



**GOVERNANCE FROM BELOW: CONTESTING CORPORATE
ENVIRONMENTALISM IN DURBAN, SOUTH AFRICA**

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ABSTRACT

Multinational corporations (MNCs) operating in developing countries face increasing social and environmental risk. Previous work on how MNCs seek to mitigate these risks often fails to recognise the complexity and interaction between international, home and host country governance mechanisms. Here however changes in corporate environmental behaviour at the site level are evaluated in terms of the dynamics of local and cross-scale institutionalisation processes. The subject of the paper is the contestation of industrial pollution at Shell's Sapref oil refinery in Durban, South Africa. Institutional and organisational theory is combined with social network analysis to explore how and why Sapref's environmental performance has changed over time. The analysis highlights mechanisms of institutional change and how MNC environmental performance can be contested and constructed from the bottom up, thus calling into question the effectiveness of global environmental governance processes.

Keywords

Corporate environmentalism; institutional theory; multinational corporations; network analysis; organizational fields; Shell; South Africa



INTRODUCTION

Within the context of economic globalization there have been increasing calls for stronger governance of multinational corporations (MNCs) that span the social, economic, political and environmental issue areas. As foreign direct investment flowing into developing economies has increased from \$35.7 billion in 1990 to \$233 billion in 2004 (UNCTAD, 2007), MNCs have arguably become the most important actors in the global economy. The supposed limited capacities of the state have opened up new roles for non-state regulators such as market and civic regulation and industry self-regulation (Glasbergen, 1998; Levy & Newell, 2005; Rosenau, 1995; Sonnenfeld & Mol, 2002; World Bank, 2000).

Traditionally governance measures have come in the form of top-down, national level, regulations and economic instruments, which implies that the obligation of the private sector is to be compliant with relevant laws and regulations. However critics suggest that given the lack of consistency in domestic rule setting and enforcement capabilities, international rules, norms and standards are needed in order to render international business accountable. Yet the treaty making process is slow and the constellation of international norms and standards is vast. Thus other non-traditional regulatory instruments are employed. These include horizontal industry initiatives such as voluntary and self-regulation, and bottom-up civil society approaches such as information-based strategies and community-based regulation.

The case can be made for increased recognition of MNCs' responsibilities towards the countries in which they operate (UNCTAD, 2003: 164). This trend can be demonstrated as MNCs operating in developing countries face increasing social and environmental risk both in terms of global 'reputational capital' and local 'social license to operate' (Joyce & Thomson, 1999; Kytte & Ruggie, 2005). Previous work on how MNCs seek to mitigate these risks often fails to recognize the complexity and interaction between international, home and host country governance mechanisms. Corporate environmentalism drivers have been examined in advanced industrialized countries (see e.g. Hoffman, 1999; Kagan, Gunningham, & Thornton, 2003), but beyond describing and prescribing corporate environmental behaviour (Utting, 2002), comparatively little analytical research has taken place on its evolution in developing country contexts (Christmann, 2004; Garcia-Johnson, 2000).

Our understanding of corporate greening in developing countries is limited by a lack of rigorous theoretical and methodological approaches that take into account internal and external drivers from the local to the global. This paper seeks to address this gap by employing a novel research design. Here institutional and organizational theory is combined with social network analysis to explore how and why an MNC subsidiary's environmental performance has changed. Close attention is paid to the dynamic institutionalization and legitimation processes that underpin changing corporate behaviour so that both structure and agency are incorporated. The subject of the paper is the contestation of industrial pollution at Shell's Sapref oil refinery in Durban, South Africa. Using social network analysis a story is told that contextualizes the refinery's legitimation process that has unfolded since democratization in South Africa with particular attention given to factors internal and external to the firm from the local to the global. The analysis highlights mechanisms of institutional change and how MNC environmental performance can be contested and



constructed from the bottom up, thus calling into question the effectiveness of global environmental governance processes.

