view the IRAM as too independent (Interviews with an industry consultant active in national forestry standards programs and the coordinator of FSC-Argentina, Nov. 19 and Oct. 18).

management in general have floundered through a lack of funding or poor execution, or because the individual responsible left office.[21] For example, the government's reputation has recently been tarnished by its failure to compensate tree farmers who invested in the forestry sector under an industrial promotion law (*Ley 25,080*) passed in 1999. The Secretary of Agriculture's national forest standards initiative appears in danger of suffering a similar fate. As of early 2005, the project has been set back by the departure of its chief advocate within the SAGPyA, and despite EU funding continues to progress very slowly, with a staff of one.[22] One industry expert commented that "In this country, the label 'governmental' condemns any initiative or plan to failure. It's a death sentence."[23]

Responsible Care in Argentina

Participation. The Responsible Care (RC) chapter in Argentina was established in May 1992, with the local title *Cuidado Responsable del Medioambiente*. Ninety-one members of the Argentine Chemical and Petrochemical Industry Council (CIQyP) signed the contract. It was not their first opportunity to do so. Officials from Dupont had presented the program to the Council board and to Council members on several occasions during the preceding year and a half (1991-1992), but members had shown little interest.[24] In April of 1992, however, a federal order to close a petrochemical plant in a suburb of Buenos Aires and the arrest of the company's CEO and the plant's chief manager (*La Nacion*, April 24, 1992) sent

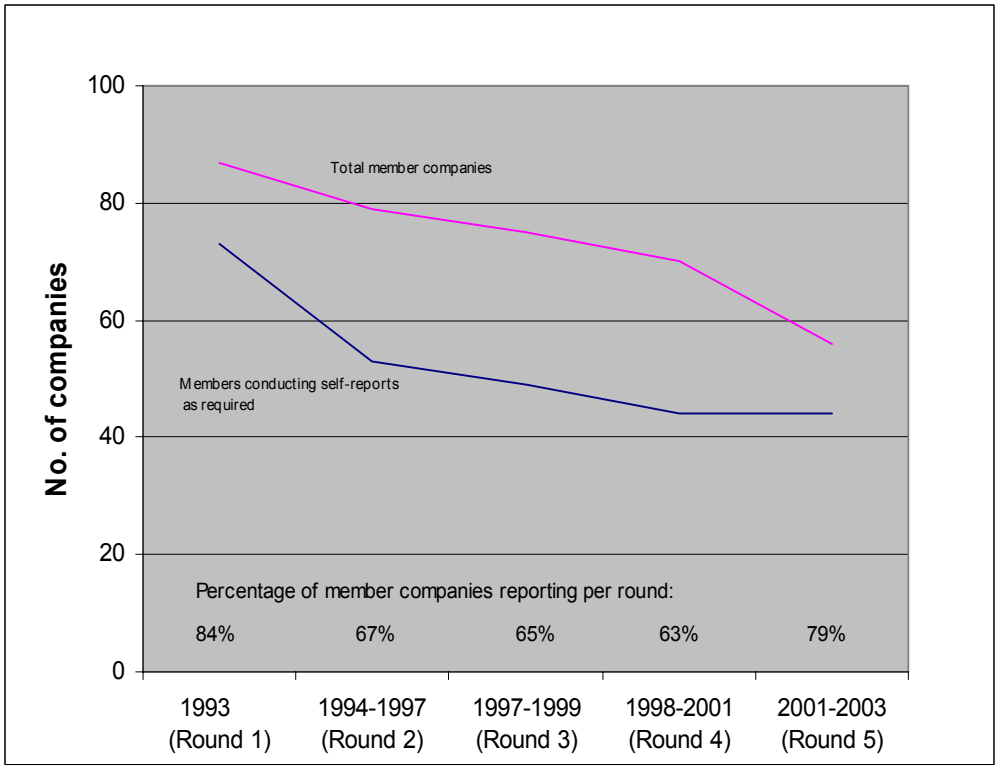
[21] Interview with an attorney and journalist who specializes in environmental law, Nov. 24.
[22] Correspondence with the coordinator of the initiative, March 16, 2005.
[23] Interview with an attorney and journalist who specializes in environmental law, Nov. 24.
[24] Interview with the coordinator of CRM, Sept. 27.

industry officials scrambling. Just over a month later, the industry council celebrated the creation of *Cuidado Responsable del Medioambiente*.[25]

The number of members of the RC program has decreased from a high of 93 in 1992, to 75 in the late 1990s, and after the financial crisis of 2000 to a low of 55. These totals, however, represent only the companies that signed on to the program. The number that actually participates, in terms of attending monthly meetings or conducting the annual self-reports, varies between 30 and 50. In 2000, the program introduced membership to companies to supplied transportation services to chemical and petrochemical clients. Twenty-three transport companies signed on, largely because some large firms have indicated they would give preference to RC participants. The program's coordinators and advocates, however, expressed disappointment with the degree of actual compliance by these transport companies.[26]

[25] Interview with the coordinator of CRM, Sept. 27.
[26] Interviews with the coordinator of CRM, an environmental manager at a Dutch-owned company, and an environmental manager at a U.S.-owned company, Sept. 27, Oct. 13 and 12.

