

Helping People Build a Better World? Barriers to More Environmentally Friendly Energy Production in China

The Case of Shell

Inga Fritzen Buan



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FRIDTJOF NANSENS INSTITUTT
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¹ In 2000 it was decided that 'Helping People to Build a Better World' was the Shell Group's 'core purpose' (Mirvis 2000:75).

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Abstract

China's rapid industrialization and economic expansion are causing massive environmental damage, with consequences beyond the country's borders, especially due to the use of fossil fuels' effect on climate change. Shell China can contribute to making energy production, if not clean and sustainable, then cleaner and more sustainable by making existing energy production more environmentally friendly; by diversifying and developing alternative energy sources; and by creating precedence influencing others to follow in its footsteps. The first goal of this report is to identify and analyze changes that have happened in the Shell Group since the 1990s when energy companies started their 'greening' processes. These changes happened due to stricter environmental legislation, increased civil society pressure and media scrutiny. Changes on the global and headquarter levels in a company do not, however, necessitate similar developments in its national and local level operations. The second goal is thus to analyze to which degree the changes in the Shell Group have had relevance for Shell China and whether barriers in the Chinese context influence its prospects to operate in a more environmentally friendly way.

Key Words

China, Shell, Shell China, climate change, oil industry, implementation, fieldwork in China

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Abbreviations and Acronyms

ADB	Asian Development Bank
CTL	Coal-to-Liquids
CCICED	China Council for International Cooperation on Environment and Development
CSR	Corporate social responsibility
ESIA	Environmental and social impact assessment
FDI	Foreign direct investment
FNI	Fridtjof Nansen Institute
GDP	Gross national product
GONGO	Government-organized non-governmental organization
GHG	Greenhouse gas
HQ	Headquarters
HSE	Health, safety and environment
IPCC	Intergovernmental Panel on Climate Change
JV	Joint venture
MFA	Ministry of Foreign Affairs (China)
NDRC	National Development and Reform Commission
SEPA	State Environmental Protection Agency
TNC	Transnational corporation

1 Introduction

The topics discussed in this report are making headlines on a daily basis. First, to paraphrase Napoleon's somewhat worn-out quote: the giant called China has finally awoken and is indeed making the world tremble. China's economic growth has enabled it to achieve the most extensive, quick-paced poverty reduction the world has ever seen, but with economic development have also come a wide range of consequences. Moreover, the environmental debate is now entirely global. It is largely centered on climate change and the threats associated with this, but the national-level environmental challenges of large countries like China are also part of the global discourse. Even people and companies not entirely convinced as to the seriousness of such threats are choosing to err on the side of caution – besides, there is money to be saved as well as employment to be created from being 'green'. This is also related to the question of *image* and the increasing need of large companies to portray themselves as socially and environmentally responsible. And that leads us to our third timely topic, *transnational corporations* (TNC), whose roles in the global environmental debate have changed significantly in recent decades, much due to heightened environmental awareness on the part of civil society. The Royal Dutch Shell Group (henceforth Shell)² is a good example of a TNC that has undergone a significant transformation. It has for that reason been chosen as the object of this case study.

1.1 Research Questions and Theory Tools

The price of China's quick-paced industrialization and economic expansion is that the growth itself is unsustainable, both socially and geographically unequal, and that it is backfiring especially in the form of increased damage to the already fragile natural environment. Driving this rapid industrialization and environmental deterioration are fossil fuels. It is not likely that renewable energy sources will be able to compete with traditional fuels in China any time soon. A more environmentally friendly energy production from fossil fuels thus becomes a kind of substitute goal. The aim of this report is to use a case study of the Shell Group and its national operative company Shell China to address these two questions:

1. What changes have happened in the Shell Group in the past decade to make it a more environmentally responsible company?
2. Do these changes have relevance for Shell China, or will barriers in the Chinese context influence its prospects for operating in a more environmentally friendly way?

² I use the names Royal Dutch Shell, the Shell Group, Shell and the Group when referring to the transnational company, sometimes also when referring to their operations in China as it is not always necessary to distinguish between the entities. When referring to something specific to the Chinese branch of the Group, I call it Shell China.

I have chosen to focus on barriers alone, and not opportunities, or both. This does not mean that I assume opportunities do not exist or that they will not be mentioned where relevant and appropriate. The reason I use the word 'more' in both questions is that although I do not believe fossil fuels production will ever become entirely benign, there is much that can be done to make the existing use of coal, oil and gas if not clean and sustainable, then *cleaner* and *more sustainable* than it is today. Shell companies can contribute to this by making their existing production of fossil fuels more environmentally friendly; by diversifying and developing renewable energy sources; and by creating precedents that can influence other companies and industries to follow in its footsteps.

Geographical context matters and I want to investigate what happens to a company's environmental policies when it tries to implement them in a new context. To answer the first research question I will use the analytical framework put forth by Estrada, Tangen & Bergesen in 1997 (henceforth Estrada et al. 1997), which contains a typology of three possible responses that energy companies may use in the face of new environmental demands, expectations and legislation. The companies' results on six indicators of change determine their position on the typology's response axis. These indicators are: the environmental vision and image the company presents to society; environmental management; long-term planning and scenarios; research and development; investments; and government relationship and public relations. Companies are then classified as *reactive*, *cautious* or *creative*. I will use the indicators to identify the Shell Group's environmental profile as of 2007 and look for changes since 1995, the year Estrada et al. carried out their study.

Estrada et al.'s (1997) study and framework are good tools for addressing this report's first research question because they provide a thorough analysis of Shell *anno* 1995, a good point of departure for a comparison of the company's environmental profile before and now. Moreover, the framework is part of a larger body of contemporary theoretical thought used in this report called *ecological modernization*, the main idea of which is that it is both desirable and possible for societies to develop economically and socially while at the same time conserving the environment (Mol 2006). During the course of this study, however, it became apparent that Estrada et al.'s (1997) framework was insufficient for explaining the *implications of companies' environmental profiles*. It did not help me analyze how the profile and the elements it includes are influenced by factors in the specific Chinese context. In Chapter 4 I will, on the basis of the literature and my interviews, identify barriers in the Chinese context which may hinder the successful implementation of environmental policies meant to make fossil-fuel energy production more environmentally friendly. Moving, then, from general empirical observations to a more analytical approach, in order to address the second research question, I will use Najam's (1995) so-called '5C Protocol' (see below) to study the prospects for implementation of existing environmental policies. More specifically, I will analyze the prospects for implementation of the Shell Group's Health, Safety and Environment (HSE) policy in China as an example of how the barriers influence implementation of existing environmental policies. Najam identifies five variables which influence the directions that implementation might take: a policy's

content, context, commitment, capacity, and clients and coalitions. The 5C Protocol thus complements Estrada et al.'s (1997) framework by adding the possibility of explaining how something happens, or does not happen, in a particular context.

1.2 Shell, a Modern Transnational Company

With the rapid increase of foreign direct investment (FDI) in developing countries, the environmental practices of TNCs increasingly influence prospects for sustainable development. Consequently, there is a need to identify and analyze the factors that may impede the positive contributions of such companies to the sustainable development of host countries.

As illustrated by some of the recent decade's highly media-covered events involving the Shell Group, it has become clear that the company is a major player in the international political economy and well-suited as the object of an in-depth study concerning the environmental aspects of the operations in the energy industry. I chose to analyze also the operations of the national operative company Shell China, because even though the Group now prides itself on being an environmental frontrunner, the geographical context is likely to influence Shell China's prospects for achieving the environmental goals shared by the Group as a whole. Just as the strategies, positions and standards of the Shell Group may indicate trends for the rest of the energy industry (Estrada et al. 1997), Shell China's ability to achieve its goals may indicate trends among other foreign energy companies in China. The *transferability* of my findings will be discussed in Chapters 3 and 7.

Information on these topics has been collected through fieldwork and interviews in China. I interviewed several people with expertise on topics related to environmental and energy issues in China. Even though considerable information on the business operations of energy companies, especially their efforts to act in more environmentally and socially responsible ways, is available in literature and on the Internet, there is also much important information that is not disclosed to the public. My informant at Shell China in particular provided me with information crucial to this analysis, information I could never have obtained otherwise.

Here let me point out that it lies beyond the scope of this report to study the *results* of any environmental policies – that is, to which degree they lead to actual environmental improvement.

1.3 Outline of contents

This report consists of seven main chapters. Chapter 2 presents the theoretical tools. I outline ecological modernization as well as Estrada et al.'s (1997) framework for the analysis of energy companies' responses to rising environmental demands, and then present the 5C Protocol, a tool for analyzing policy implementation. In Chapter 3, I give an account of the methodology used in this report and its implications. The approach is a qualitative one, using an in-depth case study of the Shell Group, based largely on information gathered through semi-structured interviews with

individuals who can be assumed able to provide relevant information. The chapter also contains a discussion on the challenges related to doing fieldwork in China. China is the focal point of Chapter 4, where I outline major aspects of the country's past and present situation related to economy, the environment and energy. Towards the end of this chapter, I identify the barriers to a more environmentally friendly energy production which I have found in the Chinese context. The comprehensiveness of this chapter represents the expected width of the barriers I am looking for as well as a kind of exploratory approach to the ensuing analysis, common in qualitative research. Chapter 5 provides an outline and analysis of the Shell Group and Shell China, the main point being the comparison between the Group's environmental profile in 1995 and in 2007. The aim of Chapter 6 is to analyze the prospects for successful implementation of Shell's HSE policy in China, in light of the barriers identified in Chapter 4 and using the 5C Protocol. Conclusions are drawn in Chapter 7, where I also discuss Shell China's potential for extended social legitimacy as well as the prospects for ecological modernization in China. Lastly, I take a critical look at the transferability of my findings and the relevance of the theory applied in this study.

2 Theory and Analytical Framework

The theory tools I will be using to analyze my data consist of a general body of theories on a concept known as *ecological modernization* which will form the theoretical backdrop of this report; Estrada et al.'s (1997) industry-specific analytical framework; and Najam's (1995) variables used for studying implementation. Using both specific and general theories in studying the same case will help deepen the analysis and reveal different perspectives of the topics discussed. Adding the implementation perspective to the analysis helps solve an analytical challenge that arose when it became apparent that the Estrada et al. framework was a good tool for description, but not for analyzing and addressing the question of *why* environmentally-friendly energy production is hard to achieve in China. Their framework is thus useful for dealing with my first research question, and the 5C Protocol in addressing the second one.

2.1 Ecological Modernization

An important concept, field of inquiry and topic of debate in the environmental social sciences over the past few decades, ecological modernization has been receiving increasing attention from policymakers in the developed countries (Dickens 2004). The term refers both to a tool for explaining existing environmental reform patterns and to a normative concept for the planning of future 'green' trajectories (Zhang et al. 2007). Here we will be dealing with the former.

In the 1980s, 'an ecological perspective started to challenge the monopoly of economic rationality as the all-determining organizing principle in the sphere of economics' (Mol 2006:31). The concept was developed as a response to the failures of the old pollution-control policies of the 1960s and 1970s, by focusing on prevention rather than cure, and on the promotion of low and non-waste technologies.³ The zero-sum game perception of 'environment versus economic growth' was increasingly replaced by a common denominator for development of industry and the preservation of ecology: there did not have to be a discrepancy between the two. Something which can prompt companies to realize this is what Porter and van der Linde (1995) refer to as *product* and *process offsets*. They claim that stricter environmental regulations can lead to innovation which in turn can contribute to strengthening companies' competitive advantages through such offsets. Product offsets occur when environmental regulations lead not only to less pollution, but also to better-performing, higher-quality and safer products. Process offsets occur when environmental regulations also result in higher resource productivity in terms of higher process yields, less downtime, material savings, better utilization or by-products, conversion of waste into valuables, or safer workplace conditions. Porter and van der Linde's (1995:98) hypothesis is that 'properly designed environmental standards can trigger innovation that may partially or more fully offset the costs of complying with them'. This makes it possible for economic processes of production and con-

³ www.valt.helsinki.fi/staff/skahonen/akatemiahak.htm

sumption to be designed, organized, analyzed and judged from both an economic and an environmental point of view, leading to institutional changes in which companies develop environmental management systems and establish environmental departments.

The core topics in ecological modernization, which are not physical improvements in the environmental situation *per se* as much as social and institutional transformations which could eventually lead to physical improvements, include:

- The changing role of science and technology: environmental improvements achieved through technological advances;
- The new roles of market dynamics and economic actors in ecological restructuring and reform, complementing the roles of the state and civil society;
- More non-state actors increasingly assuming the administrative, regulatory, managerial, corporate and mediating functions of the nation-states at the same time as supra-national institutions emerge to undermine their traditional role in environmental reform;
- Modifications in the position, role and ideology of social movements;
- Changing discursive practices and emerging new ideologies (Mol & Sonnenfeld (2000:3).

These are among the keys to modern environmental reform. In relation to the fifth core topic, Mol & Sonnenfeld (2000:4) hold that '[c]omplete neglect of the environmental and the fundamental counter-positioning of economic and environmental interests are no longer accepted as legitimate positions', something which has the potential to fundamentally influence the image of private companies.

In current research on environmental issues there is much discussion on whether economic expansion and environmental matters are complementary or fundamentally contradictory concepts. The theories of ecological modernization propose the former. They thus contrast the 'pollution-haven hypothesis' which serves to explain how TNCs will relocate to developing countries because of lower environmental-compliance costs (Gallagher 2006:100). The idea is that a pollution haven may develop if 'environmental stringency differs between countries, if capital is mobile, and if trade rules allow firms to relocate and still sell their products to the same customers' (Fullerton 2006:ix). This is then expected to lead to environmental degradation in the developing countries and improvements in the developed ones, resulting in a rise in total worldwide pollution. Another view which runs counter to ecological modernization's belief in technological progress as the solution to the economy-versus-environment dilemma is Gabel and Sinclair-Desgagné's (2001) critique of the 'Porter hypothesis'. Their main point is that not all the innovations which come about due to stricter regulations will enable companies to pick 'low-hanging fruits', that is, have economically beneficial innovation offsets. Even if Porter and van der Linde (1995) can list many examples of how this has occurred, there is no guarantee that innovation

as a norm leads to offsets. Gabel and Sinclair-Desgagné (2001:10) claim that these ‘low-hanging fruits’ must be viewed rather as an ‘unintended but welcome bonus’ of environmental regulations.

It is not the purpose of this report to ‘prove’ or ‘falsify’ either ecological modernization or the pollution haven hypothesis. It is not a question of deciding whether in today’s business reality all companies either move their pollution abroad *or* opt for ‘green’ technology because it is good for business. Nor is it the point here to determine which one Shell or Shell China is ‘choosing’. Both explanations include valuable features and a company’s strategies will most probably be based on a complex set of factors. In addition to the question of low-hanging fruits, the level of price competition on the products of a given company may influence the ability to innovate, since innovation sometimes also results in higher prices (Jenkins et al. 2002). Using ecological modernization in an analysis regarding Shell’s environmental policies, however, is useful because it is consistent with the Group’s aim: ‘to meet the energy needs of society in ways that are economically, socially and environmentally viable’,⁴ which thereby refutes any belief in there being a fundamental discrepancy between economic, social and environmental issues.

2.1.1 Ecological Modernization in this Study

In discussing the case of Shell and the prospects for ecological modernization in China, I will emphasize the new roles of economic actors and social movements. First, in ecological modernization, considerable faith and trust is put in the contribution made to environmental conservation by economic actors such as private companies. Some authors even claim that sustainable economic development can be ushered in only if corporations are made environmentally sound (Hart & Shrivastava 1995). Much effort has been made to understand how companies relate to environmental issues, and whether they indeed do so at all. At the same time ecological modernization is increasingly favored by companies and business interests as a strategy of change, because it seems to meet the ‘triple bottom line’ of economics, society and environment that underpins sustainability, *without* challenging the principles of the free market (Christoff 1996). This, and the notion that neglect of environmental interests is no longer accepted as a legitimate position, opens up for new ways of looking at private enterprise. Traditionally, free trade and notions of business self-regulation have been seen by oppositional actors as part of both the problem and the origin of environmental degradation. It is not only environmentalists who have been skeptical, however. Contrary to the notion of innovation offsets mentioned above, on the corporate side there are those who believe that environmental regulation inevitably leads to loss of competitiveness and profits, which makes business lobbies act against stricter regulations (Jenkins et al. 2002).

⁴ www.shell.com/home/content/china-en/about_shell/our_performance/dir_our_performance_110702.html

Second, in ecological modernization theory, social movements ‘play a central role in the environmental transformation of contemporary society in collaboration with government agencies and manufacturing firms’ (Sonnenfeld 1999:1). The term ‘social movements’ encompasses broad, loosely connected social formations pressing for change, as well as formalized organizations. In developing and transitional countries people often address environmental concern more as communities than as organized groups, which makes the broad use of the term appropriate for the study of China. Social movements appear to have moved out of the political periphery and now ‘communicate, negotiate, and consult directly with economic agents and state representatives’ (Mol in Sonnenfeld 2002:2), playing a critical role on the inside of the centers of power. Mol (in Sonnenfeld 2002:2) further claims ‘environmental social movements have ‘shifted from working closely with the state to closer relationships with market actors’. As neo-liberal as these views and this faith in private corporations may seem, ecological modernization also has room for the state (Beck 1999). It is seen as an enabler for markets that help produce technological advances via competition and a regulatory medium producing laws and regulations. In some cases, however, it is seen as an institution incapable of addressing critical local, regional and global environmental problems. Proponents of ecological modernization see the necessity of developing new forms of environmental governance in which environmental movements, community groups, businesses and other stakeholders can assume direct leadership roles, thus taking on some of the traditional roles of the state (Beck 1999). For this to be possible, however, certain supporting norms and institutions are required, such as a free press, and basic human rights of expression, organization and assembly. Such prerequisites are obviously not present in all parts of the world, but the potential development of a free and more outspoken press has been facilitated by the Internet.

I chose to focus my analysis on these two core topics of ecological modernization for the following reasons. The Shell Group is an example of an economic actor influenced by processes of ecological modernization in Europe. In the 1990s it underwent a thorough change in seeking to cope with the new challenges confronting its industry, among which were environmental challenges (Chapter 5). Social movements were crucial in influencing the ‘transformations’ of Shell and other energy companies in the 1990s. I wanted to see to which degree such movements can play a similar role in China. There are still limitations on the activities of such movements there, however, but some positive developments are underway (Economy 2003) (see Chapter 4).