The paper begins with a discussion of Shell, Sapref and the South African context. Then, theory is used to develop an analytical model, which is followed by the study's methodology. Next, organizational field structuration is explored using social network analysis, and qualitative narrative is incorporated to highlight key turning points and mechanisms that shape the institutionalization processes. Finally, the paper concludes with insight into South Africa's Institutional transition and how MNC environmental performance changes from the bottom up.

ANALYZING MNC BEHAVIOUR

The Context

Sapref in Durban, South Africa is a 50/50 joint venture between Shell and BP; though Shell is the operator of the refinery. Commissioned in 1963, the refinery is the largest crude oil refinery in southern Africa with 35% of South Africa's refining capacity (SAPREF, 2007). It is a highly complex refinery with an output capacity of 180,000 barrels of crude oil per day. Sapref's operations consist of the refinery, a single buoy mooring, the Island View harbour storage facility, joint bunkering services, and seven product transfer pipelines that run 12 kilometres between the refinery and the storage facility (ibid). There has been increased pressure from civil society and government actors over the last decade for Sapref to improve its environmental performance. Sapref's environmental performance will briefly be outlined considering both processes and outcomes internal and external to the firm (Ilinitch, Soderstrom, & Thomas, 1998). This analysis will not normatively judge whether or not the refinery's environmental performance was sufficient or effective, but will assess how and why it has evolved.

Sapref's internal processes began to change significantly when they achieved ISO14001 certification in 2000 and volunteered to be the subject of a Shell Social Performance Review in 2002. It is interesting to note that a significant increase in internal processes undertaken in 2004 and 2005 coincides with the appointment of a new Sapref General Manager (GM). Efforts to amend external processes began in 1998 when a communications manager was hired to help manage community relations. Substantial efforts have been made from 2001 to 2006, which include: publishing stakeholder reports since 2001 and online emissions data since 2003; hiring two external affairs staff and enlarging the Health, Safety and Environment (HSE) department in 2002; establishing a Community Liaison Forum and conducting a community survey in 2003; and increasing refinery visits for the public and reporting via the Global Reporting Initiative guidelines since 2004. It appears that Sapref's stakeholder engagement strategy has matured. Its external processes increased substantively from 2001 to 2003 then levelled off, followed by a significant increase in internal processes from 2003 to 2005.

Sapref's changes to internal environmental outcomes include investment of over 450 million rand (\$63.6 million) since 1993 in plant environmental upgrades, maintaining compliance



with host country law¹, and specification of internal HSE performance targets. As a result, Sapref has made improvements to substantive external outcomes: SO₂ emissions have been reduced by over 60% since 1995, and volatile organic compounds (VOCs) have been reduced by almost 35% since 1999. Although Sapref has made significant improvement to internal and external environmental performance, the plant's legacy of environmental incidents betrays public trust and tends to undermine its legitimacy. Sapref has continued to have a steady rate of fires and spills since 2001, and an increase in flaring from 2004 to 2005 (SAPREF, 2005). Although most of these incidents are considered minor, some have potential health impacts and are highly visible to local communities, thus exacerbating lack of trust in plant integrity and management. Sapref's safety record is better, as it did not have any lost time injuries in 2003 and 2005 (ibid). Although it has made significant improvements, Sapref continues to have environmental incidents. These ongoing incidents to some degree are related to the apartheid legacy of poor plant maintenance, limited upgrades and the knock on effects of needing to refine suboptimal crude under trade sanctions.