Diagram 1: Rates of self-reporting by chemical firms within Responsible Care Argentina



Source: data from *Cuidado Responsible del Medioambiente*, interview with administrator, November 2, 2004.[27]

Membership in RC includes both TNCs and local companies. North American companies tend to be the most active in RC and are the regime's chief supporters, while European chemical companies tend away from what they view as a U.S. or Canadian program.[28] Officials at one European company explained that their own internal systems far exceed those required by RC, noted the "incoherence" or lack of seriousness of the RC in

[27] Each round of self-evaluations included a minimum of 6 codes, or different areas, of evaluation. Each code was administered separately. At times a round took as long as 3 years to complete, so that different codes within the same round were often reported on by different sets of members, as some firms joined and others dropped from the program. For this reason, figures per round were averaged across these codes and the years covered are stated per round.

[28] Interviews with an official at a major U.S. company and an environmental manager at a major German company, Oct. 15 and Oct. 22.

Argentina, and pointed out that ISO 14001 certification is recognized in international markets while *Responsible Care* participation is not.[29]

Effect of participation on member companies' practices. Of member companies interviewed, not one claimed that a RC audit or code had led to any specific change in corporate policies. Voluntary self-evaluations are the main verification tool of RC, in Argentina and globally. In Argentina these are supposed to be conducted once a year, but many firms fail to comply. In 2000 RC began to offer voluntary independent audits, conducted under special contract by the auditing division of the national standardization organization IRAM. Audit results yield a score between 1 and 5, and scores above four are rewarded by certificates of environmental management excellence.[30] Managers are generally dismissive of the seriousness of these audits.[31]

RC has never expelled a member in Argentina, nor placed a member on probation, though some companies have been urged to improve their scores. Their response, however, has often been to leave the program.[32] Program administrators acknowledge that many participating firms are less than committed to the program or its goals.[33]

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[29] Interviews with an environmental manager at a French company, an official at an Argentine transport company, and an environmental manager at a major German company, Oct. 27, Oct. 22, and Oct. 22.

[30] In years 2003-2004, the percentage of firms scoring above 4 was between 65 and 87 percent (depending on the management area). The areas "Community communication and emergency preparedness" and "Transport and distribution" showed lower average scores, as is common in RC chapters worldwide. When I asked one manager why he did not post his RC certificate beside other environmental management certifications, he responded, "No one knows what it means. Hardly anyone outside the industry knows what *Cuidado Responsable* is. And people inside the industry would laugh if you hung up a score report from CRM. Every member that chooses to get audited receives a score around four or five. It's like a reward for agreeing to be audited. That sounds ridiculous, but it's true."

[31] One called them merely symbolic, and claimed that each audit lasts for half a day, regardless of the size or complexity of the unit being audited. In the case of his firm, the last two audits yielded scores in areas in which the company has no practice whatsoever. Another pointed out that if few member firms of CRM send in self-reports, much fewer are ever audited.

[32] Interviews with an official at a U.S. company and the coordinator of CRM, Oct. 12 and Sept. 27.

[33] One manager put it bluntly, "To be frank, *Cuidado Responsible* is a disaster. There are no real requirements for membership, so no one takes it seriously. Many members have never had an audit and never intend to. Many, including my company most of the time, fail to conduct our self-evaluations. Only a few people attend their meetings. Who cares? What purpose does it serve? I

Factors influencing Responsible Care's effectiveness in Argentina

Market demand. Because RC does not provide product labeling, end-product consumer demand does not exist. Some U.S. member firms claim to prefer, in their contracting of suppliers and distributors, those that participate in CRM. For no company, however, is membership mandatory, and this preference in practice seems informal and flexible, especially in the case of supplier or distributors deemed "strategic" to the interests of the company.[34] Companies that are not CRM members tend to place more emphasis on ISO 14001 certification than participation in CRM, partly because of EU-based preference for ISO certifications. Some officials mentioned programs in other industries, such as the "Q1" program from Ford Motor Company that requires all direct suppliers to have ISO 14001 certification. Nothing of this sort is established within the chemical industry, despite efforts by CRM to attract the participation of transport companies.

Nonmarket demand. In Argentina, the threat of state regulation seems to play little role in companies' calculations regarding regime participation. Officials regularly describe state regulators and auditors as incompetent or corrupt, owing to low public sector wages, the lack of technical training or knowledge of the industry, and scarce state resources.[35] Legislation that addresses pollution and environmental degradation is criticized as too vague to be applicable and without any technical basis. For example, actual emissions limits are often unspecified, leaving it up to plant managers to interpret legal mandates such

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honestly can't tell you. Though I think it's a good idea, if it were seriously done."(Interview with an environmental manager at a subsidiary of a Dutch company, Oct. 13).

[34] Interview with an official at a major U.S. transnational, Oct. 15.

[35] Interviews with officials at a major U.S. transnational and a French firm, and with the coordinator of CRM, Oct. 15 and 27, and Sept. 27.

as "sustainable levels."[36] The lack of effective regulation is a major disincentive to participating in CRM or to investing in any form of environmental management, especially for smaller firms.