Earlier, ecological modernization was thought to be a concept ill-suited for any other than the European countries (Mol 2006). This view has changed as the economic, political and societal processes and dynamics pushing for environmental reform are no longer restricted to one (developed) country at a time, but have become transboundary, and been carried by globalization to other corners of the world. Mol (2006) argues that ecological modernization is increasingly applicable to analyses of other parts of the world, for two major reasons. First, many countries,

especially in Southeast and East Asia, are currently going through processes of industrialization and modernization.⁵ Second, with globalization there comes increasing interdependency in the political, cultural and economic domains, resulting in the import/export not only of goods and services, but also of environmental reform models, practices, dynamics and values. These two developments contribute to extending, beyond the developed countries, the conditions under which ecological modernization originated, together with its environmental strategies, practices and measures, enabling it to develop there as well (Mol 2006). Using ecological modernization to analyze environmental developments in developing or transitional countries like China has in some cases proved a challenging task, since one often does not deal with the same forms of governmental, corporate and civil society structures as in the developed countries. The researcher must take care not to transfer perceptions about societal and cultural mechanism directly from one place to the next. In addition, the importance that ecological modernization attaches to the role of environmental social movements as drivers of the ecological transformation of society (Sonnenfeld 1999) may complicate things in the case of China because, as we will see in Chapter 4, non-governmental organizations (NGOs) there act under special circumstances and are limited in number. I expect that even though it may be hard to find clear signs of ecological modernization in China, it may still be relevant in the case of Shell China, because the Shell Group is heavily influenced by European social movements and pressure groups.

2.2 Analyzing Environmental Challenges Confronting the Energy Industry

Estrada et al.'s (1997) framework is a theoretical model aimed at improving our understanding of how environmental issues are dealt with in the corporate world. This focus on the role of companies in environmental protection positions it within the frames of ecological modernization. Since the 1980s there has been a significant increase in the focus on corporate environmental management among not only academics, but also policymakers, managers and consultants. Numerous continuum models (also called 'stage' or 'phase' models) and typologies have been formulated as ways of interpreting these developments (Kolk & Mauser 2002). Kolk & Mauser (2002:15) explain that such continua 'describe a development in time consisting of an increasing integration of environmental concerns into business policy and strategy,' while typologies characterize companies' positions as sets of ideal types, without assuming a growing responsiveness over time. While both continuum models and typologies are criticized for having flaws such as rigidity and operationalization difficulties, there also exist models situated in-between the two, with both continuum and typology characteristics. Below we will see that the Estrada et al. framework is a typology, since it characterizes company

⁵ 'Modernization' here refers to a development trajectory similar to that of the developed countries which are normally regarded as the most 'modern' or 'modernized'. Whether or not such 'modernization' necessarily means becoming like the 'developed' countries is another debate entirely.

responses as sets of ideal types and shows the situation at *one* given time. I want to identify whether Shell has shown improvement or at least ‘movement’ over time, which in turn may help solve some of the rigidity problems inherent in the typology model.

2.2.1 *The Estrada et al. Framework*

Estrada et al. (1997) present a theoretical framework for analyzing whether the energy industry is managing to extend and renew its social legitimacy as it faces the challenges stemming from its impact on the environment and the consequent public questioning of its role in society. ‘*Social legitimacy* is what gives an industry its license to operate,’ they write:

Every industry relies on a mission that is defined in its interaction with the society around it. In order to survive, it must (...) operate in a manner that is compatible with the basic values of the population. This does not preclude conflicts over specific issues, but it does guarantee a fundamental alignment of interests between industry and society. (Estrada et al.:1, italics in original)

Accrediting this kind of power to the public is part of what places Estrada et al. within the frames of ecological modernization. Six indicators⁶ of change are used to study how the energy industry is responding to environmental issues and how they affect the renewal and extension of its social legitimacy:

- The environmental vision and image the company presents to society;
- Environmental management;
- Long-term plans (scenarios);
- Research and development (R&D);
- Investments;
- Government and public relations (PR).

The companies’ positions are classified as environmental strategies that are either *reactive*, *cautious* or *creative*. Most companies cannot unambiguously be given one position, as they may well develop new ‘green images’ while at the same time focusing on their traditional pollution-intensive core businesses (Kolk & Mauser 2002). Separate parts of the same company may also behave differently, for reasons such as the backgrounds of its employees or relations to local stakeholders. Thus, the three categories are not mutually exclusive; moreover, having only three positions to choose from may obscure great variations in a company’s reactions and strategies in different fields of its operations. A description

⁶ ‘Indicator’ is defined as ‘a thing, especially a trend or fact, that indicates the state or level of something’ (Sloanes & Stevenson 2005). Even if the six elements described in Estrada et al. (1997) may not really fit this definition, I choose to keep the term for the sake of consistency.

of how a company fits or does not fit into the different positions is a good, but not absolute, way of shedding light on its stance towards environmental issues.

Estrada et al. (1997) describe an evolutionary axis of environmental concern, starting half a century ago with focus on *local* health problems like polluted city air, moving on to concerns with *regional* ecological degradation like acid rain, and ultimately *global* environmental sustainability today, with the prospect of climate change as the most prominent feature. Other aspects of today's debate are how the local and the global are perceived as closely linked; the increased focus on multinational cooperation and international agreements; corporate social responsibility (CSR) and the business case for sustainable development; the role of the media in reinforcing the political engagement of social groups; and debates over the potential for technological innovations to help us meet environmental challenges. One significant development since Estrada et al. undertook their studies in 1995 is the fact that the energy industry has started to acknowledge and even take some responsibility for the environment and its effect on it, or at least create an environmentally conscious image. Thus, today's trends in environmental regulations include devoting greater resources to preventing environmental accidents; high insurance premiums due to stricter liability laws; stricter definitions of environmental responsibility; and mandatory documentation of regulatory compliance.

As more countries' environmental regulations become stricter and international agreements are signed, leaving fewer incentives for strategies involving export of polluting industries at the same time as companies are starting to act, or at least *appear*, more responsible, it has been argued that the pollution haven hypothesis has become less relevant. Jenkins et al.'s (2002) analysis of the impacts of environmental regulation on selected industries and competitiveness was inconclusive, neither 'proving' nor discarding the hypothesis. Here it is important to remember that different companies will behave differently, for example because of their size and the amount of media attention they attract. Various factors may explain the lack of a correlation between environmental standards and location decisions by TNCs. These include the fact that the costs of compliance with environmental regulations in both home and host countries are a relatively small share of total costs and therefore carry little weight on the final decision; due to economies of scale the cost of applying common standards across a TNC system may be lower than maintaining different standards in different countries; that TNCs are increasingly visible; and that environmental issues more closely monitored (United Nations 1999). Prominent companies like Shell and the other Oil Majors have had their reputations blemished in the past, and it is thus reasonable to assume that they have become more cautious about how they operate than companies that have received less negative international attention.

The standards for environmental performance are getting higher as every link in an industry chain must comply with a series of environmental regulations imposed by the governments of different countries (Estrada et al. 1997). Due to the size of corporate operations and budgets, stricter

environmental regulations will seldom threaten the livelihood of an energy company, but with the evolution of an increasingly sector-specific environmental legislation, the industry will be compelled to develop *ad hoc* technology, and in individual cases compliance may therefore represent an economic obstacle. Estrada et al. (1997) studied Shell as well as Exxon, British Petroleum, Amoco and Statoil, all of which are among the biggest and most influential actors in the energy industry. Few companies in the world can mobilize as many resources to develop environmentally benign technologies and products as they could, if they so wished. Having experienced environmentally-related ordeals in the past (and to some extent still today – see Chapter 5), energy companies have become more fine-tuned to identifying new challenges and how to adjust to them. As in the case of pollution havens, a company that has been the object of environmental controversy or scandal can be expected to exercise greater caution in attempting to avoid similar incidents, for the sake of the people and the environment involved as well as the negative publicity which would inevitably ensue.

2.2.2 Approaches to Environmental Strategy in Energy Companies

Using the Estrada et al. (1997) framework, I will identify the environmental profile of the Shell Group and analyze how both company and country characteristics influence Shell China's ability to achieve the Group's environmental goals, thus contributing to its extended social legitimacy. An energy company's attitude towards the environment is grounded in the experiences that are common to both the industry at large and the specific companies (Estrada et al. 1997). These attitudes are 'mental frameworks' (p. 45) within which strategic planning takes place which can influence a company's approaches and strategies towards the environment. Estrada et al. (1997) identify three approaches to environmental strategy in energy companies:

The reactive approach. A reactive company will deny all public accusations suggesting that its activities or products are harmful to human health or natural ecosystems. The company's strategy will be to wait and see before making any budgetary allocations to comply with regulations, hoping that the political pressure will simply go away and that the government will not pass new regulations as a consequence of these 'unjust' accusations. It will argue that new regulations are unnecessary for the industry as well as the public, and that the new regulations and increased costs may tip the balance of costs and cause disinvestments and price rises. It will also let the public know about the negative consequences of such new regulations for the creation of wealth and for employment. It will want to let the market decide and the public trust the company to fulfill requirements and prevent environmental degradation.

The cautious approach. The cautious company will see environmental issues as a symptom of concern by influential interest groups, but will claim that there are uncertainties about the justification of said concern. Such a company will take care not to neglect environmental issues, thus complying with any regulations proposed by the government. Compliance becomes a matter of professionalism and preparedness in case the issue should prove to be more serious. The company will argue that regu-

lations must be based on minimum standards mandatory for all actors in the field, thereby avoiding harm to its own comparative position. This emerged as the most common approach among the cases studied by Estrada et al. in 1995.

The creative approach. The creative company acknowledges that the scientific evidence is strong enough to justify concern for the environment and sees the issue as an opportunity to become a frontrunner in terms of new products, technologies and organizational forms. It will attempt to redirect its skills towards a wider range of technologies, perhaps diversifying to alternative energy sources. It will promote cooperation with host country governments in defining and implementing environmental regulations. Its rationale is to improve the company's comparative advantage and discover new directions for future development, through innovation offsets, cost leadership or differentiation (Porter 1985). Differentiation means becoming unique in an industry along dimensions valued by consumers, like product type and quality, distribution, sales, marketing, service and image. A good image can be achieved by incorporating environmental aspects into all parts of the business in order to be, or at least appear to be, more environmentally friendly than the competition – which may also enhance the company's prospects for social legitimacy. In the case of TNCs, host country industries may be left at a disadvantage, because opting for environmental innovation offsets and differentiation are a diffusion process which happens as stricter regulations are gradually adopted. While simultaneously leading to environmental benefits, stricter environmental regulations prompting changes in companies may also serve to enhance a company's competitiveness (Porter & van der Linde 1995). It is reasonable to assume that innovation offsets, cost leadership and differentiation are all within the reach of a major company like Shell.

How, then, can the changes in the energy companies' approaches to the environment be observed, as one imagines them going from reactive, via cautious to creative, and actually 'moving' in the direction of creativity? Estrada et al. (1997) explain that although company strategies are seldom open to public scrutiny, it is possible to analyze their attitudes towards the environment empirically by looking at the positions adopted on various environmental issues. In addition there are also publicly available company documents on environmental policy principles, goals and measures adopted to live up to these principles and goals. This is where the six indicators of change⁷ come in to play.

Environmental vision and image. Whether or not an environmental vision and corresponding goals have been established at the corporate level is the first indication that the company is aware of the increasing environmental concerns in the public and governments in the countries in which it operates. Another expression of this indicator is how the company defines its overall role in society and if it accepts any responsibility beyond

⁷ Estrada et al. (1997) continuously refer to 'five indicators of change' but in fact always list six – perhaps a simple typographical error.

that of making profit. Here it is important to be aware of the differences in rhetoric and practice. The literature, and especially online, will be full of glowing reports on companies' environmental and social efforts, CSR instrument adherence and partnerships with non-governmental organizations (NGOs).⁸

Environmental management. This term refers to the objectives, standards, procedures and practices a company sets up to manage environmental challenges and the environmental aspects of its business operations (Hansen 1999). As noted by Estrada et al. (1997:175), it is a question of whether or not organizational changes have been made to support the goals presented in the company's visions and image because performance can be improved only if environmental concerns are integrated into company operations in the same way as other key objectives, like financial return. In addition to a set of general principles for environmental activities, there should be more specific policies as well as procedures for monitoring and control of whether the environmental conduct of the branches are operating in accordance with the regulations and standards outlined by the company headquarters; and there should be training activities aimed at awareness and competence-raising on all levels of the corporate structure. The environmental management system should be part of a formal organization, where responsibilities and functions are allocated between entities and staff members. New forms of management could include a restructuring of the organization to include new units; reallocation and increased number of staff; environmental training programs; internal audits; environmental performance reviews and environmental and social impact assessments (ESIA).

Strategic and scenario planning. To find out how environmental matters have affected a company's long-term thinking, one can analyze the use of scenario-planning to see strategic thinking and study how environmental matters are handled in long-term planning processes; how prepared the company is for dealing with environmental change and how it copes with ecological, economic or political uncertainties. Environmental aspects should be included in scenarios and strategic plans, so that the company can be prepared for future developments and ahead of the game compared to the competition. Planning can influence the company's R&D and investment.

Research and development. This indicator concerns the degree to which the changes mentioned in the three previous paragraphs have affected investment decisions and led to diversification. 'A company's perception of the future is consciously or unconsciously reflected in its allocations of resources for R&D,' write Estrada et al. (1997:67), who add that by studying a company's recent efforts in R&D one can see whether such efforts have been influenced by environmental awareness, and also whether this indicates a trend towards diversification and away from total dependence on fossil fuels.

⁸ See f. ex. www.shell.com.

Investments. In determining how investment decisions are environmentally influenced, one should look for evidence of long-term commitment to invest in projects designed to improve the environment, projects that go beyond what legal standards require, as well as expansion of the company's project portfolio in such projects.

Government and public relations. This indicator shows how the company relates to and deals with the political agenda of environmental policy. Estrada et al. (1997) explain that a company can build counter-arguments to different environmental policy debates as an attempt to mitigate the effects of proposed legislation and public pressure on it to take action against environmental degradation. This can be done by lobbying governments, through the use of PR campaigns or by influencing the scientific community.

2.3 Policy Implementation

To be able to discuss the linkages between Shell and Shell China on the one hand, and the barriers in the Chinese context on the other, I will apply Najam's 5C Protocol (1995) to analyze the implementation of Shell's HSE policy in the Chinese context (Chapter 6).

In a situation where environmental degradation is a threat or already happening and where subsequent protection or reversion of the process is needed, mitigation policies will be formulated and implemented. Mazmanian and Sabatier (in Najam 1995:6) offer a good definition of the concept of implementation by calling it 'those events and activities that occur after the issuing of (...) policy directives, which include both the effort to administer and the substantive impacts on people and events.' This analysis will be limited to studying the *administration efforts*, not the ultimate impacts on people and events. Because it is both *process* and *result*, implementation is still implementation even when it is unsuccessful, altered in the process, or when it ultimately winds up achieving goals different from those anticipated (Najam 1995). Earlier implementation was viewed as being almost an administrative chore, something that, 'once the policy had been legislated and the agencies mandated with administrative authority, would happen of and by itself' (p. 1). But implementation is not such a simple matter, whether one is trying to actually implement something, or to explain why efforts failed or succeeded.

Najam (1995) does not provide a causal theory (indeed he says this is neither likely nor desirable), but rather, based on the work of many earlier authors, identifies key clusters of explanatory variables which allow for a better understanding of issues related to implementation. Traditionally there have been few linkages between studies of implementation in developing and industrialized countries. One key feature of the 5C protocol is that it can be used in studies of implementation independent of the type of policy issue (e.g. environment, population); the type of policy (e.g. distributive, regulatory, redistributive); political system (e.g. federal, centrally-planned); and place (e.g. industrialized or developing country). It is therefore applicable to the study of the implementation of a regulatory environmental policy in the operations of a TNC doing business in a

centrally-planned transitional country like China. Rosendal (1999:238) summarizes Najam's five variables which shape the directions that implementation might take:

- The *content* of the policy itself, what it sets out to do (goals), how it questions and discusses the issue, and how it aims to solve the problem in question (methods);
- The institutional *context* through which policy must travel, and by whose boundaries it is limited;
- The *commitment* of those entrusted with carrying out the implementation of the goals and methods at various levels;
- The administrative *capacity* of the implementers to carry out the desired changes;
- The support of *clients and coalitions* whose interests are enhanced or threatened by the policy, and the strategies they employ in strengthening or deflecting its implementation.

Each of the five variables is to a varying degree linked to, and influenced by, the others, depending on the specific implementation situation (Najam 1995). For example, policy content may, or may not, provide the resources for capacity building. The institutional context of the relevant agencies may hinder or help capacity enhancement. The commitment of implementers to the policy's goals and methods can make up for the lack of capacity – and *vice versa*. Or, the coalition of actors opposed to effective implementation may impede the capacity which might otherwise have been sufficient, whereas supportive clients and coalitions may help enhance capacity.

Writes Najam (1995: 52): 'implementation cannot be seen as an activity to be planned and (...) carried out according to a carefully predetermined plan; rather, it is a process that can only, at the very best, be managed'. In Chapter 6, as an example of how this takes place, I will use Najam's variables to analyze the implementation of Shell's HSE policy. It is Najam's own suggestion that his terminology and tools be applied specifically and empirically to international environmental commitments in both developing and industrialized countries. The policies of Shell are not, of course, international environmental commitments, but they are examples of policies formulated in one place and at one geographic level which are, first, universal to the entire Shell Group, and second, implemented in a different geographical context. I also find the 5C Protocol useful and appropriate for this study because of its explicit claims to general acceptability and applicability as well as specific relevance.

2.4 Summary

The theoretical backdrop of this report is ecological modernization, which emphasizes that environmental and economic goals can be achieved simultaneously. Against this backdrop, I have outlined Estrada et al.'s framework and explained how six indicators of change will enable me to reconsider the environmental profile of the Shell Group. Viewing the company in relation to its environmental vision and image, its envi-

ronmental management, strategic and scenario planning, R&D, investments, and government and public relations, I seek to identify developments in the company which may show change from 1995, when the Estrada et al. study was carried out. A company's profile can be characterized as *reactive*, *cautious* or *creative*. It may also hold elements of more than one category. In order to discuss the linkages between barriers to more environmentally-friendly energy production and Shell China's operations, I will analyze environmental policy implementation. To this end I have presented Najam's 5C Protocol (1995) which will be used to analyze how the content, context, capacity, commitment, clients and coalitions of the Shell Group's HSE policy influence its implementation.

3 Methodology

The *credibility*, *validity* and *transferability* of one's research will depend on the knowledge base being made explicit: the ways in which the data have been collected, analyzed and the results interpreted must all be accounted for (Thagaard 1998).⁹ In this chapter I argue for the credibility, validity and transferability of my study. I will also describe my data collection process, discussing issues like doing fieldwork in China, how to get in touch with informants, and what to do with the data collected.