The refinery is situated in the South Durban Basin, one of South Africa's pollution hotspots. The basin is bordered by two high-lying ridges, south of the port city of Durban. Located in this relatively small area are two of South Africa's four oil refineries, Africa's largest chemical storage facility, and over 180 smokestack industries (Wiley, Root, & Peek, 2002). In addition Durban's airport is located in the basin which, given flight paths, limits smokestack heights and prevents the proper dispersion of refinery emissions. Many of the issues relating to the contestation of corporate environmentalism in South Durban's industrial district are a direct consequence of the apartheid-planning regime. In the 1950s, land was made available for industrial development and refineries were built. Under the apartheid government's Group Areas Act, land adjacent to the refineries was subsequently set aside for residential developments to house black, Coloured and Indian populations. By locating relatively deprived communities there, apartheid planning provided a basis for many of the issues relating to perceived environmental injustices still apparent in the area today. Under the apartheid regime, opportunities for local community members to access information, participate in decision-making or express dissent were almost entirely absent.

A proliferation of innovative forms of governance have emerged since 1994, in South Africa's new democracy. New political space was created for the previously excluded majority (Wiley, et al., 2002). In addition, the government has placed a priority on enabling economic growth and international competitiveness, hence setting up the potential conflict between environment and development goals. This case exemplifies the complexity of the MNC operating environment. Legacy issues and changing political and social contexts in subsidiary host countries provide the backdrop for the analysis of changing corporate environmental behaviour at the local level.

A Theoretical Model of Parent-Subsidiary Complexity

From an MNC perspective, a distinction can be drawn between home and host country operations. Shell considers itself a 'Group' of companies, which operate in more than 140 countries worldwide. But how corporate level policies and practices impact on site level

¹ Given that South African air pollution regulations were based upon 1965 guidelines until recently, this perhaps is not the best indicator of environmental performance; however Sapref has moved to a new permit in 2006 as South Africa's new Air Quality Management Act (2005) is implemented.



processes and outcomes (Gouldson & Sullivan, 2007), and how MNCs operate in multiple and sometimes conflicting organizational fields (Westney, 1993) are understudied areas. International business scholars often seek to contextualize MNC operating complexity in multiple host countries (Delmas & Toffel, 2004; Kostova & Roth, 2002; Kostova & Zaheer, 1999). From an institutional perspective, organizational legitimacy can be evaluated as how well an entity fits its legitimating environment. In this case, Sapref has multiple legitimating environments: externally it must maintain its legitimacy at the local, provincial, national and international levels; and internally the subsidiary must maintain its legitimacy with local employees and Shell corporate. There may be competing pressures between the internal and external legitimacy demands, as well as lack of consistency between home country corporate leadership and strategy to host country local leadership and operational behaviour (Wheeler, Fabig, & Boele, 2002: 312).

Distilled from the work of institutional theorists and organizational legitimacy scholars, three sets of factors shape and constrain the process of legitimation and institutional change (e.g. Kostova & Zaheer, 1999; Meyer & Rowan, 1977; Powell & DiMaggio, 1991; W. R. Scott, 2001). At the macro level the legitimation process can be explained through the analysis of the *organizational field*. At the meso level, the legitimating environment's characteristics are observable through changing *institutional dimensions*, and at the micro level an *organization's characteristics*, such as a firm's structures, practices, norms and beliefs, can explain its legitimation strategy. *Organizational fields*, which can be strictly defined as "a community of organizations that partake of a common meaning system and whose participants interact more frequently and fatefully with one another than with actors outside the field" (W. R. Scott, 1995: 56). An expanded view of the field is adopted that conceptualizes it as centred on issue areas and domains of contestation, rather than on common technology and markets that comprise domains of stability (Hoffman & Ventresca, 2002a: 9). In the context of this study they are discursive spaces within which actors compete to construct meanings of legitimate corporate environmental practice in South Africa.

The methodological challenge is to determine which field level structures and processes impact most significantly the institutions governing corporate environmental performance. A field, from a theoretical perspective, may be focused around an issue (Hoffman, 1999: 352), however methodologically network analysis may be the most useful tool to analyze the social interaction within the field (Powell, White, Koput, & Owen-Smith, 2005: 1134). This study will pay attention to how the structure of the field has changed over time, with particular focus on influential field elements that act as mechanisms for institutional change.