When asked why environmental management was such a neglected issue within the chemical industry in Argentina, the majority of subjects emphasized a "backward" or "short-term" mentality among most Argentine corporations.[37] Some attribute this quality to a cultural predisposition to legal non-compliance and evasion, or to the effects of repeated economic boom and bust cycles, accentuated by political instability. Different subjects stated flatly, "…(Argentina) is not a compliance-oriented country," or repeated familiar expressions such as "*Hecha la ley, hecha la trampa* (With the law comes the evasion)."

Supply-side factors. Many observers, including CRM administrators, suggested that the regime's ineffectiveness is due to disinterest on the part of the industry council, as evidenced by its refused to make membership in the CRM program mandatory of all its members.[38] This may reflect the council's fear of losing members, especially smaller member companies, and the fact that major petrochemical companies—especially the former state-owned oil company—dominate the council's executive board and funding.

U.S. firms are the program's chief supporters, as well as a disproportionate portion of its active participants. Three companies interviewed had begun to engage in environmental management only after a recent purchase by a European or U.S. company.[39] This support, however, is largely nominal and has not translated into making RC

[36] Interviews with officials at a French firm and a major U.S. transnational, Oct. 27 and 15.
[37] Interviews with officials at an Argentine firm, a French firm, and a U.S. firm, Oct. 14, 27, and 12.
[38] Interview with the coordinator of the RC, Sept. 27.
[39] Interviews with officials from Dutch, Argentine, and U.S. firms, Oct. 13, 14, and 13.

participation mandatory for suppliers, nor any more active type of support than simply participating.

State agencies play no role in relation to the RC. The two existing federal programs that aim to promote enhanced corporate environmental management and accountability have had no contact with the Responsible Care program.[40] Both government program coordinators and the administrators of the RC admitted that such cooperation would be useful; however, each lacks the resources or institutional support to build such a public-private network.[41]

The Forest Stewardship Council in Brazil

Participation. As of August 2005, 57 Brazilian forests totaling 3,223,661 hectares were FSC certified, and 177 Brazilian companies offered products under chain of custody certification. These are significant figures, similar to those in nations where FSC has had its greatest success, such as Finland and Canada. Still, relative to the size of Brazil's forests—second in the world, behind only Russia—there is great potential for growth (Garlipp 2002).

Participation varies across the two segments of the Brazilian forestry industry. Approximately 30 percent of all forest plantations in Brazil (by hectare) are certified through FSC, and another 10-15 percent is in the process of preparing for certification.[42] These numbers include several of the largest plantation companies. Native forest

[40] These programs are *Producción Limpia* ("Clean Production"), an initiative of the Secretary of the Environment begun in early 2004, and the Environmental Program of the National Institute of Industrial Technology (INTI).
[41] Interviews with the coordinator of the CRM, and an official at a federal agency administering an anti-pollution program, Sept. 27 and Oct. 6.
[42] Interviews with director of a certification agency and an expert on forestry goods markets at WWF-Brazil, Sept. 11 and July 21, 2005.

certifications in the Amazon region make up just under half of these hectares, and Brazil contains the largest volume of certified tropical forest in the world. Considering the size of the Amazon region, native forests offer the greatest potential growth for certifications. FSC administrators believe that a new federal Program for Forest Management, currently under consideration in the Senate, will help clarify land rights on public lands and will encourage certification in the Amazon.[43]

Impact on behavior. Auditors and forestry consultants report that FSC certification demands relatively little change in environmental practices. This is because native forest producers seeking certification already generally manage their forests for sustainable, measured extraction, and large plantation companies in Brazil tend to have high environmental management standards independent of the program.[44] FSC certification requires the most significant change for smaller producers, particularly in the Amazon, who generally enter the program without any previous environmental management program. For both native forest and plantation operators, the most significant impact on their operations comes in the areas of labor management and social development.[45] Part of the reason why environmental practice modifications are viewed as relatively easy is because technical assistance, instruction, and some financial support are available from government agencies and private research centers.

Factors that influence the effectiveness of the FSC in Brazil

[43] Interview with director of the forestry division at the Ministry of the Environment, July 19, 2005.
[44] The most significant change in environmental practices for plantation operators required by FSC is the minimization of chemicals use, though officials foresee that the FSC's prohibition against the use of transgenic technology will become increasingly costly from a competitive viewpoint.
[45] Interview with directors of two certification agencies, and with an official at a small wood products company, Sept. 11 and Sept. 23, 2005.

Demand side. Forest plantation firms report little or no market demand or price premium for FSC certified pulp, chips, paper, or cardboard products, with the exception of a few niche product lines—such as charcoal briquettes from FSC certified forests.[46] In the tropical wood sector, however, European buyers tend to pay a premium for certified wood—in some cases higher than 50 percent—but not for fiberboard or compensated wood products, due to the low cost of competing certified wood products from within the EU or from Asia. The opposite is true in the U.S., where certified tropical wood is less in demand than fiberboard or plywood, used mostly in "green" construction.[47] Overall, however, price premiums for certified wood are less reliable, although producers report that certification is increasingly expected by foreign buyers, especially in the EU.