3.1 Qualitative Methodology and the Use of Case Studies

Considering the objective and research questions of this report, the use of a qualitative methodological approach seemed the most appropriate. Qualitative methodology is characterized by in-depth, intensive approaches that came as a reaction to the 'quantitative revolution' which in the 1960s had tried to understand people by measuring their thoughts and actions quantitatively (Limb and Dwyer 2001). The human mind, however, is much more than numbers, and not always the most rational or measurable of actors. The social world is dynamic, always changing, and so researchers who use qualitative methodologies do so because they hold that exploring the feelings, understandings and knowledge of other human beings through interviews, discussions and participant observation is a better way to gain knowledge of, and explain the complexity of, the processes that shape our societies. Here it should be stressed that this is not a choice of using solely qualitative and never quantitative methodology, since the two are not *opposites*: they belong to different strands of research focusing on different topics and research questions. Qualitative methodology is appropriate in this study because I want to examine a smaller issue related to China's environmental challenges, namely the factors in the Chinese context which hinder Shell China in achieving its environmental goals. I have taken an exploratory approach to data collection through open-ended interviewing with informants whose expertise covers a variety of areas, and through reading scientific and journalistic articles on a broad range of topics. Such an approach is appropriate in the study of this topic since I expect the relevant factors to be many and varied.

3.1.1 The Case Study Method

Yin (1994) writes that doing a case study is suitable when the main research questions are issues of 'how' and 'why'; when the object of study is contemporary and when the researcher has little control over the events. A case study is thus relevant here in terms of Yin's criteria, given the topic and research questions: I am analyzing *whether* and *how* barriers in the Chinese context influence Shell China, and *why* implementation of environmental policies is so difficult to accomplish. Choosing a case

⁹ In an effort to distinguish qualitative and quantitative research methodologies, Thagaard (1998) uses the Norwegian terms *troverdighet*, *bekreftbarhet* and *overførbarhet* instead of *reliabilitet*, *validitet* and *generalisering* for credibility, validity and generalizability respectively.

study as a research strategy is also appropriate when exploring the operations of a company, since it will ‘preserve [the] unitary character [of the case], rather than provide generalizations’ (Mitchell 1983:169). The concept of *generalization* is a particularly tricky one in qualitative research (see below).

Qualitative research is usually considered to be *inductive*, meaning that theories are developed from data, as opposed to *deductive*, as in quantitative research where data is used to test a theory (Thagaard 1998). Between these two approaches lies *abduction*, where the relationship between theory and data is dialectic and where the analysis is characterized by the interplay of inductive and deductive inferences. With an abductive approach, established theory represents the point of departure for the research, but the goal is not necessarily to continue the development of the theory (Thagaard 1998). I have opted for what Bergene calls a ‘disciplined-configurative case study’ which ‘involves an attempt to interpret findings in light of a general theory, thus running from theory to case interpretation’ (2005:24). Using an abductive approach involves moving back and forth, ‘revising, supplementing and replacing old theories with new insights’ (page 24). Since one of the analytical tools on which I base my analysis (Estrada et al. 1997) was published over ten years ago and was based on studies carried out in 1995, I expect there to have been some changes which may render the old terminology and classifications outdated. Moreover, as explained above, I use Najam’s (1995) 5C Protocol as an additional analytical tool, because it allows me to go beyond description, compensating for any shortcomings of the Estrada et al. framework. In the final chapter of this report I discuss how this framework can be enhanced to better suit new challenges.

3.1.2 *Generalizations in Qualitative Studies*

In the traditional sense, generalizations are what produce laws and regularities and make possible educated guesses about events, by stating that what is the case in one place or time will also be the case elsewhere, under the same conditions (Lincoln & Guba 1979). The case study method has been criticized for not being able to lead to any generalizations in the classical sense of the word, because individual cases are not representative of the whole population (Bergene 2005) and cannot be used in predictions. It is true that a case study does not tell us anything about the expansion of a social phenomenon. According to Yin (1994:21), the purpose of a case study is not to generalize in order to formulate a scientific law, but to ‘generalize to theoretical propositions.’ Yin puts forth the idea of the ‘analytical generalization’, meaning conclusions drawn from a case study to develop new theories and concepts or revise old ones. Yin (in Smaling 2003) recommends a *replication logic* instead of the sampling logic of quantitative research, aimed at statistical representativity. The theory that is ultimately formulated becomes the vehicle for analytical generalizations to future case studies, giving directions on how to approach them, as long as they fit within the scope of the theory. This will be discussed further in Chapter 7.

In an effort to separate the qualitative terminology from the quantitative, Thagaard (1998) uses the term *transferability* instead of 'generalization' or 'generalizability.' Transferability is simply a question of whether or not the interpretation developed within the frames of a project has relevance in other, similar situations. It is especially important in case studies that are directed towards the development of knowledge with a more general relevance. It involves a *re-contextualization*, meaning that the theoretical understanding of a project can be put to use in another, broader context. In this way, a single-case research project can add to a more general theoretical understanding (Thagaard 1998:184).

3.1.3 *Validity and Credibility*

Closely connected to the issues of transferability are questions of validity and credibility. Yin (in Bergene 2005) differentiates between three kinds of validity: *construct*, *internal* and *external*. *Construct validity* is a question of whether or not the researcher is actually investigating what she means to investigate. Such validity can be enhanced by focusing on asking relevant questions to relevant people and by triangulation; the use of multiple methods and sources of information. During the fieldwork, I spent considerable time re-writing my interview questions, making them fit the informant's field of expertise. In analyzing my topic, I have used additional sources like scientific journals, books and newspaper sources. *Internal validity* concerns, in Bergene's words: 'the possibility to judge the plausibility of the inferences' (2005: 29). In this chapter, I describe in detail my fieldwork and interviews, and how I analyze my findings, making them more transparent, in order to strengthen internal validity. Lastly, *external validity* deals with the transferability of the findings. In my case we may speak of external validity if, for example, the experiences of other European companies in the Chinese context can be expected to be similar to those of Shell. This will be discussed further in Chapter 7.

Several important aspects regarding credibility need to be considered when working on a research project. Bergene stresses the 'replicability' of the findings and the possibility of checking the sources (2005:29). To that end, all my secondary sources are cited in Chapter 8 of this report. As regards the interview transcripts, however, my informants are all anonymous, so no names or interview transcripts are disclosed. The implications of this will be discussed further below. Another way of raising credibility is by quoting one's informants (Bergene 2005). Since I decided not to tape the interviews, there will not be any verbatim quotes, but I will consider the context in which something was said when referring to statements by interviewees. Also non-verbatim quotes have their proper context, and even if it may not have any repercussions for the informant, presenting them in the wrong context may influence or alter the inferences drawn from the material gathered.

Issues considered sensitive are still subject to restrictions and censorship in China. I do not believe that everything published there, or written by Chinese authors, is 'Party propaganda', but I do realize that in using material from Chinese sources it is important to remain critical. The literature and statistics used in this report are all issued by highly reputed international institutions like the United Nations or the World Bank, so

there should be no problem of credibility on that score. I do not find it likely that any of my informants were answering according to what they thought I wanted to hear (a problem that Thagaard 1998 warns of) or that the relationship between me and them influenced their answers in any significant way. This is more likely to happen when the researcher is in a situation of power – and that was not the case here, since my informants were all selected for their senior expertise. There is always the chance that the natives of the country or place being studied wish to give a favorable impression of their home, but since all my Chinese informants seemed to agree with me on the seriousness of the environmental challenges facing their country, I have little reason to believe they were glossing over anything. Among my informants there were friends or former colleagues of one of my supervisors, which led me to trust that they would take the interviews seriously.

3.2 Fieldwork and Interviews

Heimer and Thøgersen (2006:1) describe doing fieldwork in China as an ‘eye-opening but sometimes also deeply frustrating experience.’ I myself have met several people who, with little prior knowledge of China, and none of the Chinese languages, have travelled there to conduct fieldwork. This strikes me as both impressive and disturbing. Having spent two years as a language student in Beijing not only made the research topic more interesting and important to me, it also made the fieldwork much easier. Returning to China, I had contacts, a place to stay, friends that were happy to see me, and knowledge of Beijing and Shanghai which made getting around easy. I was sufficiently fluent in Mandarin to be able to talk about my topic, ask questions and take notes when interviewing people whose English was less than perfect, and that made a world of difference.

3.2.1 Planning Fieldwork in China

When doing *any* fieldwork, there are great many things that need careful planning and consideration. Doing fieldwork *in China* confronts the researcher with additional challenges. Restrictions on doing fieldwork and research are not fewer now, but they may be different from what they were a few decades ago. It has become easier to talk to ordinary people and organizations or groups, but getting inside government institutions is still an uphill battle (Heimer & Thøgersen 2006). Talking to someone in the hugely complex Chinese state bureaucracy would probably have been useful for my study, but this was beyond the powers of any of my contacts. Government information on issues that are open to the public is available on the Internet, but what is open to the public is seldom the interesting material, as there are limits to what sort of information foreigners and even Chinese academics have access to. The fact that it is not clear what is restricted and not can be both an advantage and a disadvantage. Research reports, Heimer & Thøgersen (2006) claim, are seldom of any interest to the Chinese authorities. They also write that once urgent problems have been made public and the government has acknowledged them, they become much less politically sensitive. This was the case with questions of poverty and unemployment in the 1990s

and has since then happened to environmental issues, explained one of my informants, the expert on Chinese energy policy. The environmental challenges facing China are no secret and are thus not *quite* as sensitive as they used to. In the words of Heimer & Thøgersen (2006:13): '[p]olitical sensitivity thus becomes a question of timing as well as of the audience and the use of the information'. I believe the timing of my study is right since the topics are now less sensitive and of current interest. As to the audience and the use of the information gathered, this is a student project, and if Heimer and Thøgersen are right about the Chinese government in general not caring about scientific reports, there should be little reason to worry.

A related issue concerns the informants' right to anonymity, which cannot be stressed too much. It is hard for a foreigner to decide what kind of information will be deemed sensitive or confidential in another country, but it is not necessary to know a lot about China to understand that the situation is quite different from that in Norway. It is crucial that the researcher informs all interviewees about the right to anonymity and confidentiality. First, the informant may not have considered the sensitivity of the issues in question and may be endangering him or herself without knowing it. Second, uncertainty about confidentiality may prevent the informant from talking freely and providing useful information. As my informants were all individuals with higher education and some degree of experience in scientific work and public relations, I expected them to be aware of issues such as this, but would nonetheless ask them about their preferences. Upon contacting them for the first time, I enclosed a short presentation letter in the e-mail, stating the aim of my research, the confidentiality of the information gathered and the informant's right to remain anonymous. My expectations were that the Chinese would wish to remain anonymous, but only one of them did. Seeking to err on the side of caution, I have nevertheless decided to keep all of them anonymous. This affects the internal validity and the credibility of this report, since it means the reader cannot know exactly who the informants are. This should not weaken this report's analysis, interferences or conclusions, however, since it is the information they provided me with, and not their identities, which is of importance.

Some degree of self-critical introspection will always be called for when doing a qualitative research project (Valentine 1997). This is where *positionality* enters in, because the researcher's identity may influence and shape the interactions with the informants. The concept of positionality was already touched upon above regarding credibility, but is relevant here as well. In some cases it can be problematic; an urban First World researcher in the Third World countryside can, for instance, produce a kind of 'colonizer versus colonized' situation (Valentine 1997:124). This I do not see as a problem in urban parts of China; moreover, having spent much time in the country prior to the fieldwork, I know it well enough to avoid any obvious *faux pas*. Nor did I get the feeling that my being female influenced the informants' views of me. It is very common for women to take higher education in China, and no one seemed to question my abilities. However, *age* seemed to be more significant, as Chinese graduate students are generally younger than their Norwegian counterparts. The Chinese would assume I was younger than I was, and upon

learning my age, would wonder why on earth I was still in school. Here it was good to be able to explain that I had spent two years studying Mandarin at a prestigious Chinese university. The fact that I was older than some of them would have expected may thus have been an advantage as it made me seem more mature and experienced.

In addition to positionality, there are a myriad other things to consider when doing fieldwork, some of them China-specific. One example is that, knowing I would be meeting scientists and professionals, and that several of the interviews would be held in Beijing's central business district, I tried to dress accordingly. The hope was that my outfit would make me look both mature and serious. The Shanghai and Beijing business districts are modern, multi-ethnic and fast-moving places. Wearing suitable clothes let me blend in, which again boosted my confidence. Another thing to consider is how, in big cities like Beijing, everything takes time and needs detailed planning. I was aware of this and could plan around it. Knowing some things would take long and that there would not be time for more than one interview or one trip to the library a day, I planned a seven-week fieldwork stay.

Upon arriving in China, most foreigners suddenly become largely illiterate, which can be a very frustrating experience. For this and other reasons, my two years of language studies in Beijing proved to be of the utmost importance. I am able to read books and articles in Mandarin, and there is an enormous sense of accomplishment in finding a highly relevant and interesting text which you would not have been able to read if you did not know the language. For getting around the city, buying food and drink and being able to print your revised interview guide, it is also of great crucial, not to mention what I was actually there for: *talking with people*.

3.2.2 Interviews and Informants

Sæther (2006) describes getting into the 'China field' and in touch with scholars working on China as a rather harsh screening process. Strict qualification requirements such as language skills and contextual knowledge are mapped out so as to prepare the student for what lies ahead – and, I suspect, also to weed out those with insufficient skills and motivation. In this process, the student will often see the scholar as an *insider* in the China field, a genius who speaks and reads Chinese. Indeed, this was exactly how I saw Sæther, years ago, when she suggested I get a scholarship to study Mandarin in China before writing the thesis this report is based on. Having gained both language skills and contextual knowledge, however, it is still hard for a younger researcher to feel like an insider in the 'China field.' Age and experience play a great part here, as I was to feel keenly on several occasions.

There are various ways to approach potential informants, and one does not necessarily need to be part of any country's 'field' or group of academics. It does help to be connected, though. I initially planned to get in touch with people via one or two 'gatekeepers'. Gatekeepers are 'individuals in an organization that have the power to grant or withhold access to

people or situations for the purpose of research' (Flowerdew & Martin 1997:115). It would have been wonderful to have a gatekeeper who held open the door to Shell China, but this was not to be. The rest of my informants were not part of any group, and so the gatekeeper method did not really work out. After being let through the 'gate,' or at least having met their first informants, researchers often rely on 'snowballing' to keep going: using one contact to help recruit another, who in turn can put you in touch with someone else (Flowerdew & Martin 1997). I tried both the gate and the snowball, but my efforts were of little avail, as my contacts and informants were seldom able to suggest anyone I could talk to besides them. I had been hoping that my contact at Shell China would be a door opener, but although my interview with him was successful, the person he put me in contact with afterwards proved less interested in my work. I was, however, lucky to have the chance to look through not only my own but also one of my supervisor's collection of business cards, which can almost be considered a currency in China. My fieldwork might have been almost impossible to accomplish had I not had my supervisor's network to rely on and had I not met people in China myself. Valentine (1997) emphasizes the necessity of a contingency plan if recruitment strategies fail. In China, however, pulling every far-fetched string you have and searching through the stack of cards you inevitably end up collecting may be more than a fallback plan. In my case it was how I managed to get the fieldwork done.

My fieldwork was conducted in English, Chinese and Norwegian in Shanghai and Beijing from October to December 2006. Wanting to explore the situation regarding energy and the environment in China, I interviewed and talked with professionals, academics, consultants and journalists with expertise on these topics. I started out in Shanghai by attending the 3rd Shanghai Renewable Energies International Forum. Online information about the forum gave the impression that it would be full of people I would both need and want to speak with. In fact, the forum proved to involve numerous lectures, with no time for questions or discussions, and a lot of new information on topics irrelevant to my study. In the end I met only one informant there. In Beijing, I met with both Chinese and foreign people. The interviews were conducted in places suggested by either the informant or myself, mostly in their offices or a nearby coffee shop. The meeting with the Shell China representative was a particularly successful interview, even if I was nervous in the beginning, simply from knowing this would probably be the most important one.

Towards the end of my stay, there were several interviews I had been confident were going to happen that never materialized. I had been trying to prepare myself mentally for such a situation, as this kind of experience is so common I would almost say it is part of any fieldwork. I seemed to get nowhere; e-mails were not answered and excuses made on the phone, even from people who had already agreed to meet me for interviews. In one case, I kept on e-mailing a woman my Shell China informant had referred me to, pretending not to read between the lines of her reluctant and annoyed replies. It felt horrible. Here and on other occasions, I could have been more insistent, but a creeping sense of insecurity about my own project and abilities as a researcher kept me from being too pushy. I

also think that turning up on the doorstep of someone who had told me 'no' would have made both of us 'lose face' and that any subsequent interview would have been awkward and of little use. Talking to other students and researchers I have learned that people will sometimes agree to a meeting in order to be polite, but really have little intention of keeping the promise. This is also a matter of 'face' and is something foreigners are even taught in classes on Chinese business culture (Fang 1999). On the other hand, this is not to say that I did not succeed in finding some very interesting people to talk with.

As the fieldwork progressed the interview guide became more like a checklist that I would adjust before each interview to better fit the informant. I would also bring a letter from my supervisor at the university, confirming that I was indeed a student and expressing gratitude for any help lent to me. I would give this to my informants together with my business card, but I viewed it more as a formality, as few of them seemed to care.

Many researchers choose not to use a tape recorder when working in China because they do not want the informant to feel inhibited knowing that his or her statements will go on 'permanent record.' As discussed above, it is difficult for an outsider to know exactly what is deemed sensitive in China, so it feels better to be on the safe side. I had decided not to tape my interviews, which meant I did not have to transcribe the interviews either, at least not in the traditional sense. During the interviews I would take notes, furiously scribbling down everything that seemed important, praying I would be able to read my own handwriting afterwards. After each interview I would go home and type it up, relieved to be able to make sense of the mixture of English, Chinese and Norwegian shorthand. One challenge I faced was not to get my own meanings and interpretations mixed up with my informant's words, as I tried to write complete sentences and paragraphs. Not using a tape recorder has the disadvantage of not capturing people's tones of voice, hesitations, and feelings like frustration or eagerness. I feel that this disadvantage would have been greater had I been asking about personal matters. The people I met were professionals, some of them experienced public speakers, which makes me think they would not let their emotions shine through in any case, and that little was lost by not taping.

Sæther (2006:42) describes fieldwork as a process saturated with insecurity: 'fieldwork is (...) about learning while coping with multiple sources of insecurity.' This is certainly true, but there are ways to make sure this does not prevent you from accomplishing what you came to do. Being mentally prepared is one way, looking at it positively is another (try thinking: 'I would not even have been trying to talk to them if they were not successful, important and therefore busy people, so it's really no wonder they do not have time for me'). I was expecting the fieldwork to be challenging and I learned a lot from trying to solve the problems encountered along the way.