At the meso level, *institutional dimensions* shape and constrain corporate behaviour (W. R. Scott, 2001). Institutions originating within the firm's business, economic, political and social networks constitute its organizational field (Hoffman & Ventresca, 2002b). Scott (2001) introduces the useful analytical distinction between regulative, normative and cognitive institutional pillars. Each is grounded within its own disciplinary assumptions about what institutions are and how they impact organizational behaviour (Hoffman & Ventresca, 2002a: 6). The regulative pillar views institutions as coercive mechanisms such as formal and informal rules, laws, and sanctions (W. R. Scott, 2001). The normative pillar considers values and societal norms (ibid: 55), and a third set of theorists stress the importance of cognitive institutional dimensions, such as how shared understandings of what constitutes social reality impact organizational behaviour (ibid: 57). The basis of legitimacy for the three institutional elements differ and may conflict (W. R. Scott, 2001; Suchman, 1995), particularly



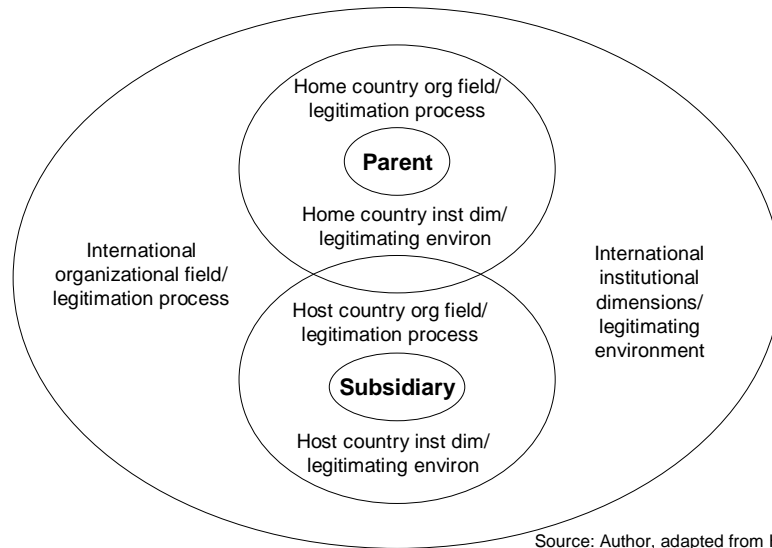
in the case of an MNC. Therefore how a firm at the parent and subsidiary levels fits within its legitimating environment should provide insight into both how and why institutional change has occurred.

At the micro level, an *organization's characteristics*, such as firm level structures, processes, norms and beliefs, will determine how a firm reacts to field level demands (Bazerman & Hoffman, 1999). Linkages between the macro and micro are often under theorized within explanations of changing organizational behaviour (Hoffman, 2001). As Hoffman and Ventresca (2002a: 9) underscore, the perspective is often taken that the field has unidirectional isomorphic impacts on the firm, whereas in an expanded analytical view there can be a dual-direction of influence between the field and the organization. Highlighting organizational agency, Suchman (1995: 600) identifies legitimation strategies to gain, maintain and repair organizational legitimacy. Within each of these goals he breaks down how organizations may employ strategies to conform, select or manipulate the environment in order to maintain pragmatic, moral or cognitive legitimacy. However some scholars have been critical of how business seeks to accommodate stakeholder concern in order to legitimize their positions of power in society (Hamann & Acutt, 2003; Idemudia, 2007; Levy & Newell, 2002; Utting, 2000).