A consensus of industry officials in Brazil believes that international demand for forestry certification for tropical wood products will continue to grow. Indeed, with Brazil's infamous record of deforestation, certification is already virtually required because no buyer wants to risk facing a public action from Greenpeace or other activists. Even plantation officials who harvest Eucalyptus and Pine wood in the south of Brazil report foreign buyers expressing reluctance to buy any Brazilian wood without certification, in order to avoid any appearance of being involved with the situation in Amazônia.[48]

However, Brazil is at once the world's largest producer and consumer of tropical wood, and the majority of wood logged in the Amazon is sold, illegally, within Brazil. FSC administrators and participants see great potential in developing the local market for certified wood. In recent years, FSC has organized a national Certified Wood Buyers Group

[46] Interview with World Bank official, July 25, and with pulp and paper firm official, August 16.
[47] For example through the LEED (Leadership in Energy and Environmental Design) Green Building Rating System developed by the U.S. Green Building Council (USGBC). Interview with market expert at WWF-Brazil, July 21, 2005.
[48] Interview with manager of a major Brazilian pulp and paper firm, August 16, 2005.

and a Certified Wood Sellers Group, which hold annual fairs and coordinate to increase awareness of certification and to build a network between harvesters, processors, sellers, and consumers. Also, the state of São Paulo has agreed to give certified wood preference in procurement decisions, following a campaign by Greenpeace.

There is little pressure across production chains on the part of major companies. However, the high number of chain of custody certifications is a testimony to the number of wood product manufacturers and retailers who see benefits in offering certified wood products. Design and Nature (*Desenho e Naturaleza*), a network of top-end architects, furniture designers, home designers, and builders began holding annual exhibitions featuring certified wood products in 1999, and after 2000 only FSC certified wood can be displayed. Certified wood products are gaining favor among the artistic and elite-aimed segments of the market which, while small in number, tend to be trend-setters. The next step, according to FSC administrators, is to promote awareness and product availability on the Brazilian mass market.

Producers in Brazil do not report any direct nonmarket pressures in terms of NGO campaigns or threats of legal action, which prompted them to turn to FSC certification.[49] However, broad national public concern over deforestation and illegal activity in Amazônia is an important contextual factor that supports certification for domestic merchants of tropical wood. It is well known that the majority of tropical wood sold within Brazil is illegally logged and laundered to legal retailers using false papers. Legal compliance means nothing in the eyes of stakeholders and consumers, due to massive corruption and a fifty-year history of uncontrolled logging under the blessing of local governments. So in order to

[49] Direct campaigns by Greenpeace and other NGOs against companies tend to target exporters, and shipments of illegal wood on their voyage to Europe, Japan, or North America, instead of illegal Brazilian operators.

reassure their clients and employees, companies in the Amazon region chose to certify as proof of good management, since legal compliance. An untrustworthy legal and regulatory system in Amazônia increases stakeholders' demands for private regulation in the form of FSC certification.

Supply side. FSC-Brazil has a full-time staff of six and its own office in Brasília. The program has flourished, however, largely due to the network of environmental NGOs and certification agencies that have operated in the Brazilian forestry sector since the early 1990s. These organizations, each for its own purposes, actively advocate forest certification, work with companies and communities across Brazil, participate in FSC standards negotiations, coordinate participation by their local partners, and monitor the activities of certified producers to report any non-compliance.[50] This web of overlapping interests and active stakeholders translates into an FSC-supportive team of several dozen highly motivated and capable individuals, including many with personal histories and ties within the industry. This large and active group of Brazilian advocates and coordinators also served, in the early years of FSC operations, to mute criticism of the FSC as a foreign institution.[51]

The Ministry of the Environment (MMA) and, within it, the federal Brazilian Institute for the Environment and the Sustainable Use of Natural Resources (IBAMA), which regulates operations on all public lands, officially support voluntary forest certification as a complement to government efforts to improve forest management. However, these agencies are suffering from internal conflict and inefficiency. Despite the

[50] These include the WWF-Brazil, Greenpeace, Friends of the Earth, IMAFLORA (a Brazilian NGO and certification agency that has promoted environmentally sustainable forest management since ___), and Scientific Certification Systems (SCS, a certification agency based in Oakland, CA).
[51] Interviews with a certification agency official, August 11, the director of the forestry division at the Ministry of the Environment, July 19, and a World Bank official, July 25.

official position expressed by political appointees at the executive level, IBAMA regulators at the local level are widely regarded to be, in general, opposed to forest certification because legal, certified operations threaten their long-standing mutually beneficial relations with illegal loggers. Certified companies in Amazônia report that in recent years IBAMA officials have prolonged or withheld their granting of permission for harvesting, forcing these companies to ground operations or to go to court, a situation that threatens efforts to expand certifications.[52]

As in Argentina, in the early 1990s some firms dissatisfied with FSC requirements partnered with national standards agencies to write a national planted forest management standard, as an alternative to the FSC. The CERFLOR standard and its formulation process are patterned loosely on the model of the U.S. industry's Sustainable Forestry Initiative (SFI). The two sets of standards are very similar in regards to environmental practices, the main difference being in CERFLOR's acceptance of transgenic trees.[53] The principal dissimilarity between the two is that CERFLOR standards are less demanding in terms of community relations, a difficult area for some large pulp and paper companies that face prolonged disputes over land tenure rights. CERFLOR certification has been available to companies since 2002. To date, only two forests have been certified using CERFLOR. Industry and FSC officials widely regard CERFLOR as a technically sound management standard, but it suffers from a lack of domestic and international market recognition and skeptical stakeholders that view it as a product of the pulp and paper industry.