Table 3.1 List of informants and topics covered

No.	Description of informant	Main topics covered
1.	Chinese environmental consultant.	The Chinese environmental and energy situation; prospects for renewable energy sources in China; existence of political will for environmental protection and sustainable development; Chinese civil society.
2.	Norwegian energy and environment consultant.	TNC environmental strategies; the Chinese government's approaches to environmental degradation; political will for environmental protection and sustainable development.
3.	American oil and gas industry adviser.	TNC environmental strategies; the business case for sustainable development; the Chinese government's approaches to environmental degradation.
4.	Chinese representative from Shell China	Shell China's operations, environmental and social strategies including the HSE policy, dealing with the government and Chinese joint venture partners; TNC environmental strategies.
5.	European director of China Environment and Sustainable Development Reference and Research Centre	The Chinese government's approaches to environmental degradation. Chinese environmental social movements; political will for environmental protection and sustainable development
6.	European journalist and energy correspondent	Chinese energy policy; political will for sustainable development and environmental protection; political instability and uprisings; environmental approaches of TNCs in China; development of pressure groups in China.
7.	Chinese professor of environmental economics	The Chinese government's approaches to environmental degradation; political will for environmental protection and sustainable development
8.	Norwegian expert on Chinese energy and environmental issues	Chinese environmental degradation; energy policy; climate change policy; government environmental approaches; political will for environmental protection and sustainable development

3.2.3 Other Sources of Data

Conclusions reached in a research project will be more convincing and accurate if they are based on several different sources of information (Yin in Bergene 2005). The simultaneous use of different methods and methodologies – triangulation – is a powerful tool in scientific research since both qualitative and quantitative methodologies have advantages and can be used to deepen the understanding of the phenomenon under study. For this reason, supplementing the qualitative data with some quantitative data like statistics will be important for my case study, in addition to the extensive use of theory and secondary literature. Using qualitative methodology does not mean excluding all quantitative data, and since I am doing a case study, additional data will help deepen the analysis and give a more varied impression of the topics studied. The inclusion of other kinds of data answering the same questions may also enhance the construct validity of the study (Bergene 2005). When using both qualitative and quantitative data, it is important to remember that combining the two does not change their basic inherent logic and different scopes for generalization (Andersen forthcoming 2008). In an analysis based on qualitative methodologies, but with added quantitative

data, the study is still basically qualitative, so any conclusions on its general relevance will have to be based on the logic of analytical generalization.

Books, scientific journals, databases and relevant clippings from Chinese and international newspapers have been made available to me from the libraries of FNI, the Nordic Institute of Asia Studies in Copenhagen and the University of Oslo. The collection of text material was open-ended and eclectic, and text analysis of relevant literature contributed importantly to the project's development and findings. My Shell China informant provided me with some material on Shell China, but I got most of the *interesting* articles on Shell from the FNI. Due to the 'administrative tradition in China, where documentation is inherently sensitive and its distribution usually requires more leverage than just good will' (Nordqvist 2005:9), much interesting data on Chinese conditions and strategies are simply not available to the public. What *is* openly available is frequently criticized for government censoring and dismissed as untrustworthy propaganda. This situation is not static, however, and some recent events make for a rather confusing picture. Chinese censorship of a World Bank report on Chinese environmental conditions stands in sharp contrast to the regulations on open government information issued by the same government earlier this year. The latter was called 'a milestone on the path to guaranteeing the public's right to access environmental information' by a famous Chinese environmentalist (Ma 2007:1).

3.2.4 *Making Sense of the Collected Data*

After re-writing the interview notes I would send the document to the informants for review, at the same time thanking them for meeting me. On one occasion I got the document back the same afternoon, pleased to see that the informant had gone through it, thoroughly correcting errors and adding important information. In cases where the informants wanted me to change something, I made the corrections at once. I would then send the document to myself by e-mail so that it would be saved on a server in Norway. This way I made sure that no material would be lost even if the computer crashed or was stolen. I did not include the names of the informants in any e-mails or attached files. Due to the limited numbers involved, I had no trouble telling my interviews apart.

I agree with Crang (1997) that an analysis should not be an afterthought, but needs to be included in the early research plans. I had been reading relevant empirical and theoretical material for months while preparing for the fieldwork and tried to keep it in mind during the interviews and the write-up of the notes. If an idea sprung to mind during the transcription, I would make sure not to get my own thoughts mixed up with the informant's words. I would do this by writing little clues like 'similar to A' or 'relevant to theory B' using capital letters. Interpretation cannot be divorced from the theoretical approaches adopted in a project, and keeping the theoretical material in mind at all times helped me in the process of interpretation. Similarly, when analyzing my field notes, I went through the transcriptions doing 'open coding' (Crang 1997:186); taking notes as ideas emerged about the topics in the material. When

using open codes, there is a need for constant comparison of codes and their contents, comparing new and old material, so all the themes and implications of the materials are drawn out (Crang 1997). Operating this way helped me clarify recurring themes that might be worth pursuing, and to see both the small and the big picture. Specifically, I made notes identifying 'barriers', 'possibilities', 'example of a *creative* corporate response' and other issues related to my theory framework. In identifying the barriers, I took special care to make a detailed and systematic list, also citing interviews or connecting them to other source material. Later, as the list grew longer, it became evident that many of them were related (and quite a few were irrelevant) letting me 'boil them down' to the three barriers to be presented in Chapter 4.

3.3 Summary

Crang (1997) emphasizes the need to think clearly about one's epistemology, that is; *how one can claim to know something*. In this chapter I have argued for the credibility of this study by explaining and discussing the fact that, in qualitative methodology, 'the researcher is her own research instrument' (Thagaard 1998:179). I have reflected on how my identity may influence the interview situation and my interaction with the informant. I have argued for the validity and credibility of my study by describing the data collection process and data analysis. In my opinion, there are good reasons to believe that the information gathered is relevant and reliable. The construct validity of this report is enhanced first, by the use of multiple methods and sources of information; second, by interviewing people with relevant expertise and balancing the interviews with a selection of the relevant literature; and third, by discussing my work with my supervisors and others throughout the process of analysis and write-up. Next, internal validity is strengthened by the possibility of the reader to look up the sources and by the detailed description of the data collection process. External validity is dealt with in the final chapter, where I discuss the transferability of my findings.

4 The Chinese Context

No country has ever before made a better run at climbing every step of economic development all at once. No country plays the world economic game better than China. No country shocks the world economic hierarchy like China. (Fishman 2006:1).

Powerful-sounding quotes describing the rise of China and its future prospects seem a dime a dozen these days as people realize that understanding China and its people will become increasingly important in the future. This chapter provides information on the numerous factors that influence and shape China, thus helping to explain the causes and consequences of the barriers I am searching for and will present towards the end of this chapter.

4.1 China's Economic Development

From 1979 to 2002, China's gross national product (GDP) grew by an average of 9.4% per year (Qu 2003), making China the fourth biggest economy in the world in 2004 (Yin 2004). Economic growth had already been underway for decades, however, but China needed to change its economic system, because economic development is not necessarily the same as human or societal development. Simply stating that a country has achieved economic growth hides important information. In the mid-1970s, China suffered from problems of forced withdrawal from the world economy due to the trade embargo imposed by the USA; unproductive state-owned enterprises; the inability to feed its own population; labor inefficiency; and political alienation of the population (So 2006). Deng Xiaoping then set out to develop a socialism 'tailored to Chinese conditions',¹⁰ combining central planning with market-oriented reforms so as to increase productivity and raise living standards and technology levels without exacerbating inflation, unemployment or budget deficits (So 2006). The government encouraged village enterprises and greater self-management for the state-owned enterprises while increasing market competition. China started relying on foreign financing and imports while its industry began producing for export. GDP growth per capita peaked at 175% in the 1990s (*China Daily* 2006). However, GDP per capita is still low by world standards, ranking 109th out of 229 countries in 2006.¹¹ Even though China may have achieved tremendous economic growth it is still an *undeveloped* and *underdeveloped* country in many ways. The characteristics of an underdeveloped country, all of which China is struggling with, include low per capita GDP, labor surplus, resource-poverty and a population typically engaged in agriculture amidst widespread disguised unemployment and high population growth rates (Rui 2005). China's quick economic growth has had a wide variety of consequences for both society and nature. On the positive side the transition has allowed hundreds of millions to lead middle-class lives (Economy 2004), even if both economic and social developments have been highly specific to the eastern parts of the country. Today, the Chinese economy suffers

¹⁰ <http://english.peopledaily.com.cn/dengxp/vol3/text/c1220.html>

¹¹ www.cia.gov/library/publications/the-world-factbook/index.html

from three structural weaknesses which the Asian Development Bank (ADB) cites as consequences of a *successful* rapid industrialization and modernization process: over-capacity in sectors like aluminum, cement and steel, a widening income gap, and growing threats to the environment (ADB 2006). Most important for this study, the rapid growth and high investment rates have taken their toll on the environment:

[f]or many years, the environmental impacts of industrialization have been exacerbated by the underpricing of land, energy, and water, which has encouraged overuse; by minimal investment in environmental infrastructure; and by weak enforcement of regulations governing the environment. (ADB 2006:124).

The 11th Five-Year Plan (2006–2010) is meant to combat these structural weaknesses by emphasizing policies aimed at achieving *balanced, equitable* and *sustainable development*.¹² It seeks to avoid an ‘over-heated economy’ and also pays special attention to social and environmental issues. Out of 22 goals, 16 relate to issues of population growth, resource use, the environment and standards of living (ADB 2006). The Plan calls for a 20% reduction in energy consumption per unit of GDP by 2010 and an estimated 45% increase in GDP by 2010.

In 2002 China had become the greatest receiver of FDI among the developing countries. Energy resources, comprehensive utilization and regeneration of resources, and prevention of environmental pollution are among the *encouraged* sectors, while industries that cause pollution and damage natural resources and public health are *prohibited*.¹³ FDI is often expected to create new production capacity and jobs, to transfer technology and know-how, and to create linkages to the global marketplace. It is criticized, however, for crowding out local industry, for using up natural and human resources, disregarding working condition standards, sending all profits out of the country, and for being part of pollution-haven strategies (Dicken 1998). FDI is often seen as favorable for developing countries because of its nature as a stable, long-term investment in infrastructure, equipment and organization (Svendsen 2005). The Chinese government now wants to steer FDI toward the less developed regions of the country and the manufacture of higher-value-added products, using tax breaks as incentives.¹⁴ It claims to focus increasingly on the *quality* of foreign investments rather than *quantity*.

4.2 China’s Environmental Context

One can easily be overwhelmed by estimates saying that pollution is costing the Chinese economy 7–10% of GDP each year,¹⁵ not least since the country plans to spend only about 1.5% of its GDP on environmental protection in the years 2006–2010 (Liu 2005). The environmental challenges facing China are complex and their reasons include historical, social and political factors (Siciliano 2006). China has a lengthy history

¹² www.cia.gov/library/publications/the-world-factbook/geos/ch.html

¹³ www.china.org.cn/english/features/investment/36739.htm

¹⁴ www.china.org.cn/english/features/investment/36739.htm

¹⁵ www.state.gov/r/pa/ei/bgn/18902.htm

of achieving industrial growth and economic gain at the expense of the environment (Economy 2004), but the real large-scale projects came about during the Great Leap Forward and the Cultural Revolution: these involved overzealous attempts at 'modernization' in which large swaths of forest, lakes and rivers were destroyed to enable grain-planting projects and dam construction (Siciliano 2006). Coal provided the energy for quickly expanding industry, while releasing harmful compounds into the air. Today China's environmental degradation takes many forms.

4.2.1 *Environmental Degradation in China*

China struggles with severe pollution of its air and waters, as well as deforestation and desertification. Moreover, it is vulnerable to the potential effects of climate change. Regarding *air pollution*, oil, coal and gas are produced, distributed and widely used, doing harm in the form of spills, mine accidents, explosions and emissions. Air pollution is traditionally caused by the use of coal in industry, households and for heating, but today the dramatic growth in automobile use is pushing asides these traditional culprits (Gallagher 2006). According to some estimates, China surpassed the USA as the world's largest emitter of CO₂ in 2007, a decade earlier than anticipated,¹⁶ and is currently consuming more coal than the USA, Japan and Europe combined (Economy 2007). In a situation of continuing growth in energy consumption, China's increase in greenhouse gas (GHG) emissions is likely to exceed that of all industrialized countries combined over the next 25 years.¹⁷ Combustion of fossil fuels causes acid rain which leads to poisoned soil and groundwater, causing sometimes lethal damage to humans, livestock and agriculture (Economy 2007). *Access to water* and *water pollution* are among the most serious environmental challenges facing China (Economy 2004). Runoffs from petroleum processing and petrochemical plants have resulted in the dumping of toxic wastes into nearby waters. This harms humans through the effect on vegetation, livestock, fish, and the human body itself. China also struggles with *deforestation* and *desertification* which can be caused by over-exploitation of natural resources, wildfires and pollution.¹⁸

Today scientists and others largely agree that *global warming* induced by human activities is indeed taking place (IPCC 2007). A warmer climate may lead to changes in weather patterns: a rise in sea level from polar and glacial ice melting, and a wide range of other impacts on plants, wildlife and humans. The processes of climate change and global warming are still controversial, but the Intergovernmental Panel on Climate Change (IPCC) concluded in 2007 first, that a warming of the climate system is *unequivocal*, and second, that most of the observed increase in average global temperatures since the mid-20th century is *very likely* due to the observed increase in GHG concentrations caused by

¹⁶ www.reuters.com/article/environmentNews/idUSL2080219120070620

¹⁷ www.nytimes.com/2006/06/11/business/worldbusiness/11chinacoal.html?ex=1307678400&en=e9ac1f6255a24fd8ei=5088partner=rssnyt&emc=rss

¹⁸ www.planetark.com/dailynewsstory.cfm/newsid/43083/story.htm

the combustion of fossil fuels. Certainly not everyone agrees with the IPCC's conclusions, but they have, on the global level, significantly influenced the views of policymakers and scholars. The highest levels of GHG emissions which lead to climate change come from the production and combustion of coal, for which China is notorious. The energy industry is therefore a central factor in fighting the climate change threat and much will depend on its responses. As a developing country with a large but geographically concentrated population, China is highly vulnerable to the devastating impacts of climate change. The necessary physical and social infrastructures for handling major environmental disasters are not in place. As elsewhere, the poor, worst equipped to protect themselves and with the least knowledge of the situation, would be hit the hardest (World Bank/SEPA 2007).

Energy consumption and its effect on the environment has become a priority area for the Chinese government (Heggelund 2007). China has ratified the UN Framework Convention on Climate Change (the 'Kyoto Protocol'), but has not agreed to any binding emission reductions.¹⁹ The country is perceived as more forthcoming than before in international negotiations, but prospects of significant emission reductions are not realistic under the current policy environment (Heggelund (2007). China is focusing on technology development and transfer, stressing that emission reductions should not come at the expense of economic growth.

4.2.2 *Environmental Authorities*

China is a country with a large state apparatus where the division of labor and responsibilities is complex. The most obvious actor among its environmental authorities, the State Environmental Protection Administration (SEPA), is an agency directly under the Chinese State Council, the chief administrative authority which is chaired by the Premier. SEPA is responsible for environmental protection: this includes drawing up national principles on global environmental issues, administering international cooperation on environment, and participation in and coordination of important international environmental activities.²⁰ Since the 1990s environmental protection bureaus have been established on the local levels (Ho & Vermeer 2006). The Ministry of Foreign Affairs (MFA) is a second key actor. Since climate change policy is seen as a foreign policy issue in China, the MFA is the head of the climate change negotiations (Heggelund 2007). A third key actor is the National Development and Reform Commission (NDRC), responsible for national economic policy and planning as well as energy policy and the energy bureaus. Although the MFA heads the negotiations, the NDRC acts as coordinator of China's climate change activities, while the Ministry of Science and Technology is in charge of the Clean Development Mechanism.²¹ The

¹⁹ www.eia.doe.gov/emeu/cabs/chinaenv/html

²⁰ http://english.sepa.gov.cn/xztz/jgzn/gszn/200606/t20060630_50000.htm

²¹ An arrangement under the United Nations Framework Convention on Climate Change which allows industrialized countries with a GHG reduction commitment to invest in projects that reduce emissions in developing countries as an alternative to more expensive emission reductions at home. <http://cdm.unfccc.int/index.html>

Department of Foreign Affairs of the NDRC is in charge of cooperation between the Commission and international organizations, foreign government agencies and foreign institutions, including companies investing in China.²² Such companies therefore deal with them and not the MFA. Climate change may be a foreign policy matter, but since it is also a matter of environmental conservation and public health, it could in theory be under the purview of either of these institutions. This issue is, however, dealt with only superficially in their public materials online, in the form of a hyperlink to the Kyoto Protocol. It is not clear to the reader who is responsible for climate change issues. China thus lacks a framework that could provide explicit delegation of environmental responsibility among the numerous governmental bodies and clear instructions on who pays for what. The structures of authority seem fragmented by both function and territory, which could lead to 'turf wars' between entities (Zhou 2007). In particular, the interests of powerful agencies like the Ministry of Finance and the MFA will take precedence over those of SEPA. SEPA is in charge of more than it can handle or afford, but, in cases where it loses a 'turf war' to another agency, it may find itself stuck with cleaning up the environmental mess of others, and paying the bill. Upgrading SEPA to ministry level and expanding its funding could help counter this.²³

SEPA is required by law to implement environmental policies and enforce environmental laws and regulations, in accordance with the government's fairly ambitious 'green strategy' from 2000 (Economy 2004). The strategy includes developing a circular economy, increasing resource-use efficiency, developing clean production, reducing pollution costs in production processes, reducing the ecological impacts of consumption, developing new energy resources, reforming production methods, moving toward an 'ecological industrial civilization,' and creating a balanced ecological environment.²⁴ Environmental protection thus has the potential to change slowly from end-of-pipe kind of management to supervision and control of the entire process. The Cleaner Production Promotion Law of 2003 requires full control over the entire production process in order to reduce pollution and promote sustainable use. The Environmental Impact Assessment Law requires all authorities at city level and above to prepare ESIA's when making plans for land use, construction and development of districts, river basins, and sea areas. Moreover, a five-point strategy to address environmental problems has been developed by SEPA (Economy 2003). This strategy involves environmental policy guidance from the centre; devolution of some power over environmental protection to local authorities; broader cooperation with the international community; enhancement of the environmental legal system; and most importantly here, the development of grassroots environmentalism. By permitting the activities of NGOs, government-organized non-governmental organization (GONGOS) and the media in environmental protection, the

²² http://en.ndrc.gov.cn/mfod/t20050520_0888.htm

²³ In March 2008 the promotion of SEPA to a more powerful ministerial status was announced, but further details were not finalized at the time of writing (www.gov.cn).