Sapref's environmental behaviour will be analyzed in terms of how it is shaped and constrained by the institutional dimensions, how it engages in field level strategies, and its internal and external legitimacy. Figure 1 demonstrates MNC complexity in managing the relationships between parent-subsidiaries, institutional or legitimating environments, and multiple organizational fields or legitimation processes. Obviously the model simplifies MNC operating complexity, as large firms will operate in dozens of countries. Not explicit in the model is the distinction between internal and external legitimacy. A subsidiary will have the pressure to maintain internal legitimacy within the MNC and external legitimacy within their host legitimating environment (Kostova & Zaheer, 1999). Here, given the complexity of the qualitative data, the model in Figure 1 will be used to guide the research inquiry as opposed to develop testable hypotheses. The following in-depth case study will pay close attention to legitimacy, power and the construction of shared understanding as the data is analyzed in relation to the field, institutions and organization.



Figure 1. A model of parent-subsidary complexity embedded in their legitimating environments



Source: Author, adapted from Hoffman 2001b and Kostova and Zaheer 1999

METHODOLOGY

Research Design

To unpack the complexity represented in Figure 1, this study employs multiple units of analysis at multiple scales (Yin, 2003: 40). Although this study's starting point may be theory driven, the research process has evolved iteratively (Eisenhardt, 1989). Three explanatory units of analysis are specified: the organizational field, institutional dimensions and firm level behaviour. In addition, this study utilizes an 'explanatory' case study research strategy (Yin, 2003: 3). Although a single-case research design may be limited in how generalizable the results are to other contexts, this in-depth study aims to yield both rigorous and relevant insight into how and why Sapref has changed its environmental behaviour, and also theoretical insights into how multiple units of analysis can triangulate to construct more complete explanations of organizational behaviour.

In addition, these units of analysis are theoretically linked but methodologically distinct (Ragin, 1987). The organizational field is explored using social network analysis. The observational units are relationships between actors and issue areas. Data was collected from newspaper articles dating from 1995 to 2006. The institutional dimensions are identified through rules, norms and cultural factors that become apparent through primary and secondary data sources. Finally firm level behaviour is analyzed through changing structures, processes and outcomes at both the subsidiary and parent company levels. Here attention is paid to the legitimation strategy that the firm employs. Primary and secondary data sources were used, including over 40 key informant semi-structured interviews, newspaper articles, corporate reports, and government documents.²

² Interviews were conducted in South Africa in 2004 and 2006.



Social Network Analysis

Social network analysis is used to explore social structure and organizational agency (J. Scott, 2000). A network can be defined as a set of actors, or nodes, connected by a specific type of relation; the structure of the network is then interpreted through the patterns of ties between the nodes (Diani, 2002: 175). Here social network analysis is used in an exploratory way combining both quantitative and qualitative approaches (Börzel, 1997: 2). Hypotheses are not tested using statistical techniques, but both the structure and content of the interaction between actors that populate the organizational field are explored in order to find relevant patterns. Network ties are often investigated in terms of 'one-mode' networks, where all the actors come from one set of relational data (J. Scott, 2000; Wasserman & Faust, 1994), but there are other types of relational data where two sets of actors or a set of actors and events are represented. This is known as a 'two-mode' or affiliation network, where one set of actors has ties to actors or events in another set (Wasserman & Faust, 1994: 30). The concept of affiliation networks is adopted, but instead of noting actors and events, actors' participation in various issue areas was coded. These issue areas then comprise the larger organizational field. Newspaper articles were analyzed yearly from 1995 to 2006; they were selected by keyword searches.³ What is of interest is to show how the issues are connected and perceived over time. The analysis will examine which issues are more and less central in the discursive space, and the dynamics of how issues and actors connect (Anheier & Katz, 2004: 216).