[52] Interview with an official at the Ministry of the Environment, July 22, a small company operating in Amazônia, Sept. 23, and two forest management certifiers, both on August 11.
[53] Interview with official at the Brazilian Forestry Society (SBS, *Sociedade Brasileira de Silvacultura*), August 12.

While federal agencies have no official position in favor of the FSC over CERFLOR, they are in frequent contact with FSC administrators and recognize that for the time being FSC is by far the dominant and more credible forest certification program in the country.[54] FSC administrators claim to have personal ties with several officials in these federal agencies, although they discount the importance of these ties to program effectiveness. Companies do not report improved government treatment as a significant benefit of certification.[55] However, the new federal Public Forest Management Program, due for passage into law in September 2005, would require independent sustainable management certification for all economic activities in public forests not set aside for conservation, an area that amounts to approximately a third of Amazônia. While this certification is not required to be through FSC, many believe the new program will push the vast majority of forest managers in that direction. In addition, three Amazonian state governments (Amapá, Amazonas, and Pará) support community-based forest certification through FSC by offering technical and financial assistance.

Responsible Care in Brazil

Participation. Since 1998, participation in the Responsible Care (RC) program (*Atuação Responsável*) has been mandatory for all chemical industry council (ABIQUIM) members, which totaled 176 in 2005.[56] Members include virtually all of the large chemical producers in Brazil, responsible for more than 80 percent of chemical production in the country. However, beyond these large companies, including dozens of TNCs, ABIQUIM and its

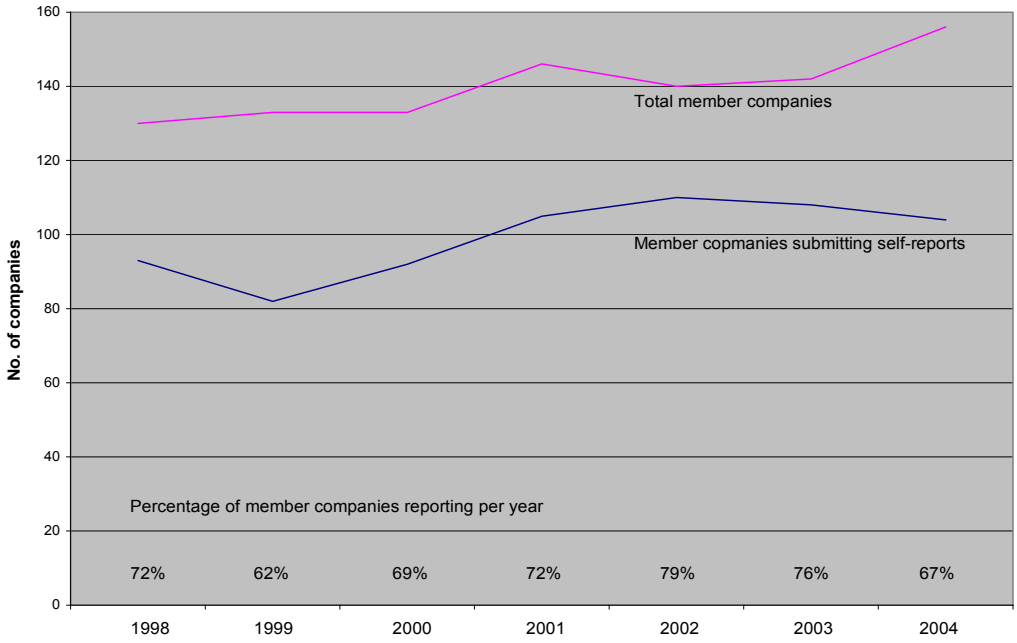
[54] Interview with the director of the Forestry Division of the Environmental Ministry in Brasília, on July 22, 2005.
[55] Interview with FSC administrators on July 19, 2005.
[56] This total includes 142 members and 34 associate members, ABIQUIM *Annual Report 2004*.

Atuação Responsável program has struggled to attract more than a few dozen of the two-thousand or so (estimated) small or medium-sized chemical operations in Brazil.[57] Responsible Care participants also include several transportation companies and a couple of consulting and services firms. A previous study found that RC participants tended to be large, publicly owned, transnational exporters (Roberts 1998). Diversity increased, however, following the decision to make participation mandatory of all ABIQUIM members, though certainly larger, exporting firms continue to be better represented, in proportion to their number, than are small firms.