²⁴ http://english.gov.cn/2006-02/08/content_182528.htm

government hopes to fill the gap between its need and desire to improve the environmental situation and its capacity to do so. There will still be restrictions on what parts of environmental conservations NGOs and the media are permitted to be active in,²⁵ but this nevertheless shows significant progress. The 11th Five Year Plan also includes numerous points on environmental protection showing that concern with the environment is indeed growing, stating for example that ecological deterioration in China is not under control (Ho & Vermeer 2006). To reach goals such as that, words must be translated into action, but the Program is criticized for lack of details on the policies and reforms necessary to accomplish this (Li 2007). Implementation and enforcement of environmental laws and regulations are therefore among the greatest challenges to the environment and sustainable development in China, and this has become a focal point for the Chinese environmental authorities. China has built a system of environmental laws which is comprehensive, but still flawed (Ferris & Zhang 2005). Van Rooij (2006) explains that despite campaigns to tackle problems of weak enforcement, serious pollution violations keep recurring as huge challenges of non-compliance and imperfect enforcement remain. This laxity may be rooted in conflicts of interest between national regulation and local stakeholders. Regulations are a means to improve the quality of air, water and soil, but negative consequences such as the shutting down of polluting factories will have much more tangible and immediate impacts on local stakeholders than will for example acid rain. If a law lacks local legitimacy, local actors are likely to resist enforcement and until a balance of interest is found, compliance will remain difficult (van Rooij 2006).

There are some signs implying that things are looking up. China is increasingly involved in international environmental cooperation. In addition, there is the China Council for International Cooperation on Environment and Development (CCICED) which has been successful in articulating high-level advice and assisting Chinese decisionmakers in understanding the links between environmental protection and economic development.²⁶ The CCICED's recommendations are used by ministries to develop policies and incorporate environmental considerations in their five-year planning processes, and have contributed to a better public understanding and awareness of environmental issues in China. This indicates greater openness about the challenges facing the country, and that environmental issues are not as politically sensitive as they once were.

4.3 Energy Consumption and Policy

By 'security of energy supply' is meant a country's ability to supply its industries and the rest of society with enough energy to meet demand at a price that commensurate with economic growth. Since all economic activity requires the use of energy of some kind, energy security is an

²⁵ Whether or not 'real NGOs' exist in China and what roles they play in society at large is a question I do not have the opportunity to discuss here. The interested reader is recommended to consult Economy (2004).

²⁶ www.cciced.org/cn/index.asp

important component of both energy and economic policy. China needs energy security to keep up the pace because high levels of energy use are essential to its industrialization and economic growth. However, there are several reasons why China needs to become more energy efficient. Keeping the economy going and growing with the limited amounts of resources China is endowed with is one reason. Second, since fossil fuels are the main drivers of economic development, whoever has this resource and can sell it, can exert considerable power, making fossil fuels important factors in the world's geopolitical situation. Third, primary energy consumed in China in 2004 consisted of 67.7% coal, 22.7% oil, but only 7% hydroelectricity and 2.6% natural gas (Cui 2006). Even though China wants to 'cool down' its 'overheated' economy, its production and consumption are not likely to decrease much, meaning that energy will remain of major importance. The solution to this dilemma is threefold: energy efficiency, use of renewable energy sources, and cleaner use of fossil fuels.

China's energy situation differs from that of other developing countries. First, its *per capita* energy use and GHG emissions have remained comparatively low, at about only one quarter of that of the USA and half that of the UK (Adam & Vidal 2007), yet overall consumption of energy and the resultant CO₂ emission are substantial, because of the population size and the intensity of coal consumption. Second, both the amounts of energy and CO₂ consumed per dollar of GDP have decreased in the past 20 years. This has been achieved through governmental energy conservation strategies, the introduction of more modern industrial equipment and a reduction in coal and petroleum subsidies. Third, China has a strong state, with a large and complex bureaucracy. Due to the scale and financing, decisions on major projects in the energy industry are invariably made on high political levels, such as by the State Council and the NDRC (Kambara & Howe 2007). In the 1990s China started converting its centrally planned economy and non-competitive-minded administration into one in which independent units aimed at improving their efficiency and utility through cost reduction, innovation and the capacity to conform to market needs. Some ministries were converted to bureaus which could establish commercial entities operating like modern corporations below themselves, like China National Petroleum Company (colloquially known as PetroChina), China Petroleum and Chemical Corporation (Sinopec) and the China National Off-shore Oil Company. The three companies are meant to acquire the skills that will help China develop its energy industry through joint ventures (JV) and co-working with foreign companies (Kambara & Howe 2007).

Industry is the largest consumer of energy, but residential consumption has increased its share over the past decade.²⁷ Experts had predicted this would not happen for years, but in 2007 Dutch scientists released figures showing China had overtaken the USA as the world's top CO₂ emitter by an amazing 8% (Adam & Vidal 2007). The soaring demand for coal to generate electricity and a surge in cement production were identified as

²⁷ www.eia.doe.gov/emeu/cabs/chinaenv/html

the culprits. There do exist some emission mitigation strategies, centered on technologies to reduce emissions from industrial boilers and motors, and on improving vehicle efficiency. China is focusing on natural gas, clean-coal technology, combined heat and power plants as well as wind, solar and hydropower, but has had little success thus far in reducing its dependence on coal as the primary energy source (Wang & Li 2005). China is not obligated to reduce emissions under the Kyoto Protocol, but policies focused on cutting energy costs and reducing local pollution still have the auxiliary benefit of reducing carbon emissions.²⁸ In 2006 the new Renewable Energy Law set as a goal that 15% of China's electricity should come from alternative and renewable energy sources by 2020 (Coonan 2006). The NDRC emphasizes that 'developing renewable energy is an important measure to ensure energy supply, improve the energy mix, protect the environment, eliminate poverty and promote sustainable development' (Wang 2007:14). Successful implementation of this law seems difficult, however, since it is a 'framework law' and many other rules and regulations need to be formulated to complement it. Moreover, as Wang notes, 'the Chinese government's ability to implement environmental laws and policies is generally deficient' (2007:36), as exemplified by the weakness of the environmental state agencies and laws lacking in local legitimacy.

4.4 Historical, Cultural and Political Factors Influencing the Environment

The need to give an outward impression of harmony is an overarching principle in Chinese politics and administration (Nordqvist 2005). Independent political initiative is suppressed and society is kept under surveillance, so that organized political opposition can be spotted and threats dealt with. China lacks a free press and civil society movements which in other countries fill important roles in environmental protection, like awareness-raising and criticism of polluting companies. There are reasons to expect policies allowing a freer flow of information, as a draft ordinance on openness of information was being prepared in 2007.²⁹ However, considering the deep-rooted wish for outward harmony, 'it is an openness that smacks of public relations' (Bandurski 2007:35). A freer flow of information would have the potential to pressure both governments and private companies on all levels to be more accountable for their actions, but Bandurski wonders if the Chinese leaders are ready to match their promises with progress. On the other hand, the government has come a long way in acknowledging many of the challenges facing the country. As exemplified by the fact that China is engaged in broad-scale international cooperation on environmental issues, such issues are not as politically sensitive today as they were only a decade ago, and many people in the know think that the political will to counter the negative trends exists (Economy 2004; Schreurs 2006; Vennemo et al. 2006). One sign of this is the rules recently (June 2007) issued by the government

²⁸ www.eia.doe.gov/emeu/cabs/chinaenv/html

²⁹ Officially known as the Government Information Release Ordinance and approved 'in principle' by Premier Wen Jiabao on 17 January 2007 (Bandurski 2007).

aimed at increasing official transparency, requiring companies and government departments to publish their environmental records, perhaps countering Bandurski's (2007) skepticism.

The desire to avoid social unrest is related to the goal of a harmonious society. Environmental degradation and pollution were acknowledged as leading causes of social unrest already in the mid-1990s (Economy 2007). The role of environmental social movements has been changing, however, and this may help the situation. In the 1990s the Chinese leadership gradually withdrew from its responsibility to meet all the social welfare needs of the population and welcomed greater public participation to some extent. SEPA's five-point strategy has allowed the establishment of what Economy (2004) at least sees as genuine environmental NGOs, partly to compensate for the weaknesses in the formal environmental protection apparatus. This is a way to reconcile the desire to achieve both unimpeded economic growth and improved environmental protection. Environmental protection is important *per se*, but also because deterioration can lead to protest and civil unrest. It is thus recognized that environmental social movements have a role to play, but there are still restrictions on their activities. NGOs, grassroots and community-based organizations constitute an increasingly important part of what the World Bank sees as an emerging civil society in China.³⁰

The traditional concept of harmony in Chinese culture includes a harmonious relationship between man and nature, making environmental protection a necessity for social stability (Vennemo et al. 2006). Economy (2004), however, emphasizes how the environmental challenges now facing China result not from decades but from centuries of abuse of its natural resources: '[n]ation building, war, and economic development have all exerted unrelenting pressure on land, water, and forest resources' (2004:27). Societal doctrines will influence politics towards nature. In China, we first have the legacies of Confucianism, Taoism, Legalism and Buddhism sharing what Economy (2004:3) refers to as a 'healthy respect for the importance and power of nature to shape man's conditions.' The land and the agricultural system were seen as the source of all value and virtue, but ideas about man's ability to conquer and control nature for human needs still developed under Confucianism. Under Maoism, with the attempt to catapult China into communism and a fully industrialized society, came massive destruction of the natural environment. The decades of Deng Xiaoping rule set the stage for new 'state-sponsored campaign[s] to exploit the natural environment for the purpose of economic development' (Economy 2004:59). This provided a poor foundation for building a sound environmental protection apparatus. One consequence of this is, as noted, that SEPA is less powerful than other ministries, so that environmental concerns are frequently set aside to reach economic goals, as emphasized among others by my informant at Shell China. Economy (2004:27) describes the situation this has led to as

³⁰ <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/EASTASIAPACIFICEXT/CHINAEXTN/0,,contentMDK:20600359~menuPK:1460599~pagePK:141137~piPK:141127~theSitePK:318950,00.html>

a ‘deeply rooted cultural tradition that accords little value to some of the core elements of effective environmental governance: independent scientific inquiry, a transparent political system, and accountable leadership.’ First, the development of a modern scientific rationalism has been hampered not just by Maoism/Marxism-Leninism, but also by centuries of Confucianism, because scholarly concerns with preserving doctrinal orthodoxy constrained the ability to think and question freely. Punishments for criticizing or even questioning the dogma kept scholars from developing a sense of personal responsibility, initiative and risk-taking. Thus, the expert community has not been able to provide informed and useful analysis to the political elites, something which might have prevented an environmental disaster of the scale we are witnessing today. Recently, vice-premier Zeng Peiyan was quoted as saying that the quality of research into pollution in China is not very high (Yuan 2007), a consequence of this legacy. Second, there is the matter of the non-transparent political system, for which China has been severely criticized. Third, the issue of an accountable leadership includes the fact that responsibility for environmental protection is often delegated to the lower ranks of the political structure or governmental departments lacking in power, and on a lower geographical level. This serves to reinforce the tradition of promoting rapid economic growth at the expense of the environment, as political and economic interests at this level often coincide (Economy 2004).

4.5 Barriers in the Chinese Context

Thus we would expect Shell China to be confronted by three main barriers to a more environmentally-friendly energy production. The potential effects on Shell China will be discussed in Chapter 6.

The strong state. ‘Strong state’ here refers to an interventionist state which has the power to tax and regulate the economy, including industry and energy security, as well as withstand political and social challenges from non-state actors like private local and foreign companies. I refer here only to the case of the Chinese state, *not* interventionist states in general. A strong, interventionist state is normally an asset for the formulation and implementation of environmental legislation. In China, however, even with its well-developed state bureaucracy and environmental legislation, I expect it also to serve as a barrier to achieving and upholding Shell China’s environmental goals and standards. This does not mean I assume that the Chinese state is only a negative force with regard to more environmentally friendly energy production, on the contrary, but in accordance with the second research question I focus on the barriers, not the opportunities to such production. First, with its emphasis on guiding public opinion, the state may be hindering individual initiative. Individual efforts are important for progress on environmental issues, especially for developing commitment to a cause. Second, in trying to achieve an image of harmony and to avoid uprisings, the strong Chinese state limits the activism of environmental social movements, which, when free, play important roles in bringing about change through pressuring private companies to alter their behavior, as such movements did with Shell in Europe in the 1990s. Environmental social movements are also of great importance to environmental awareness-raising. Third, in

its role as owner of foreign energy companies' JV partners, the state influences the investments made by these partnerships, how projects materialize and how environmental concerns are integrated into them. One reason why this is possible is the fact that SEPA has neither ministry status nor sufficient power to influence other agencies and ministries. The notion of the state as sometimes incapable of addressing critical environmental issues is also part of the ecological modernization perspective.

Short-term economic perspectives. A barrier I expect to have significant contextual influence on Shell China and the actors involved in its business operations is what seems, according to my interviews, to be the tendency to see things in short-term economic perspectives, and act accordingly. China's economic growth and resource consumption are unsustainable over time as well as environmentally (Zheng presentation 2007). In all likelihood, China will continue to be an increasingly important economic actor, but it is unlikely that its economic growth will go on forever. When economic growth slows down or stops completely in the future, it may be too late to save the environment, and this will necessarily have major consequences, not least in terms of food and energy security. China has reserved the right to develop its economy and raise its living standards the way the industrialized countries have done, refusing to impose limits on its rising CO₂ emissions, because they historically and *per capita* are much lower than those of the developed countries.³¹ What has made possible its continued economic expansion so far has been the reliance on inefficiently used fossil fuels and industrial production at minimal cost due to an abundance of cheap labor and badly enforced environmental standards. Undeveloped environmental infrastructure, population size and a limited resource base add to the burden. This appears not only to be characteristic of the country's economic strategies, but also to influence the ways in which the Chinese think.

Conflicts of interest. Conflicts of interest relevant to the case studied here can arise both within a company and between a company and external actors. It is common for foreign companies in China to have mainly Chinese employees (Fang 1999). Their JV partners are also Chinese; in the energy industry, these are the national energy companies. The actors involved in a foreign company's energy production, perhaps especially the subcontractors,³² are likely to have differing views in environmental issues and their importance. This barrier has to do with levels of environmental awareness and economic security. The former are generally low because environmental issues were politically sensitive for so long and not part of any kind of public debate (if, indeed, such exists). Even in cases where environmental awareness means that some people are committed to an environmental policy, other goals like short-term profits and energy security may prevent them from contributing to its implementation. For the foreign staff of a European company operating in

³¹ www.uofaweb.ualberta.ca/govrel/news.cfm?story=60995

³² An individual or a company that performs parts of or all of the operations of another individual or company's contract.

China, on the other hand, acting in an environmentally responsible manner is a question of having realized that being 'green' can be good for business, of environmentally-based social legitimacy, and of personal environmental concern. This, I expect, is caused by their background of economic security and a longer history of focus on environmental issues.

4.6 Summary

Despite its recent economic 'miracle,' China is struggling with a range of challenges, of which environmental problems are but a part. In this chapter I have outlined the economic developments of recent decades and the most imminent environmental problems. I have presented the state authorities relevant to the environment; the country's energy consumption pattern and politics; and lastly, historical, cultural and political factors which influence the environment. Energy security, crucial to continued industrial and economic expansion for the sake of higher standards of living, is among the absolute top priorities in China. Its energy mix consists mostly of fossil fuels, with coal as the dominant source. The current energy mix is causing environmental degradation in many forms, but this can be at least partly ameliorated through energy efficiency, the use of renewable energy sources, and cleaner use of fossil fuels. These have become priority areas for the government as well as the energy and environmental authorities. This is also an area in which foreign energy companies like Shell can contribute, but the extent to which this is possible will be influenced by barriers in the Chinese context. Here I have identified three main barriers: the role of the state, short-term economic perspectives, and conflicts of interest.

5 The Royal Dutch Shell Group and Shell China

The Shell Group is not what it used to be – that is, at least its image is not. The first aim of this chapter is to explain *why and how that happened* and *how it was possible* for a company which had been so heavily criticized throughout most of the 20th century to transform itself into the ‘most admired company in Britain’ by 2001 (Taylor 2006). The second aim is to explain the 1990s’ ‘transformation’ of the Shell Group and outline its 2007 environmental profile, in order to reposition it on the axis of environmental responses. In addition to addressing my first research question, this will provide information needed for analyzing what the Shell Group’s new environmental profile means for the Shell China. In the last part of the chapter I present Shell China’s business operations and other relevant information.

5.1 The Royal Dutch Shell Group

Shell is a global group of energy and petrochemicals companies, operating in more than 130 countries and employing approximately 108 000 people.³³ In addition to its familiar roadside stations and its exploration/production of oil and gas, the Group’s companies deliver petrochemicals and a wide range of energy solutions including coal, solar and wind power, as well as plastics and detergents (Skjærseth & Skodvin 2003). Shell does not produce nuclear power, a point which is emphasized in company literature (Shell 2002), but has recently resumed some of its coal operations, but only in China (interview Shell China). Today Shell has five global functional core businesses that, while independent, all follow the same set of business principles (Skjærseth & Skodvin 2003). These core businesses are: Exploration and Production, Oil Products, Chemicals, Downstream Gas and Power, and Renewables (Shell 2000). Shell’s Renewable energy sources sector is working to develop wind, hydrogen and solar power opportunities. It is among its newest additions, a part of the company’s strategy to diversify away from its core oil, gas and chemicals businesses. Even though its operations in solar and wind are minuscule when compared to the core businesses, Shell has now become one of the world’s largest investors in these sectors, and in 2004 it ranked fourth worldwide in terms of sales of solar products.³⁴ Earlier attempts at diversifying were not deemed successful and all have been set aside, apart from coal (interview Shell China). The corporation’s post-2000 publications emphasize that Shell does not produce coal, and some of the negative consequences of coal consumption are listed (Shell 2002), thus sidestepping the fact that although Shell may does not *mine* coal, coal is a part of its operations. Capital investments in 2006 totaled \$24 896 billion, out of which 2% was in businesses other than the oil, gas and chemicals sectors.³⁵ Shell’s revenues of \$318.8 billion in 2006 made it the next-largest corporation in the world, second only to ExxonMobil.

³³ www.shell.com/home/content/aboutshell-en/at_a_glance/at_a_glance_09112006.html

³⁴ http://tata.com/tata_bp_solar/articles/20040104_Sunny_side_up.htm

³⁵ www.shell.com/home/Framework?siteId=investor-en&FC2=/investor-en/html/iwgen/quarterlyresults/2006/zzz_lhn.html &FC3=/investor-en/html/iwgen/quarterlyresults/2006/q4_2006_results_01022007.html

5.2 Shell's Environmental Profile *anno* 1995

Estrada et al. described Shell's 1995 environmental profile as being a pragmatic business-like approach with visions defined by society and goals set by governments. Aiming at providing flexibility to each of the Group's companies to define their own environmental strategy, it avoided 'the excessive display of green values in its public image' (Estrada et al.: 96). Shell did not publish corporate environmental reports with inventories of emissions as a group, but Estrada et al. nevertheless concluded that it had stepped up its efforts to rebuild confidence and legitimacy after years of negative press and media-covered blunders. When Estrada et al.'s *Environmental Challenges Confronting the Oil Industry* appeared in 1997 (based on their 1995 study) some changes had already taken place. On the project level, ESIA's were a routine part of operations, and managers faced liability for their own and their employees' actions. In R&D, the focus was on environmental efficiency and the development of clean technology. Any 'confrontations' between regulators and company representatives took place on the regional and local levels, where companies in the Group were more likely to be outspoken about their views. As a group, Shell spoke with one voice.