It is important to recognize the potential weaknesses of using newspaper data. First, possible bias is introduced through purposeful sampling strategies (Barranco & Wisler, 1999; Earl, Martin, McCarthy, & Soule, 2004). However this was guarded against given that all of the articles found through keyword searches were used in the analysis. It is possible, however, that relevant articles were framed in unusual ways were missed by this technique. Second, it is difficult to get around the selection and description bias of news agencies when relying upon newspaper data (Barranco & Wisler, 1999; Earl, et al., 2004: 72). Indeed, there is a reliance upon what the press deems as "newsworthy" and how the "who, why, what, when, where" of issues is reported. By picking a variety of daily, weekly, local, national and international news sources it is intended that this bias is mitigated. Within the context of South Africa's post-apartheid media reform (Barnett, 2003), it is expected that the newspapers will report on the issues of greatest social concern. However it is possible that Durban has more proactive investigative journalism than other South African communities, and thus is more supportive of community activists. Finally, the newspaper data is triangulated with data from in-depth interviews so that accuracy and importance of issue areas are to some degree verified. In sum, newspaper data is one of the few sources of event and issue area longitudinal data, and although it does have flaws it remains a useful data source (Earl, et al., 2004: 77).

Within this study the "closeness" or "distance" between issues and actors will be explored: two issues are close if they have many actors in common; two actors are close if they are connected to many of the same issues; and an actor and an issue are close if that actor is

³ Searches were made on the keywords of "Sapref", "Durban and Air Pollution" in a variety of different South African and international sources. These include: Sabinet, a South African online information portal; the Mail & Guardian, a national newspaper; Business Day, South Africa's main financial newspaper; Independent Online, a variety of local and national papers; and LexisNexis' all English language news search engine. Over 275 articles were coded that were published within the time period of 1995 - 2006.



frequently cited in discussion of that issue. The network analysis software Ucinet and Netdraw is used to analyze the data and render the network diagrams (Borgatti, Everett, & Freeman, 2002).⁴ To make the data more accessible, hypergraphs, or contours around actors participating in the different issue areas, are used to show how different categories of issues have evolved (Wasserman & Faust, 1994). The contours are colour coded to denote the types of categories: red signifies incidents; green is civil society activism; grey indicates industry initiatives or upgrades; purple shows health issues; and blue represents government initiatives or action. In addition, ties are weighted by strength, i.e. how many times an actor referred to an issue area, and nodes are by shape. Circles are actors and squares are issue areas. All issue areas or squares are red, although difficult to see on the small graphs within this paper (especially if it is printed in black and white), actors or circles are also coloured by type.⁵ The following section will combine the use of network diagrams and qualitative narrative to present the contestation of the organizational field as it relates to industrial pollution and Sapref's environmental performance.

DISCUSSION

Detecting Field Structuration: Network Diagrams

Four graphs that are representative of the shift in field structure will be discussed: 1995-1999, 2000, 2002 and 2005. What is immediately apparent after a glance at Figures 2, 3, 4 and 5 is how the field structure evolved from being somewhat fragmented to much more structured. Tables 1, 2, 3 and 4 indicate how the types of actors engage in the issue areas over time; the third column (citations) indicates how many times a particular category of actor participated in the issue areas. Field structuration (Giddens, 1979), or the construction of shared understanding at the field level, should be detectable through four factors (DiMaggio & Powell, 1991: 65; Hoffman, 1999: 352). First is increasing interaction between field level actors. This certainly has occurred and is indicated by the increasing density of the network graphs and the increase in citations from civil society, government and industry actors from 1995 to 2005.

Second are well-defined relationships that result in patterns of domination or coalition. It is apparent how in Figures 2 and 3 the issue areas were relatively disconnected, but in Figure 4 incidents at Sapref and civil society activism contributed to more cohesion, and in Figure 5 government regulation and enforcement moved to the centre of the field. It can be inferred that new interorganizational relationships have evolved within the organizational field. The third indicator of structuration is an increase in information load that the organizations must contend with. Similar to the first factor, this is demonstrated by the increasing cohesion and density of the network graphs. More actors were participating in more issues, hence it can be deduced that new information was introduced into the field. Finally the fourth factor is mutual awareness of the field level issue area. This is apparent given how in Figure 5

⁴ The network diagrams are generated using Netdraw's spring embedding algorithm. The location of actors and issue areas are to some degree interpretable but their distances and directions are somewhat arbitrary (Hanneman & Riddle, 2005).