Regarding the degree of participation, in 2004, of 142 full ABIQUIM members, 104 conducted self-reports, a requirement of participation. This amounts to an active participation rate of 73 percent, in line with that of the Argentine chapter. Around fifteen percent of these members are new to RC and are given a two year phase-in period during which self-reporting is not required. Another seven or eight members are holding companies, not required to self-report independently of their production firms. This leaves 12 to 15 "rebel" firms each year that do not self-report, and require pressure from ABIQUIM staff, referral to the board of directors, and in some cases, expulsion. To date, two companies have been expelled from ABIQUIM for not complying with RC rules.[58]

[57] Interviews with two ABIQUIM officials, June 27 and August 15.
[58] Interview with ABIQUIM official, July 4.

Diagram 2: Self-reporting rates for Responsible Care members in Brazil



Source: ABIQUIM annual reports, 1998-2005, *Relatório de Atuação Responsável* 2005, and *www.abiquim.org.br.*

Impact on behavior of participating firms. None of the large companies, foreign or Brazilian, reports any specific change in practice or behavior directly resulting from participation in *Atuação Responsável*. This is largely due to the fact that RC imposes no specific performance requirements beyond continual improvement in management practices. In terms of technical practices, these firms tend to seek out and implement the most efficient and modern management practices and systems they can identify, in order to compete and lower costs. Many also have their factories within highly modernized and well serviced petrochemical "poles" or centers, which facilitates the sharing of information and lowers the costs of operating under high standards of emergency, safety, and environmental management.[59] Chemical engineers tend to view environmental management mostly as a

[59] The petrochemical center in Camaçari, Bahia state, for example, built in the 1980s with massive governmental assistance, features the services of an environmental and safety services company. This agency oversees the practices of all the firms operating at the center, collects and disseminates best practices,

technical issue of reducing emissions and leaks, improving waste treatment and handling, and—increasingly—product stewardship. RC is not reported to have had led to any significant changes that were not already implemented according to internal management practices.

Large, internationally competitive chemical manufacturers are technically sophisticated and highly oriented toward process management by their institutional culture. So it is not surprising that RC has had little impact on their technical operations. TNCs differ dramatically in the reported importance of RC to their internal management. One uses RC exclusively, at the global level, while others refer to RC codes and guides of practice only as "references" for their own management system, or as incorporated in their systems along with and not superior to ISO 14000, OSHA 18000 standards, etc. All large firms, however, report that the program contributed most to changes in their relations to the local community, including the creation of Community Advisory Panels and the implementation of open-door policies at production facilities. This attitudinal transition is well documented across the chemical industry worldwide. It is unclear how much Responsible Care is a source, or simply a component, of this tendency.

In the cases of smaller companies, the practice codes and guidebooks of RC seem to be much more useful as a roadmap for the design and implementation of a comprehensive management system. Small companies report that *Atuação Responsável* has led to numerous modifications, both in information management (for example, many did little waste or emissions monitoring before joining the program) and new safety and emissions or waste management procedures. Because they lack the financial, technical, or human

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coordinates community information and outreach programs, and facilitates relations with local regulators. Both industry officials and regulators in other Brazilian states speak highly of the operations at Camaçari.

resources of the large companies, and are without regular access to information about modern practices or new technologies, RC can be an especially important tool for small companies.[60] However, this gap between the technical standards and targets encouraged by RC, and the capacities of small companies, is a main reason why so many of these firms balk at assuming the projected costs (in terms of money, and of the labor-hours and time needed for implementation) of participating.

In contrast to the Argentine chapter, *Atuação Responsavel* is viewed as a credible standards program operated by serious, professional staff with the full backing of the industry's leading companies. Although flexible in terms of compliance, since the criteria and targets for "continual improvement" are left largely to individual firms to define, it is not a program that can be simply ignored. The knowledge, shared across all firms interviewed, that RC has expelled firms for non-compliance significantly boosts its legitimacy.

Factors that influence the effectiveness of Responsible Care in Brazil

Demand side factors. Without providing any basis for product labeling, RC brings no market benefit in terms of product sales or profit premiums. In terms of client pressure, TNCs in some industries including automobiles and cosmetics have recently begun to require of their suppliers independent environmental management certification, such as ISO 14001. These demands threatened *Atuação Responsável* because, until 2004, the program had no system or requirement of independent verification. This led one major German firm committed to RC's management system to push ABIQUIM to design a new, more independent verification system that such clients would accept. The *VerificAR* system,

[60] Interview with officials at small chemical companies, August 3 and 11.

established in 2005, includes participation by community members and independent auditors in RC company audits, which will be required every two years.

In terms of RC promotion by TNCs, only one TNC claims to have a formal program to promote RC participation among its suppliers and contractors, and it falls short of making participation obligatory. However, smaller firms state that an RC certificate (indicating an acceptably high score on self-reports) helps to show potential clients that the firm is a modern, well managed business posing low safety or environmental risks. ISO 9001 or 14001 certifications, nevertheless, are more commonly recognized by the market.

In terms of nonmarket pressure, managers do not consider pressure from regulators or from health or environmental advocacy groups as significant factors in their decision to participate in RC. Also, they claim that the benefits of participating, in terms of relations with these groups, are not significant, although some firms suggest that environmental and safety regulators do recognize RC participation as an indication that the firm is well managed, and tend then to focus their attentions elsewhere.