In the 1990s new routines for environmental management and rather ambitious environmental strategies were developed, but some things nevertheless remained the same. On the issue of climate change in particular the whole industry was ambivalent (Estrada et al. 1997:182). The environmental progress of the 1990s meant that Shell paid more attention to and worked to minimize and avoid the most obvious and tangible types of environmental degradation like oil spills and the potential devastation of the surroundings. This was an approach with a highly local or regional focus, belonging to the first and second generations of environmental concern. The threat of climate change, on the other hand, emerged as a *global* matter and was far more controversial and complex. Estrada et al. note that while some of the companies studied were 'hesitant, preferring a low profile,' others seemed 'determined to fight the issue to the bitter end' (1997: 182). None of them had been persuaded to diversify away from the traditional fuels. Therefore, when it comes to climate change, Shell, as well as the other companies analyzed, showed elements of both reactive and cautious behavior. I will argue, in accordance with Estrada et al., that Shell's environmental profile at this point was *cautious*, but that it also held both creative and reactive elements. Shell was a member of the Global Climate Coalition lobby and did not disclose its carbon emissions. On the other hand, even if it felt there was not enough scientific evidence to claim that anthropomorphic climate change was indeed taking place, it nevertheless became the Group's view that there was enough evidence of the potential risk for governments to address the issue. For the energy industry, erring on the side of caution also had other benefits than climate-change mitigation which could justify environmental measures even if the concern over climate change should prove misguided. Such benefits include offsets like improved energy efficiency, technology export to the developing world, incorporation of environmental costs into fuel prices, halting deforestation and improving *reforestation*, speeding the elimination of chlorofluorocarbons, and reducing emissions of sulfur and nitrogen oxide.

Thus, Estrada et al. were left with ambivalent conclusions. True, the industry had realized that the environmental threats were real and would have to be taken seriously if the companies were to retain their social legitimacy. This was more than a question of simple PR stunts, because large investments had been made and innovative technological solutions provided for its emissions problem. However, Shell still did not publish figures on its emissions; it kept funding organizations working to undermine political regulations on emissions; and was not positive to a tightening of rules on company behavior. What Shell wanted was a level playing field: an environment in which all companies in a given market follow the same rules and are provided with equal ability to compete. It wanted governmental guidelines, the freedom to find its own ways of adhering where it saw fit, and believed that market-based instruments and measures would help reduce carbon emissions (Skjærseth & Skodvin 2003). For these reasons, none of the companies in the 1997 study by Estrada et al. fit the creative label.

5.3 The Transformation of Shell

There are several reasons why an in-depth study of Shell is interesting and why an analysis of the Group's environmental performance and agenda is relevant for examining environmental management in big business and across borders today.

In 1995, 'Europe's biggest company made the most public and controversial U-turn in the history of environmental campaigning' (Huxham & Sumner 1999:349) after a massive campaign by Greenpeace had forced Shell to cancel its planned disposal of the redundant oil installation Brent Spar in the Atlantic. The same year, protectors called Shell shareholders 'murderers,' demanding that they be held accountable for despoiling the homeland of the Nigerian Ogoni people and for provoking the Nigerian government to sentence tribal leader Ken Saro-Wiwa and others to death for eco-terrorism (Mirvis 2000). Shell owned up to the environmental problems and worked on Saro-Wiwa's behalf with prominent African figures, but, citing its policy of 'non-interference', did not take part in the ensuing economic and political sanctions against the Nigerian government (Mirvis 2000). Earlier, in the 1980s, Shell had come under fire from and had been boycotted by protesters as part of a campaign against the South African apartheid system. Clearly, the Group had committed important errors in its environmental, community and communications strategies. Some dramatic changes were due.

The Shell General Business Principles (box 5.1. below) govern how each of the Group's companies conducts its affairs. Mirvis (2000) claims they were updated to include commitment to human rights and social and environmental reporting, but in the 1998 report 'People and Profits – does there have to be a choice?' (Shell 1998) I find no explicit reference to human rights. Reporting and the external auditing of environmental and social performance are emphasized, however.

Business Principle number five, which refers to the HSE Policy, is what is of greatest relevance to this study and will be outlined in some detail in

Chapter 6. Shell emphasizes that it manages HSE matters as they would ‘any other critical business activity, [setting] targets for improvement, and measure, appraise and report performance’ (Shell 1998:24). The argument seems to be that managing HSE in this way will in fact improve HSE management. In Chapter 2, I noted how a central point in the business case for sustainable development is that companies can *do well by doing good*. It also makes sense that they can *do good by doing well*, meaning that efficient business management also makes environmental management more efficient.

Box 5.1 Shell’s General Business Principles

1. Economic	Long-term profitability is essential to business goals and continued growth. Without profits and a strong financial foundation, it would not be possible to fulfill the company’s responsibilities. Criteria for investment and divestment decisions include sustainable development considerations (economic, social and environmental) and an appraisal of the risks of the investment.
2. Competition	Support free enterprise and seek to compete fairly and ethically and within the framework of applicable laws, while not preventing the competition of others.
3. Business Integrity	Insist on honesty, integrity and fairness in all aspects of business and not accept any form of bribery. Employees must avoid conflicts of interest between their private affairs and those of the company.
4. Political Activities	Not make payments to political parties or organizations, nor take part in party politics, but insist on the right and responsibility to make its position heard in matters concerning itself, its employees, customers, shareholders or local communities.
5. Health, Safety and the Environment	Have a systematic approach to HSE in order to achieve continuous performance improvement, managing these matters as critical business activities. Continually seek ways to reduce the environmental impact of operations, products and services.
6. Local Communities	Aim to be good neighbors and manage the social impacts of business activities carefully, working to enhance the benefits to local communities and to mitigate any negative impacts from company activities. Take constructive interest in societal matters.
7. Communication and Engagement	Be committed to reporting on performance by providing full information to interested parties, subject to any overriding considerations of business confidentiality. Seek to listen and speak to employees, business partners and local communities honestly and responsibly. External auditing of publications.
8. Compliance	Comply with all applicable laws and regulations of the countries in which the company operates.

Source: Shell 2005.

Shortly after Shell had published the new Principles, it left the Global Climate Coalition, a US corporate lobby group working to undermine the UN climate negotiations, and joined the UN Global Compact (Frynas 2003) and the World Business Council for Sustainable Development (Kolk & Levy 2001). Further, it announced its support of the Kyoto Protocol and that Group now held that anthropomorphic climate change is a real threat which needs to be addressed without delay (Kolk & Levy 2001). This was highly significant since, as we saw in Chapter 4, climate change is today widely seen as the biggest threat to the future of the planet.

In 1998 Shell started rating the Group's performance against each of the new Principles (Mirvis 2000), a milestone in Shell's efforts to improve its social and environmental record through self-scrutiny, two-way dialog with stakeholders and disclosure of its performance. It worked to play a part in the formulation of international standards and guidelines, and made commitments to adhere to a range of CSR instruments (Boasson and Wettestad 2007). New instruments were springing up everywhere, and for the energy companies it became a matter of being perceived as front runners, publicly making a commitment before they reach peak popularity

The significance of not all, but some, of these developments is easily exaggerated. The UN Global Compact, a key CSR instrument, is routinely dismissed as little more than 'corporate greenwash' (Frynas 2003:280). There seem to be two main strands of criticism. On the one hand, the free marketer perspective holds that CSR hinders the operation of the free market, breaking the 'rule of corporate law' which holds that a company's directors are prohibited from doing any activity that would reduce profits,³⁶ because, contrary to Porter and van der Linde's notions of offsets and differentiation, they see CSR adherence and environmental regulatory compliance as extra costs only. Others claim that CSR is essentially cynical and selfish because companies engage in it only for the sake of their own profits. The motivation for commitment is a highly debated issue to which we return later in this report. Whether sincerely motivated or not, however, *something* happened, and something *caused* it to happen. What then, convinced a company like Shell to embark on such an overhaul in the first place? Several events serve to explain the changes in company attitude.

The twin crises of the Brent Spar and the Nigerian case were the triggering factors behind the change, but according to Mirvis (2000) the whole process started already in 1994 when Shell, after a study of staff and corporate structure, underwent an extensive reform. The initial reason for the reform was that Shell had started to lag behind its competition, with worsening financial and retail results (Grant 2002). At the time it was also fighting on the commercial side: hungrier investors, experienced competitors, savvy new market entrants and a faster-changing customer base (Mirvis 2000). On the social front it faced protestors and protests increasing in number, anxious politicians and a public with growing levels of environmental concern and cynicism. The committee of managing directors took note that Shell had badly misjudged the pro-environmental sentiments of the press and public, as well as the sensibilities of its customers (Mirvis 2000). An examination of the Group's corporate culture showed mistrust in anything but hard facts, as well as arrogance towards and lack of ability to dialog properly with customers, stakeholders and adversaries. It was time to think 'outside the box' to be able to alter the company culture. Thus, what came to be the transformation of the Shell Group was originally launched due to a commercial need, but came to involve much more as the company learned the hard

³⁶ <http://planningskills.com/library/article.php?id=3>

way that it had to listen, engage and respond to stakeholder groups (Frynas 2003). As it became clear that business is inseparable from its social and environmental contexts,³⁷ Shell came to emphasize both 'hard' and 'soft' aspects of performance. Only a few years later, every part of it would be touched by change (Mirvis 2000).

Starting in 1997, the CEO of Shell went public with self-criticism in the aptly titled article 'Shellman says sorry' (Mirvis 2000). Shortly after, the Business Principles were updated and the CEO was assigned responsibility for all ethical and environmental issues. Having acknowledged that anthropomorphic climate change caused by the combustion of fossil fuels and subsequent release of GHGs *could be a possibility* in their annual report of 1996 – this was before it left the Global Climate Coalition – the Shell Group in 1998 announced its goal to cut emissions of GHGs from its operations worldwide by 10% by 2002 compared to 1990 levels. This goal was reached in 2000 (Shell 2000). It also pledged to take account of potential GHG emissions from operations when making investment decisions on major projects, and to accurately measure, report and verify its own emissions performance. An internal GHG emissions trading system, STEPS, was established in 2000 (Skjærseth & Skodvin 2003). The practice of benchmarking began spreading throughout the Group as financial, social and environmental performance was contrasted with that of both competitors and top performers from other industries and presented to staff and analysts (Mirvis 2000). Reviews were conducted that emphasized transparency in operations and communication involving all stakeholders. Compared to other companies, Shell faced growing evidence of 'suboptimal financial performance' (Grant 2002:8) which the company executives attributed largely to themselves and the company being 'bureaucratic, inward looking, complacent, self-satisfied, arrogant' and tolerating their own underperformance. Moreover, Shell's reputation among the general public was far from favorable. To counter this, a working group formulated the Group's new 'core purpose': 'Helping People to Build a Better World,' and set the goal of becoming the 'World's Most Admired Company' (Mirvis 2000:75).

With the growing awareness of the negative side-effects of energy-intensive consumption patterns in the industrialized countries has come an increase in related legislation. Visions and images presented to the public may be an important indicator of change towards environmental friendliness and renewed social legitimacy, but the public wants results: it is more interested in what companies *do* than what they *say they do*. Showing commitment to CSR must be about more than just following the law. For an energy company to achieve a good image with the public actually *believing* that it wants to contribute positively and not only feed its shareholders stock portfolios, it would have to support new environmental legislation; leave lobbies working against new legislation or favoring the energy industry; set stricter targets for its own operations; and invest more in new technology and renewable energy sources.

³⁷ www.shell.com/static/china-en/downloads/news_and_library/Yves%20Business%20Civil%20Society%2011092003.pdf

Showing the public what it does necessitates transparency in operations and disclosure of results.

To achieve this, Shell started publishing a new kind of annual report explaining how it was living up to its business principles. The first, 'Profits and Principles – does there have to be a choice?' came in 1998 (Shell 1998). In the wake of this report and the above-mentioned benchmarking, 62 contracts were terminated and one JV divested because of incompatibility with Shell's Business Principles (Shell 2000). Also, some senior executives were dismissed for not enforcing the same Principles (Mirvis 2000). In an effort to change what was perceived as an arrogant corporate culture, executives did community service among homeless people in London and, in an act symbolizing the birth of 'new Shell', they wrote letters of resignation to 'old Shell.'

On lower geographical levels, one may expect the situation to be different. Management and workers may need training and probably quite some convincing before they start implementing new policies handed them from above, and not take money- or time-saving shortcuts on HSE issues. The physical and mental distance between the HQ and 'the floor' is a problem shared by Shell and China, and it has led to policy implementation challenges (interview environmental consultant). This will be discussed further in the following chapters. In the transformation, the operating companies in the 130 countries where Shell does business lost some of their decision-making power, and this may have had both positive and negative repercussions. Corporate HQ may have more power over their five main business units than they did over the country-level operating companies, but the local-level plants and staff are still far away from The Hague.³⁸

5.4 Shell's Environmental Profile *anno* 2007

I will now use the six indicators of change introduced in Chapter 2 to describe Shell's environmental profile today. The intention is to look for changes and progress since 1995, with the aim of repositioning Shell on the axis of environmental responses. I expect to find progress and changes which will be relevant when applying the framework to the case of Shell China in 2007, as opposed to the Shell Group in 1995. After all, most of the changes in Shell had only just begun or were far into the future back then.

5.4.1 Environmental Vision and Image

Have an environmental vision and corresponding goals been established at the corporate level, and how do they affect the company's image? Environmental awareness can be observed by studying the extent to which a company incorporates environmental concerns into the way it presents its objectives and responsibilities to its staff, shareholders and

³⁸ In 1995 the Shell Group's organizational structure was altered. Instead of having two headquarters, in London and in The Hague, only The Hague remained. www.rh.edu/~stodder/BE/Shell1.htm

society in general (Estrada et al. 1997). By the early 21st century, Shell has become increasingly regarded as an economically sound and socially responsible company (Boasson & Wettestad 2006). Its view of environmental matters is one of seriousness and urgency, but with hope and opportunity as well. It has aimed to establish itself as a frontrunner, often with goals that go beyond regulatory compliance. Whereas in the past Shell called for a level playing field where all companies in an industry would have the same rules and regulations to follow, it abandoned this notion when it set company-internal emission reduction targets, effectively putting its own financial competitiveness at risk because of the potential costs associated with these reductions. I have not been able to determine whether the emission reductions have caused any product or process offsets, but it is Shell's official view that being environmentally responsible promotes innovation and increases its effectiveness (Shell 2003). This and other factors show that Shell has been working hard to improve its image. It is now perceived as a frontrunner in CSR, actively participating in the UN Global Compact, the Carbon Disclosure Project, the Global Reporting Initiative, the World Business Council for Sustainable Development, and the Global Gas Flaring Reduction Public-Private Partnership (Boasson & Wettestad 2007). What Shell is *specifically* doing to reach its environmental goals is as follows (Shell 2006:11):

- reducing emissions and setting own standards for emission reductions;
- improving technology to capture and store CO₂ from fossil fuels;
- providing natural gas, clean coal technology and advanced transport fuels;
- working to build a substantial business using at least one alternative energy source;
- calling on governments to introduce the policies needed to manage GHG emissions.

It is Shell's explicit view that climate change is the most important of all social challenges confronting the industry, thus supporting the strong scientific consensus that recent changes in the global climate are almost certainly caused by human activity (Shell 2006). This marks a new development from 1995, when supporting climate change mitigation was a means to 'err on the safe side' (Estrada: 94), staying safely within the *cautious* category. Recently, Shell has been highlighted as one of the best companies in dealing with the climate change issue (Boasson, Bohn & Wettestad 2006).

5.4.2 *Environmental Management*

Have organizational changes been made to support the environmental goals on the corporate level? Shell's strategy is to manage environmental issues just like everything else, but energy companies clearly have to struggle to convince a skeptical public of their sincere intentions. Communicating their efforts on impact assessments, product stewardship, environmental audits, accounts and reporting to the public can alter this situation. Shell's 1990s transformation entailed a comprehensive organizational change in which the Group got several new additions related to environmental management. Examples include:

- Shell General Business Principles revised to include sustainable development and human rights and a strict governance process introduced (1997);
- Shell Renewables established as a core business to consolidate activities in forestry and solar, wind and biomass power (1997);
- HSE policy revised and strengthened associated governance processes (1997);
- internal CO₂ emission reductions targets established and met (1997), and new targets set (2000);
- commitment to contribute to sustainable development (1998);
- company-wide minimum environmental standards formulated and implemented (1998);
- Shell Tradeable Emission Permit System launched (2000);
- Social Performance Management Unit established (2001);
- biodiversity standard and commitments formulated and implemented (2001);
- program for all major installations to be certified to ISO 14001 complete (2002);
- continuous venting of gas from all oil production operations eliminated (2003);
- sustainable development learning program established (2004);
- new Group-wide Code of Conduct launched (2006).³⁹

Before the organizational restructuring, national level and local operating companies managed the refining of oil products and selling and distribution of oil, gas and coal products. Today virtually all of Shell's operations are much more directly managed from The Hague as 'global businesses' have been created in all sectors. A centralized company is held to be better equipped for internal communication and coordination (Skjærseth & Skodvin 2003), with greater capacity to make use of information generated through monitoring. In this way, the restructuring appears to have contributed favorably to environmental management. In 2006 Shell ranked 'best in class' for environmental management, policy and biodiversity as well as corporate governance, codes of conduct and transparency on the Dow Jones Sustainability Index.⁴⁰ The internal emission reductions targets as well as the commitment to ESIA's even in countries where this is not compulsory⁴¹ (as in China), shows how Shell

³⁹ www.shell.com/home/PrintFramework?siteId=envirosoc-en&FC3=/home/envirosoc-en/html/iwgen/making_it_happen/our_progress/our_progress_04072007.html

⁴⁰ http://www.shell.com/home/PrintFramework?siteId=envirosoc-en&FC3=/home/envirosoc-en/html/iwgen/making_it_happen/our_progress/our_progress_04072007.html

⁴¹ www.shellchemicals.com/magazine/1,1098,957-article_id=164,00.html

is striving for standards *beyond regulatory compliance*, a change from before when even the companies supporting CSR did not agree that it meant doing anything more than what was required by law (Estrada et al.). However, while for example the decision to sign up to the UN Global Compact was formally taken by the executive board, Shell employees interviewed by Boasson & Wettestad (2007) said that the consequences of adherence had not been explored prior to adoption, nor were efforts made to implement the Global Compact afterwards. Boasson & Wettestad claim companies like Shell embark on instrument adherence on the basis of their popularity, *not* their feasibility. On the other hand, this is not all ‘window dressing,’ as in 2002 Shell reached its self-set GHG emission reductions goal years ahead of schedule.⁴² The second target is to maintain these 5% below 1990 levels by 2010. It seems unlikely that this would have been tried, much less achieved, if successful changes in environmental management had not been made.