⁵ Bright green are community based actors or organizations (CBOs); medium green are NGOs; dark green are international NGOs; grey is industry; light blue is municipal government; medium blue is provincial government; dark blue is national government; very dark blue is foreign governments; pink is the media; and purple is academia.

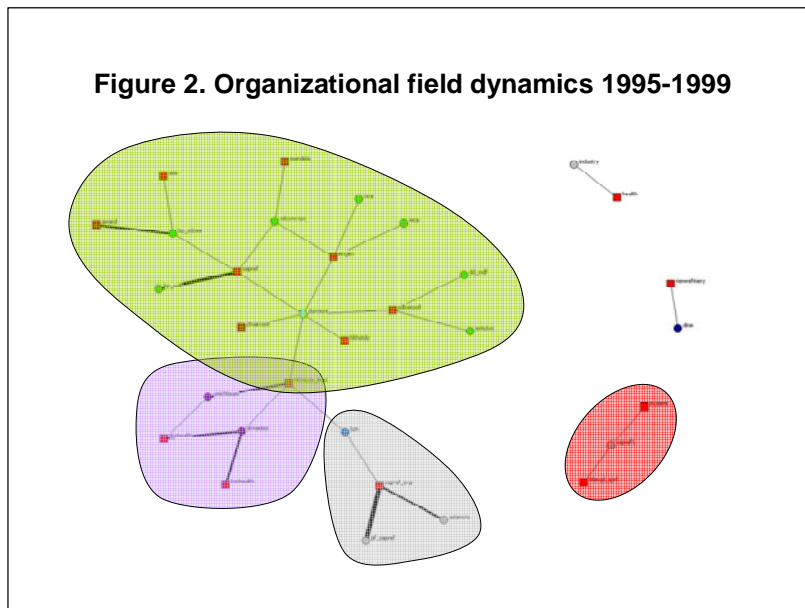


industry, government and civil society actors are centrally located in the field, demonstrating a degree of connectivity. Also Table 4 shows that civil society, government and industry all actively participated in the organization field so it can be posited that a heightened mutual awareness of the field level issue area is achieved.

It appears that common understanding for environmental and air quality management has indeed occurred, and that this should in part explain why Sapref's environmental performance has improved. The following discussion will describe some of these key turning points, events and modes of field level contestation, and will consider how these field elements act as mechanisms of institutional change within the context of Sapref's legitimation process.

The Beginning: 1995-1999

The starting point for this analysis is 1994, the beginning of South Africa's new democracy. Indeed as Shell's Social Performance Review of Sapref in 2002 summarized: "The major implication for South African industrial facilities such as Sapref is that they can no longer rely on their pre-1994 relationship with government for their license to operate, but must instead proactively engage with a range of other stakeholders" (Shell, 2002: 12). This post-apartheid environmental pollution struggle ignited in 1994 when the Engen oil refinery, located a few kilometres north of Sapref, called upon local communities to engage in a Community Awareness and Emergency Response Committee as part of the Chemical Industry's Responsible Care Initiative. This was Engen's attempt to address community concerns before President Mandela's visit to the refinery in March 1995.



Type	Subcat.	Cit.
Academic	Academic	3
Civil Society	CBO	19
	Intl NGO	0
	NGO	0
Government	Intl Gov	0
	Local Gov	6
	Nat Gov	1
	Prov Gov	2
Industry	Engen	0
	Industry	3
	Sapref	6
	Shell	0
Media	Media	0
Total		40

This event started a long process of negotiations between Engen and the communities that catalyzed the communities into an organized pressure group, and resulted in a Good Neighbour Agreement (GNA) that committed Engen to a five year performance improvement programme in 1998. Under the leadership of community activists Bobby Peek and Desmond D'Sa white, black, Coloured and Indian communities came together in 1996 to