Supply side factors. *Atuação Responsável* is administered by a full-time staff of six, all former professional chemical engineers and/or auditors. The office is housed within ABIQUIM and the program runs on an annual budget of approximately US$500,000. This staff coordinates several directing committees made up of member company representatives that meet regularly to address program procedures and goals. Since 1996, when the first practice code was written, RC in Brazil has written several codes of practice and guidebooks on implementation, developed a new verification system, and most recently has dramatically overhauled the entire program to make it more accessible and its codes more applicable to its diverse members. RC administrators have repeatedly modified the program

in response to member demands (such as independent certification) and challenges (such as making the program more accessible to smaller companies).

The program does not collaborate in any way with any NGOs, community groups, unions, or government agencies. Only in 2004 did RC open a channel for public representation at the program level, by creating a National Community Council made up of a diverse set of people, from singers to NGO representatives to community leaders, nominated by member companies. This Council meets twice a year and reviews the RC program and its plans.

The program has very few, and weak, links to government agencies. A federal council that oversees national law on chemical safety and emergency preparedness includes Responsible Care representatives and in its reports advocates program participation. At the state level, the environmental regulatory agency of the state of Bahía has an exceptional relationship with the petrochemical center at Camaçari. RC members receive special treatment in the licensing process, and a public-private program encourages RC participation among these companies' suppliers. Regulatory agencies in other states are considering implementing aspects of these programs into their own operations.

The most significant supply side factors that support *Atuação Responsável* seem to be contextual, and not direct, in their effects. First, the size and resources of the chemical industry in Brazil dwarf those of all other chemical sectors in South America. This fact helps to account for the industry's capacity to implement the program collectively, and for the willingness and ability of many firms, and all the leading firms, to engage themselves in the modernization of their environmental management systems. Second, several industry officials cite a Brazilian business culture open to new models and standards that come from other countries. Brazilian companies tend to incorporate new management trends and to

seek innovation more aptly than those of other South American countries, a claim supported in the area of social and environmental responsibility by the indigenous creation of several national programs in the areas of business ethics and social accounting (Cappellin and Giuliani 2002). In addition to a certain legacy among the leading Brazilian businesses to show interest in social responsibility, the Brazilian public demonstrates relatively high concern for environmental and public health issues, probably the result of widespread recognition of recent catastrophes, including industrial pollution tied in the public eye to chemical operations (Cubatão in the 1980s, and major oil and gas leaks in 1999-2000).

III. Lessons from the Case Studies

These cases yield important insights into the extent and manner in which the effectiveness of global private regulation varies across developing countries and the factors that influence that variation. The programs in Brazil are more developed than those in Argentina, in terms of volume, quality, and their scope of activities. In Brazil, Responsible Care has added an innovative verification system that includes independent auditors and community members, and the FSC chapter has developed five different standards and has virtually all the market share for forestry certifications. In Argentina Responsible Care consists mostly of poorly attended monthly meetings and oft ignored audits, and FSC certifications have yet to spread outside of a narrow, export-oriented sector of the industry.

In terms of influence on the practices or behaviors of participating firms, however, we see much less cross-country difference. Despite the sophistication and activity of the Brazilian RC program, companies there show a similar level of impact from membership than Argentine companies. In the FSC cases, both national programs mandate similar,

relatively rigorous standards of social and environmental management. This indicates that although national level factors make some industries more receptive than others to private regulation, once implemented a program's rules and administrative structure generate similar effects on actual firm practice.

Regarding the research hypotheses regarding demand side and supply side factors than influence effectiveness, these cases indicate the following.

First, on the demand side, it is true that firms often participate in private regulatory programs aiming to improve their access to export markets, to meet clients' demands, or to obtain a higher price for their goods.[61] However, in these cases program effectiveness does not correlate at all with market benefits. The strongest examples of participation—among Brazilian forest plantations, large chemical firms, Argentine wood exporters—report virtually no market benefits. Supply side factors are of far greater importance to program effectiveness. Another finding contrary to the accepted wisdom is that the support these programs receive from U.S. or European TNCs does not extend far beyond their own participation. In the case of Responsible Care, a program designed by North American chemical industry councils and exported globally, no TNC requires participation in RC even from its own contractors. Nor do they tend to give more financial or project support to program activities than do local companies. Large U.S. companies may have originally introduced the program to the Argentine and Brazilian industries, but there seems to be little relation between a firm's home country and its ongoing support for or participation in the program.

[61] Obviously, it is the FSC cases that speak to this hypothesis; the RC cases do not, because the program does not support product labeling.

In the case of the FSC, certification in Brazil, regarding both plantations and native forests, is overwhelmingly dominated by Brazilian operations. Transnational NGOs were instrumental in bringing the program to Brazil, but several Brazilian NGOs and certification groups played equally critical roles. In Argentina, some foreign companies have certified with FSC, but others, led by those from Chile, oppose the FSC and promote an alternative, more industry friendly certification system. In short, this study suggests the need to modify the widely held view that foreign investment consistently promotes the raising of environmental standards through private regulatory programs.[62]

In no case does NGO or environmental advocacy pressure seem to have been a significant source of incentive for companies to participate. Likewise, these cases suggest that environmental regulations and control agencies have little, if any, direct influence on the effectiveness of these programs. Regarding Responsible Care, public agencies are largely neutral actors and the program has had scarcely any effect on members' relations with regulators. With FSC, neither government opposition (in the case of the Argentine Secretary of Agriculture, or Brazilian IBAMA officials) nor advocacy (on the part of the Brazilian Ministry of the Environment officials and some state governments) appears to have any significant impact on companies' decisions.