5.4.3 Strategic and Scenario Planning

Have environmental matters affected the company’s long-range thinking? Since the energy industry is by nature a long-term affair, it needs to be able to forecast future developments. Shell’s scenario planning is a way of alerting the staff to the uncertainties in this area, and plays a role in environmental management and preparedness (Estrada et al. 1997). Things have changed in the past decade, and renewable energy sources are given greater emphasis; it is Shell’s view, however, that ‘oil and gas will continue to supply a significant part of the world’s energy for the foreseeable future, but energy will increasingly come from alternative sources like wind, solar and biofuels.’⁴³ That Shell aims to develop at least one alternative energy source into a substantial business is a considerable change from 1995, when ‘there was only one way forward – back to the traditional core business of petroleum exploration, production, refining and marketing’ (Estrada et al. 1997:177). Today’s scenario planning encompasses a much wider spectrum of uncertainties than the more traditional focus on oil price, political and financial trends and the post-Cold War world (Skjærseth & Skodvin 2003). Three scenarios published in 2005 are ‘alternative stories of how the world may develop’ by 2025,⁴⁴ indicating where the principal challenges for the future lie. In all three, the focal question is how the triple dilemma posed by trying to achieve efficiency, social justice and security – objectives that can at times require conflicting solutions – can be resolved in a globalized world. In the 2005 scenario ‘Open Doors,’ environmental effects have been internalized in energy prices, with Kyoto-like mechanisms making carbon management an essential part of energy development and use. Climate change is not explicitly emphasized in any of the three, even though emission reductions are mentioned. There is thus a slight discrepancy

⁴² www.shell.com/home/content/envirosoc-en/making_it_happen/our_progress/our_progress_04072007.html

⁴³ www.shell.com/home/content/aboutshell-en/what_we_do/renewables_hydrogen/renewables_hydrogen_07112006.html

⁴⁴ www.shell.com/home/content/media-en/news_and_library/press_releases/2005/global_scenarios_launch_06062005.html

between Shell's acknowledgement of the climate change threat, and how this is incorporated into its plans. Climate change was more central in the 1998 scenario 'The New Game,' which featured a US-ratified Kyoto Protocol and coal being driven out of the energy mix entirely (Skjærseth & Skodvin 2003). This was only two years before Shell divested itself of its entire coal operation.

5.4.4 *Research & Ddevelopment*

Do environmental matters affect investment decisions in the R&D of traditional core and alternative energy activities? Shell's policy is to develop technology geared towards producing energy and petrochemicals sustainably and economically. In the face of demands for higher environmental standards, the company applies the latest technological solutions for exploring and production of oil and gas, for processing and refining products, and developing energy from new sources. Shell says its 'success is built on integrating technology, driving innovation and harnessing expertise.'⁴⁵ Renewables are a still-embryonic part of Shell's operations, but wind energy developments have taken place in the USA and in China. The 'outlining [of] plans to explore the potential for wind energy developments in China'⁴⁶ may not seem like much, but from visiting Shell's offices in Beijing, I know that their Renewables Unit at least has a proper Wind Energy Division. In 1998 Shell anticipated a future in which low-carbon and renewable energy sources would cover as much as 50% of world demands by 2050 (Skjærseth & Skodvin 2003). It might strike the observant reader as odd that this figure was published only one year after the Renewables Unit was established, and today the company seems to have abandoned this ambitious view of the future of renewable energy sources. Shell Solar is the world's largest photovoltaics business, with a 13% market share (Shell 2002). In China, Shell provides solar panel electricity in rural villages formerly without access to electric power. Its renewable energy investments elsewhere involve hydrogen purification technology and plant waste ethanol for blending with gasoline to reduce GHG emissions.

Natural gas today supplies only 2% of China's energy needs, but the government is committed to increasing the use of gas to 8% by 2010.⁴⁷ Shell is involved in natural gas production and gas-to-liquids technology internationally and in China. The Group makes the case for use of natural gas by explaining the many advantages of gas over competing fossil energy sources: it is sulfur-free, produces less GHG emissions and no dust or particulate emissions. In 1998 a Shell director concluded that since China is unlikely to become energy self-sufficient, natural gas would not out-stage coal as the country's main source of energy

⁴⁵ www.shell.com/home/Framework?siteId=technology-en

⁴⁶ www.shell.com/home/Framework?siteId=china-en&FC2=/china-en/html/iwgen/leftnavs/zzz_lhn2_3_6.html&FC3=/china-en/html/iwgen/about_shell/what_we_do/renewable_12282001_1947.html

⁴⁷ www.shell.com/home/content2/china-en/about_shell/what_we_do/gp_12282001_1800.html

(Williams 1998). The solution seems to be to continue developing natural gas and to produce coal in a more environmentally friendly way, through investments in coal-to-liquids (CTL) and coal gasification technologies.

5.4.5 Investments

Do environmental matters affect investment decisions in traditional core activities and the diversification to alternative energy? Shell today views investment in diverse energy sources as critical for energy security, to protect the world from interrupted energy supplies and avoid over-dependence on any one region or energy source (Shell 2006). Its Renewable Energies Unit is part of a strategy to safeguard the company by exploring several kinds of renewable energy sources rather than opting for only one (Boasson & Wettestad 2007:15). Financial results and efficiency seem to be the main legitimating concepts within the field, so environmental responsibility is relevant to the extent that it is related to financial gains. As seen above in the section on R&D, Shell's focus on diversification is wider in range than it is large in quantity, and the Renewables Unit is not represented by an executive director at the board level like the other core business units (Boasson & Wettestad 2007). For Renewables to become economically viable, R&D, investments and risk-taking may be necessary. This is part of being a frontrunner: willingness to take risks for the greater good is necessary when working to maintain one's social legitimacy.

At the same time as the Renewables Unit was established, Shell divested itself of all its coal production, although this was later reversed in China, with investments in clean coal and CTL technology. According to my source at Shell China, the abundance of coal is the only reason Shell is present in China at all. This seems to be an overstatement since Shell's non-coal related business in China is substantial (see section 5.5.), but it is nevertheless an interesting notion. Shell China's coal investments will be further discussed later on.

5.4.6 Government and Public Relations

How does the company relate to and deal with the political agenda of environmental policy? As a TNC, the Shell Group has to deal with significant regional differences in business culture, environmental standards and government structures. It now takes great care as to how it is perceived by customers, governments, stakeholders and society. A good reputation may improve profits, just as a bad reputation has proven to have negative economic consequences in the past. The Netherlands, one of Shell's two home countries, has been a frontrunner in general environmental as well as climate policy development, whereas the UK, Shell's second home country, raised its ambitions a little later (Skjærseth & Skodvin 2003). With thousands of Dutch and British employees in the Group, it is logical to assume the company will be influenced by the environmental sentiments of the governments and publics of both countries. Today Shell works together with governments, NGOs, local communities, industry partners and UN bodies (Shell 2002). In addition to publishing annual reports on HSE issues, the online 'Tell Shell' system has been established as a way of communicating with the public (Shell

2002). These developments are perhaps an effort to counter the criticism directed at the industry for using a lot of big words without showing actual results or listening to feedback from the public.

The Shell Group has avoided excessive display of 'green' values in its public image, in contrast to competitor BP's \$7 million green logo.⁴⁸ There have been some changes on this area too, as Shell came to realize that the public wanted companies to *show them* what they were doing. Websites and printed material now focus on goals and achievements, even self-criticism. It is nevertheless still emphasized that this is not a matter of philanthropy; it is *business*, consistent with the view that environmental sustainability makes good business sense. Whereas in 1995 Shell did not publish environmental reports as a group, it now publishes reports annually, using external review committees to ensure transparent reporting (Shell 2006). Cooperating with governments is part of Shell's climate change mitigation strategy. The role of government is, among other things, to formulate and implement policy, but governments also need to work together with industries to find viable and achievable solutions. The Group's view is that governments must produce frameworks to encourage investments in low and zero CO₂-emitting energy while promoting efficiency in both energy production and consumption.⁴⁹ Recently, a Shell executive was reported as saying 'governments need to enact mandatory limits on greenhouse gas emissions and not rely on voluntary measures to battle global warming'.⁵⁰ He called for governments to take the lead by replacing the worldwide patchwork of regulations with a uniform system to create a level playing field for companies to address climate change – a quite different kind of playing field from what Shell had wanted earlier (Skjærseth & Skodvin 2003). While for example Shell's internal emissions trading system was a very positive effort, calling for governments to encourage any kind of *voluntary* action does not sound either effective or likely. Indeed, the above-mentioned executive was quoted as saying '[v]oluntary is not fast enough' in the same article. Thus the recent call for mandatory caps could be a step in the right direction, even if it is still partially a question of a level playing field.

5.4.7 The Creative Shell?

Calling Shell's 1990s transformation a 'holistic approach to changing the ways it does business' (2000:65), Mirvis explains that this was different from what is usually seen in company crisis response. Crisis-driven changes most often involve 'fire fighting,' (p. 65) meaning that the company will engage a few relevant work units which seldom have any long-lasting results once the crisis is averted. Shell has done much more than just that, writes Mirvis (2000). Skeptics rightly question why a major energy company would go to lengths trying to contribute to sustainable development through costly investments, even to the point of being dismissed from JV partnerships for taking too long with costly impact

⁴⁸ <http://news.bbc.co.uk/1/hi/business/849475.stm>

⁴⁹ www.shell.com/home/content/envirosoc-en/environment/climate_change/our_approach_to_climate_change/our_approach_to_climate_change_000407.html

⁵⁰ www.reuters.com/article/companyNewsAndPR/idUSN2538148320070925

assessments. This happened in the case of Shell's cooperation with Petro-China on the West–East Gas Pipeline (interview Shell China) (see section 6.1.2). Countering this, Shell explains that '[c]ontributing to sustainable development [is] not only the right thing to do, it [also] makes good business sense.' Specifically, this involves:⁵¹

- *Reducing operational and financial risk.* Delays, approval failures, disruption to existing operations by concerned communities are significant risks to business. Understanding what stakeholders perceive as responsible behavior, meeting these expectations and achieving recognition from financial institutions, investors and customers deliver financial benefits.
- *Reducing costs through eco-efficiency.* This is about producing more with less energy and materials by adopting cleaner technologies, reducing emissions, recycling, reusing, minimizing waste and turning waste into marketable products. This can improve operational efficiency, reduce costs, avoid the current and future costs of emissions and generate new revenues.
- *Influencing options and evolving portfolios.* By anticipating new markets driven by society's desires for a cleaner, safer, more sustainable world, and evolving business portfolios and supply chain relationships to match, Shell can gain competitiveness and enhance its 'license to operate and grow.'
- *Influencing product and service innovation.* Being aware of changes in customer lifestyles and values enables Shell to provide more services to customers that reflect and meet their demands.
- *Attracting more loyal customers and enhancing the brand.* Providing products and services built on sustainability thinking creates customer loyalty and market share.
- *Attracting and motivating top talent.* Shell's commitment to sustainable development is an important factor in some people's decision to join and stay, and that alignment between personal values of staff and corporate values is a powerful motivator.
- *Enhancing reputation.* By being seen and being credible as a good corporate citizen whose performance matches its words, Shell becomes the organization of first choice for customers, staff, investors, suppliers, partners and the communities in which it operates.

Thus Shell has worked to enhance its competitiveness through innovation offsets, following the hypothesis of Porter and van der Linde (1995), by reducing costs through eco-efficiency and enhancing and influencing product innovation. According to Porter (1985), Shell has also differentiated by achieving an image as an above-average performer in environmental matters. 'Companies primarily contribute through their business operations and not by philanthropy,' stated Shell China's high-level executive Merer (Shell 2003:1), adding that:

⁵¹ www.shell.com/home/PrintFramework?siteId=envandsoc-en&FC3=/home/envandsoc-en/html/iwgen/sust_dev_and_business_strategy/business_case_sd/business_case_sust_dev_29032006.html

[i]n terms of what we are responsible for in Shell, it is the 12\$ billion we invest with partners in business every year that really matters, rather than the 140\$ million in donations – although these have an important catalytic role.

In this way, Shell has redefined the market to its own advantage by making the public expect and, in the future perhaps accept, more than mere regulatory compliance from other companies in the same industry.

When reading company material today, one senses a humbler approach to dealing with society and public environmental consciousness. Contrary to the earlier arrogant corporate culture, Shell now ‘believe[s] long-term competitive success depends on being trusted to meet society’s expectations’ (Howard 2006:182), thus acknowledging the need for social legitimacy. Being frank about its intentions in this pragmatic way may be intentional. The public does not seem ready to buy into the notion that a capitalist organization would do anything simply out of the goodness of its heart, and may never be ready, if it knows anything about the nature of capitalism. After all, in capitalism the main purpose of a company is to maximize returns to its shareholders, and by adhering to, for instance, principles of CSR one can be accused of breaking the above-mentioned ‘rule of corporate law’ (Friedman 1970). Such beliefs provide the public with ample justification for its mistrust in the ‘good intentions’ of private companies. In my opinion, the idea of CSR and ‘greening’ as damaging to business is short-sighted. The long-term survival of a company depends on its social legitimacy and, in addition to financial profit of course, on the ultimate survival of the planet. Here, however, my point is that Shell may be sticking to its pragmatic and business-like approach because it is easier for the public to accept that than believe that Shell has turned to philanthropy.

Without a deeper study of all aspects of the Group’s operations, it is impossible to ‘prove’ whether or not its efforts at mitigating environmental degradation and climate change are sincere. On the other hand, it is evident that Shell has undergone changes that seem to be to its own financial disadvantage, like leaving the Global Climate Coalition and having self-imposed emission reduction targets. Calling this a disadvantage, however, is problematic in this case because one may also argue that Shell *is* in fact working to its own favor since renewed and extended social legitimacy will provide new customers and business deals.

From the information presented in this chapter, it is my view that Shell has shown progress along the axis of environmental responsiveness. It is thus approaching the characteristics of a creative company, because:

- It is the company’s view that environmental issues represent a fundamental change in society with opportunities as well as challenges, as opposed to denial or simple acknowledgment of risk.
- Shell adapts to the new developments by management of technology as opposed to sticking to its core business or managing resources.
- Its strategy is a hands-on approach (‘Let’s do something now!’) as opposed to caution (‘Let’s wait and see’) or simply being prepared for what might happen.

- Its internal responses focus on actual innovation and diversification, not PR, ‘fire fighting’ or introducing basic environmental management procedures.
- When dealing with government demands, it responds with breakthrough solutions and the formation of public-private partnerships, not divestiture or reluctant compliance.
- Its message to society is one of guidance and provision of choices, going beyond alignment (‘We too care for the environment’) or intimidation (‘Wealth creation is at stake!’).
- Shell has redefined the market in which it operates to its own advantage by differentiating and raising the public’s expectation to the industry. By abandoning the demand for a level playing field with unified standards and comparative advantage through minimum standards, it has become an ‘image frontrunner.’

What held the Shell Group back in 1995 was partially its position on climate change. A step in a more proactive direction has been taken as Shell now acknowledges the imminence of the threat and is working to mitigate it.

5.5 Shell China

Shell’s business relationship with China goes back as far as to the 1890s, when the Shell Transport & Trading Company began shipping kerosene to China, and the company with which it would later merge, Royal Dutch Petroleum Company, had operations in China (Shell 2006b). The two companies merged in 1907, becoming the Royal Dutch Shell Group. By the time of World War II, Shell had more than 50 subsidiaries in mainland China, running 1000 sales outlets in 20 provinces, but during the war the facilities were taken over by the Japanese. After the war, everything was quickly rebuilt and Shell remained in mainland China until 1966, as the only European or American energy company trading with the People’s Republic of China. According to Frynas (2000), Shell has always had very close relationships with governments and because of its ability to nurture those relationships it has avoided some of the nationalizations that have happened to other companies. In 1970/71 Shell re-entered China, and re-established a representative office in Beijing in 1980. Active trade in chemicals resumed and Shell formed oil exploration ventures with Exxon and Phillips. In 1985 and 1987, two Shell JVs were opened in the Shenzhen Special Economic Zone. Since then, Shell China has continued to develop and expand its operations, in both number and in scale. By the end of 2005, the company’s investments in mainland China totaled about USD 3.5 billion, ‘one of the largest commitments of any international energy company’.⁵² Today, Shell China has 21 wholly-foreign-owned or JV companies employing 1,600 people, most of them Chinese. It has formed partnerships with the national energy companies

⁵² www.shell.com/home/Framework?siteId=china-en&FC2=/chinaen/html/iwgen/about_shell/what_we_do/zzz_lhn.html&FC3=/china-en/html/iwgen/about_shell/what_we_do/bussiness_01302002_1438.html

PetroChina, Sinopec and the China National Offshore Oil Corporation. All of Shell's core businesses are present in China; current key business developments are (Shell 2006):

- the Nanhai petrochemicals project in Guangdong Province,
- oil products retail joint venture in Jiangsu province involving about 500 service stations,
- a growing lubricants and bitumen business,
- oil exploration and production offshore in the South China Sea,
- natural gas development in Hangzhou,
- coal gasification developments,
- coal-to-liquids and gas-to-liquids developments,
- hydrogen car fuel project in Shanghai,
- solar electrification projects in rural Western China,
- consultancy services for energy efficiency and technological solutions.

Shell China's renewed involvement in coal-related operations was mentioned in Chapter 4. The justification for re-investing is that coal provides more than 70% of China's energy and will in all likelihood remain the dominant energy source for years to come, making this a matter of *how the coal is used* and not *if it is used* or *how to reduce its use*. Shell's strategy is to use coal, but to do so more efficiently and cleanly. To that end, Shell has invested in the R&D of coal gasification and CTL technology.⁵³ Currently, Shell China is working together with UNESCO on a coal gasification technology project intended to speed up the application of the technology and promote social development through scientific interaction.⁵⁴ Coal gasification technology allows for a cleaner use of coal, with an environmental footprint similar to natural gas – which is cleaner than both oil and coal. Thus far, the technology has been licensed to 12 Chinese companies. Both CTL and gas-to-liquids technologies are involved in trial projects in Shanghai: according to Shell, they produce little waste, are cost-effective and deliver 'superior environmental performances with [low] local emissions'.⁵⁵

Next, there is the matter of renewable energy sources. Even though they are repeatedly mentioned as a focal point for Shell (see e.g. Shell 2002, Shell 2006), one does not have to dig deep to find that Shell China's Renewable Energies Unit is incomparable to the other core businesses, as

⁵³ www.shell.com/home/Framework?siteId=china-en&FC2=/china-en/html/iwgen/leftnavs/zzz_lhn2_3_3.html&FC3=/china-en/html/iwgen/about_shell/what_we_do/gp_12282001_1800.html

⁵⁴ www.unescobeijing.org/projects/view.do?channelId=004002004001005001

⁵⁵ www.shell.com/home/Framework?siteId=china-en&FC2=/china-en/html/iwgen/leftnavs/zzz_lhn2_3_3.html&FC3=/china-en/html/iwgen/about_shell/what_we_do/gp_12282001_1800.html

also indicated in the list above. Examples of Shell's involvement in renewables in China include photovoltaic panels used in the provinces of Qinghai, Xinjiang and Yunnan; electricity provision for villages as part of a rural development program under the NDRC;⁵⁶ and a public-private partnership on a pilot program building China's first hydrogen filling station. Regarding wind power, recent developments were mentioned in section 5.4.4.