This is not to say that government policies, or the general legal environment, are not important background variables. In the Brazilian FSC case in particular, an important motive for participation in these programs is to obtain independent validation that the company is in full legal compliance and operates with environmental responsibility. The

[62] A study of six chemical and pharmaceutical transnational firms in Brazil reached a similar conclusion. See Ana Guedes 2000.

general public perception that state regulatory systems are corrupt or ineffective lead firms to certify in order to differentiate themselves within industries of ill repute.

Supply side factors such as industry characteristics, the resources of administrative agencies, and the general societal context, are more determinative of program effectiveness than any demand side variables. The relative strength of Responsible Care in Brazil mostly reflects the size, diversity, and resources of the chemical sector there compared to that of Argentina. It must be noted, however, that a high degree of industry concentration does not seem to improve the likelihood of effectiveness, as collective action theory suggests. Of the four sectors represented in the study the Argentine sectors, especially the chemical sector, are the more concentrated. The Brazilian forestry sector is the most heterogeneous and diffuse. However it is within the latter that private regulation is most effective, and it is least effective in the former. In fact, in the case of FSC-Argentina high industry concentration explains its vulnerability to the opposition of one or two firms.

The professionalism and capacity of program administrators is largely a direct result of the resources available to it. However, program effectiveness seems strongly determined also by the degree of administrators' opportunism and strategic action. Both Brazilian cases demonstrate programs capable of pursuing strategic opportunities and adapting to changes in the economic or political environment. For example, the Brazilian RC chapter is constantly reviewing and revising its procedures and has created new avenues for public outreach. FSC advocates in Brazil consciously targeted specific sectors and leading companies, in the beginning, to gain credibility as a market-friendly program and to isolate resistant groups.

On the supply side as well as on the demand side, the influence of state and civil society actors has mostly been insignificant. The only exception is the case of FSC in

Brazil, which has benefited from the active participation and advocacy of a network of national environmental and social rights organizations, including unions, each of which promotes forest certification as part of its own mission. In no case have government agencies contributed any type of assistance nor open show of support to either program.

Last, this comparison of two very different programs—one industry-driven and one coordinated by environmental NGOs—supports the argument that various instruments of private global governance are beginning to converge upon a democratic, multi-sectoral procedural norm. In these cases, over almost fifteen years of operations, the FSC standards writing process based on the convening of local-level, open participatory forums has proved relatively effective, especially in terms of protecting the credibility of the standards in the eyes of stakeholders. Negative elements of the FSC system include the slowness of its deliberation process and the difficulty of applying its inflexible rules across wide ranging local conditions. In the future these aspects may restrict its extension or scope, but not its credibility as a standard of sound forest management.

The chief failing of the Responsible Care programs in Argentina and Brazil are their lack of credibility among stakeholders outside the industry. In response, the Brazilian chapter has incorporated community involvement at the level of performance evaluation (within the *VerificAR* system) and program management (through the national community advisory council). The Argentine chapter also has introduced audits conducted by semi-independent certification. This indicates that the greater the level of Responsible Care's development, the greater the tendency toward expanding community participation. Viewed overall, these four cases support claims that since the mid-1990s a gradual process of institutional isomorphism has been taking place, in which private governance or regulatory programs are converging upon procedural norms of greater openness, multi-sectoral

participation, and transparency, pushed by their need to enhance their credibility across diverse sets of stakeholders.

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Appendix 1: Summary of global characteristics of the case study regimes

	Size	**Scope** Range of issue-areas covered, and type of standard required.	**System** Verification and enforcement instruments	**Administration**
Responsible Care®	52 national chapters, covering an estimated 80 percent of global chemical manufacturing.	Safety, health, and environmental management.	No external verification required. Evaluations are self-reported by firms, though some national chapters conduct their own audits or require external verification. Members may be placed on probation or expelled.	Standards and rules written by international industry association and national industry association chapters (i.e., by firms); process not open to outside participation except in advising roles.
Forest Stewardship Council (FSC)	689 forest management certificates in 66 countries (covering 54 million hectares). 3819 chain of custody certificates in 72 countries.*	Standards cover economic, social, and environmental sustainability.	External verification required by certification agencies accredited by FSC. Public notification and review required. Permission to use logo can be revoked. Also, accreditation of certifying agency can be revoked.	Standards and rules written through multi-party negotiation process, at both international and national level. Process heavily influenced by a coalition of environmental and social rights NGOs.

*As of May 2005.

Sources: Responsible Care® Global Status Report 2002 (*www.icca-chem.org/pdf/icca004.pdf*), and the FSC list of certified forests (*www.fsc.org/en/about/documents/Docs_sent*)