In its business overview for China, Shell promises to offer the latest technological and environmental solutions in all its core businesses, thus contributing to sustainable development. Its business objectives in China are described as follows:

[T]o help address the country's energy priorities including energy supply/security, environmental protection and energy efficiency, working in partnership with Chinese companies and customers to mutual benefit both in China and overseas.⁵⁷

As mentioned above, it is Shell's official view that its greatest contribution to society lies in supplying energy in a good way, but it is nevertheless involved in certain kinds of philanthropic ventures. In China, its 'Environmental Awareness Initiatives'⁵⁸ include:

- a scheme encouraging schoolchildren to apply their *environmental learning* and develop community projects designed to protect the environment;
- support to *tree planting projects* around China since 1998;
- sponsorship of a *children's environmental guide* published by Beijing Global Village;
- sponsorship of the *China Exploration Research Society* since 1993 on important conservation projects in remote areas of China;
- sponsorship of the NGO Global Village for making a series of *TV programs about the Green Olympics* in Sydney;
- sponsorship of the protection of *wild camels* in Xinjiang province;
- contribution to funds to the *Task Force of Environment and Natural Resources Pricing and Taxation* of the CCICED.

Shell China adheres to the Business Principles and the HSE policy of the Shell Group (Shell 2002), but it is also required to follow Chinese law.

⁵⁶ www.shell.com/home/Framework?siteId=china-en&FC2=/china-en/html/iwgen/leftnavs/zzz_lhn2_3_6.html&FC3=/china-en/html/iwgen/about_shell/what_we_do/renewable_12282001_1947.html

⁵⁷ www.shell.com/home/Framework?siteId=china-en&FC2=/china-en/html/iwgen/about_shell/what_we_do/zzz_lhn.html&FC3=/china-en/html/iwgen/about_shell/what_we_do/bussiness_01302002_1438.html

⁵⁸ www.shell.com/home/content/china-en/society_environment/dir_socialinvestment_1030.html

5.6 Summary

This chapter has outlined the operations of the Shell Group and its subsidiary Shell China, the Group's transformation in the 1990s as well as the motivation and philosophy behind its new look and attitude. Based on a comparison between Estrada et al.'s analysis from 1995 and my own recently collected data in combination with secondary literature, I have found that Shell now holds a position which is closer to the creative category of environmental responses. This is because, to mention some of the reasons, Shell has shown progress in how it relates to environmental matters, the climate change threat in particular; it has diversified its energy portfolio to include renewable energy sources; it focuses on innovation and technology which, while good for business in terms of product and process offsets, are also good for the environment; it is party to a range of CSR instruments and is striving for compliance beyond regulatory requirements.

Our next step will be to see what the Group's new environmental profile means for this daughter company, which has also been introduced in this chapter, and how it does business in the complex and increasingly important People's Republic of China.

6 Barriers to More Effective Implementation

In this chapter I will, in light of the three expected barriers outlined in section 4.5., discuss the potential for successful implementation of Shell's HSE policy. More environmentally friendly energy production can, as we have seen, take various forms. I have chosen to focus on HSE policy implementation because it is at the heart of Shell's environmental efforts and because there is ample information available on it. Health and safety are important matters, but it is the 'E' in HSE which is central here.

I have identified the expected three barriers inductively by analyzing the data, without looking specifically to Najam's (1995) terminology for 'pegs' to 'hang' them on. To avoid biasing the analysis, I have not looked for barriers to implementation that would fit squarely into Najam's categories. Instead I have looked for the terms my informants used in the interviews, as well as what I deemed most important as relevant to the information provided in Chapter 4. This approach has proven useful because the barriers all relate to more than one of the five Cs. Najam's terminology thus serves as a check on my findings against the works of other authors.

6.1 Implementation of Existing Legislation

Governments may have the most logical policy imaginable, the policy may pass cost/benefit analyses with honors, and it may have a bureaucratic structure that would do honor to Max Weber, but if those responsible for carrying it out are unwilling or unable to do so, little will happen (Warwick, in Najam 1995:41)

Warwick's remark may originally have been applied to governments, but implementation is equally relevant in connection with private companies. Implementation is a challenge for governments and private companies world-wide, and the three barriers introduced in Chapter 4 hamper the implementation of existing legislation which could facilitate more environmentally friendly energy production. As mentioned in Chapter 2, experts used to view – as much of the lay public probably still does – implementation as something that would come about largely by itself, once a policy had been formulated, and responsibilities and authority delegated. Regrettably, things do not seem to be as simple as this. Moreover, merely identifying insufficient implementation as the outcome of the barriers is not the end of the story, because 'implementation is more akin to a Russian doll of implementation-within-implementation' (Berman in Najam 1995:2) and the problems could be just beginning. Najam (1995:43) was writing about the implementation of international environmental agreements, but his logic applies also to the case of Shell:

[A] lack of commitment at the international (...) level to fulfill promised resource transfers, or at the national (...) level to translate the international policy into priority domestic legislation, or at the agency-level to formulate well-endowed projects, or at the street-level to translate mandated programs into action could each equally lead to ultimately inefficient implementation.

‘The life and soul of a law lie in its implementation,’ writes Wang (2007:31). Shell’s executives in Europe can decide all they want how they would like things to be done – and probably influence some of their employees and maybe even impress the public – but ultimately, the responsibility for implementation lies on the whole organization. This is also true in the case of Shell China’s HSE policy implementation. The 5C protocol is a set of interlinked, generally applicable, explanatory variables set in system to be used in studies of implementation (Najam 1995). Let us now see what the five Cs represent in the case HSE policy, and how the above-mentioned barriers influence it.

6.1.1 Content

The HSE policy is a regulatory policy, meaning that it specifies ‘rules of conduct with sanctions for failure to comply’ (Najam 1995:35). It has a list of goals, which I find rather vague, which may make them ambitious, but also hard to operationalize and therefore, I expect, difficult to implement:

- pursuing the goal of no harm to people;
- protecting the environment;
- using material and energy efficiently;
- developing energy resources, products and services consistent with the HSE aims;
- publicly report on its performance;
- playing a leading role in promoting best practice in its industries;
- managing HSE matters like any other critical business activity;
- promoting a culture in which all Shell employees share this commitment.

The first two points are vague because what someone does to protect the environment will depend on what one thinks *needs* protection, and in calling for the *pursuit* of no harm the company in a way is letting itself off the hook as long as it tries, without specifying the definition of success in this goal. The third and fourth points, however, show commitment to efficiency and diversification, even if Shell China’s diversification has so far taken place on only a small scale. Several of the points are in accordance with Shell’s official view that being environmentally friendly is good for business, and involve energy and material efficiency which can bring potential product and process offsets. Managing HSE like any other part of the business shows an institutionalization of environmental concerns. The new corporate culture was a process initiated during the transformation, and one which should be well under way by now. Exactly how Shell is going to make this happen, however, still remains a question. The content part of the 5C Protocol should not only include goals, but also methods. The methods part of Shell’s HSE policy states that all companies must:

- have a systematic approach to HSE management designed to ensure compliance with the law and to achieve continuous performance improvement;
- set targets for improvement and measure, appraise and report performance;
- require contractors to manage HSE in line with this policy;
- require JVs under its operational control to apply this policy and use its influence to promote it in its other ventures;
- include HSE performance in the appraisal of all staff and reward accordingly.⁵⁹

Also this list is not particularly specific, and especially point three on subcontractor relations sounds like a true case of the never-ending policy-within-policy predicament: making subcontractors do anything is a question of a lot more than policy content, indeed it involves all the five Cs. Regarding the vagueness of these lists I also recognize that little material with explicit operational methods is likely to be made public by Shell China or the Shell Group, even though it probably exists. From my interview with Shell China, I nevertheless know that all projects have to go through a ‘Hazards and Effect Management Process’ which involves identifying:

- potential hazards in the project (e.g. acid);
- what consequences these hazards might have;
- how to manage this consequences (e.g. an acid leakage);
- how to reduce or avoid these consequences.

This process is more relevant to actual plant-level production, and less to overarching goals like being a leader in promoting best business practices.

6.1.2 Context

The institutional context refers to the corridors through which policy must travel, and by whose barriers it is limited, in the process of implementation (Najam 1995). The context of the HSE policy is thus China, the Shell Group and Shell China as well.

In the Chinese context the three barriers are influential in several ways. First, one example of how the role of the state has inhibited HSE implementation is the case of the 4000km West–East Gas Pipeline which Shell China was going to build in a JV with PetroChina and other foreign companies, to transport ‘clean fuel from Xinjiang to the energy-hungry Yangtze River Delta.’⁶⁰ In Shell’s view ‘[t]he project would bring enormous environmental benefits to China by harnessing (...) cleaner

⁵⁹ www.shell.com/home/content/china-en/about_shell/our_performance/environment/hse1_12282001_1213.html

⁶⁰ www.china.org.cn/english/features/Gas-Pipeline/37313.htm

fuel and replacing the growth in coal in many eastern cities', but 'the benefits should not be at the expense of the environment or people's quality of life along the pipeline route [thus presenting the project with] a number of environmental, cultural heritage and social challenges before the gas [could] be delivered' (Shell 2003:3). Shell collaborated with the UNDP in making an ESIA, which delayed the project for some time (Zhou 2005).⁶¹ In 2006, Shell was removed from the project, according to my informant at Shell China because the government and PetroChina felt they could not let the demands based on the ESIA results delay the project further. Having a strong state capable of directing industry investments towards areas in which it is needed, preventing pollution haven strategies and the like, is both important and necessary, in order to put pressure on private companies. A paradox thus presents itself when the private company seems to be the 'environmental good guy,' and the interventionist state not. Business dependency on the Chinese state and national oil companies could in this way be a barrier to Shell's involvement in the production of more environmentally friendly energy by refusing to allow full implementation of the HSE policy. According to my informant at Shell, the government is open to Shell's ideas and requirements and will listen to Shell's advice – but not necessarily follow it. Shell China on the other hand, being under continuous scrutiny from pressure groups, cannot afford not to implement its HSE policy and may thus become reluctant to future investments in other projects which would contribute to more environmentally friendly energy production. It should be noted, though, that others claim that Shell China *pulled out* of the project because the project would benefit mostly PetroChina, and that Shell China had been denied access to the Chinese market for its own imported gas.⁶² I have not found much information to support this notion. The explanation could also be a combination of the two.

Second, short-term economic perspectives in the context will also influence HSE implementation. While economic growth is an easily quantifiable and observable development goal, environmental progress is not, and economy readily takes precedence over environmental issues. In industry, environmental short-cuts can save money, even if it means not implementing or enforcing laws and regulations intended to improve the situation in the long run. The chances of getting caught violating environmental laws and regulations are so small that people in the Chinese industries are willing to run the risk, and they also bring this practice with them to foreign companies (interview Shell China; oil and energy industry adviser). Someone facing what appears to be the dilemma of promoting either economic *or* environmental goals can 'solve' the problem by emphasizing short-term gains and letting economy take precedence. The dilemma may be consistent with traditional views on the issue of economy versus environment – but it is, as we have seen, not necessarily a reality today, where modern companies also have the opportunity to opt for innovation in order to spur economic offsets and differentiation from competitors to create favorable images. 'We see a clear business

⁶¹ I have not been able to establish exactly how long the project was delayed.

⁶² www.businessweek.com/magazine/content/04_46/b3908044.htm

case for social and environmental responsibility,' claims executive Merer (Shell 2003:4), explaining that this is because 'it increases effectiveness (...), promotes innovation (...) [and] is fundamental for our reputation.' According to Porter and van der Linde (1995), companies will become aware of innovation offsets in a diffusion process. It is likely to start where environmental regulations and their implementation are the strictest and most effective and, as other countries follow suit, spread to companies operating there. Shell's R&D policy is to develop technology geared towards producing energy and petrochemicals sustainably and economically. This emphasis on R&D to produce innovations in both renewables and fossil fuels, including coal, gives Shell China the possibility to counter the dilemma by showing off its innovation offsets to actors both within and outside the company, thus differentiating on image and products. If the notion that being environmentally friendly can benefit the economy becomes better known in China, this can help counter short-term perspectives on economic gains detrimental to the environment and facilitate the implementation of environmental policies. Successful HSE implementation can thus produce significant process offsets. In following the Hazards and Effect Management Process, plant-level actors save time and money by erring on the safe side because they avoid environmental damage like spills that would have had to be cleaned up later; damage to people which could mean sick leaves and liability; damage to machinery which could cause production down-time and loss of productivity; and extra paperwork and investigations related to finding out what went wrong and who was to blame. Two of my Chinese informants, the Shell China representative and the environmental consultant, had no doubts that Shell is in this way creating precedents and influencing Chinese companies through their JVs.

Third, China is home to a great deal of the world's pirated goods industries, and this could influence Shell China in its development of energy resources, products and services consistent with the aims of HSE policy. Counterfeiting makes companies reluctant to long-term investments, to opt not to use their newest technology, or not establish R&D facilities (interview energy and environment adviser). This has consequences for the development of new technology, as wind and solar power, LNG and clean coal need to be 'cutting edge' in order to compete with traditional fuels (interview environmental consultant). Counterfeiting is thus a barrier to HSE policy, diversification and the cleaner production of fossil fuels. On a more positive note, it is conceivable that piracy could also lead to the diffusion of 'green' technology into Chinese industry.

The Shell Group is also the context of the implementation of HSE policy. My access to information about the inner workings of both the Shell Group and its Chinese branch is limited, however, and I have not been able to take into consideration in this discussion much of its decision-making and implementation processes. From interviewing with Shell China I nevertheless know that the Group at the top level designs and decides on the universal, global policies like HSE. Since there will be location-specific differences, there is also something called the 'Golden Rule,' which states that all Shell companies and employees must:

- follow local rules and laws;

- intervene in unsafe situations;
- respect people (interview Shell China).

Vagueness thus seems to be a weakness in the whole of the HSE policy, if a separate and indeed even vaguer rule is needed for when special local conditions apply, as is not unlikely in the case of Shell China. There is no mention of environmental protection in the Golden Rule. Without the existence in the environmental management system of elements like the Hazards and Effect Management Process, this would be problematic if it meant that, under local circumstances in China, where for example conflicts of interest hinder Shell employees in using energy and material efficiently or reporting publicly on its performance, that everything would be fine as long as they followed local rules and law, intervened in unsafe situations and respected people. Here, the Hazards and Effect Management Process serves as an example of how processes in environmental management complement each other.

6.1.3 Commitment

In Shell China, insufficient commitment to environmental policies in general and to the HSE policy in particular appears to be a problem of low environmental awareness among the Chinese employees, who make up the majority of the staff, leading them to let other concerns take precedence. Indeed my informant at Shell China emphasized the difference between Chinese and foreign managers on environmental issues. On the managerial level, the Chinese employees are highly educated, bilingual and many with international experience, which sets them apart from the Chinese public as a whole. They are nevertheless less environmentally aware than their European counterparts, as Europe has a longer history of environmentalism as well as more resources to spend on issues not related to the creation of wealth (interview Shell China; director). So far, environmentalism in China exists mainly among the economic and cultural elite, as they are precisely the ones with the time and money to care, as well as being the most exposed to influences from the developed countries (interview Shell China; director). The managers of Shell China are unlikely to be part of such an elite, and those 'lower down' in the system, even less so. According to two of my interviewees, what influence the actions of Shell's Chinese employees are short-term economic perspectives based on financial and social insecurity; lower levels of education and training as well as the influence of what appears to be an intense contradiction between economic development and environmental protection (environmental consultant and Shell China employee). Even if the local-level managers are educated and exposed to (what Europeans at least like to think of as) 'Western' environmental values, the physical and mental distance from the HQ combined with the pressure to show quantifiable results, with the consequent conflicts of interest, will often lead them to let economy and energy security take precedence over environmental protection, even when strict regulations exist (interview, environmental adviser). In, addition, even if many Chinese are concerned about environmental degradation, they feel that it is the responsibility of the government, the state, NGOs and academia, and not private companies (interview, environmental consultant).

My informant at Shell China emphasized throughout the interview that when doing a deal with a business partner, the deal is dispensable, but HSE standards are not. He explained that this can be a hard beginning in meeting with powerful companies like PetroChina, as exemplified by the pipeline incident. Confronted with this notion, however, other informants did not think it very likely that Shell China would dump a business investment over a disagreement on HSE standards (interview, journalist; director). In my opinion, even if Shell China is unable to implement its environmental policies fully in every instance, that does not necessarily justify accusing it of 'greenwash,' because it is a matter of feasibility: what Shell China can reasonably be expected to be able to achieve given the difficult situation.

According to Najam (1995), the lack of commitment to the goals and methods of those entrusted with carrying out implementation at various levels can be compensated by implementation capacity, that is, the resources allocated to the implementation and *vice versa*. As will be discussed below, commitment is nevertheless not something which can necessarily be bought, even though the amounts of resources allocated to creating it though training and awareness-raising contribute to its formation.

6.1.4 Capacity

The administrative *capacity* of the implementers determines their ability to carry out the desired changes entailed by a policy. Whereas commitment shows *will* to action, capacity shows *ability*. Policy implementation may be hindered by overworked or poorly trained staff, insufficient information or financial resources, time constraints and the like (Najam 1995). Capacity is also called 'resources' and refers to the allocated time, funding, size of staff, training, tools and technology. In an industry where companies' social legitimacy and role in society is widely questioned not only because of the negative social and environmental impacts, but also because of the 'obscene profits' (Estrada et al. 1997:53), the Shell Group is less likely to get away with insufficient funding for their own policy implementation processes. This issue may be different regarding Shell China, however, since social legitimacy may not be based as much on environmental and social issues in China as in Europe – an issue to which we return in section 7.4.

I regret not having been able to find specific information on capacity and the funding of environmental policy implementation in Shell China. This might have been analytically problematic given its important role in the 5C Protocol, but since implementation capacity is largely a question of financial resources, Shell China, among the TNCs with biggest and most successful investments in the country, has no financial excuse for underfunding its policy implementation processes. Moreover, after the Shell Group restructuring of the 1990s, each operating company reports directly to a global division which now enjoys more authority.⁶³ This is favorable for the funding of policy implementation because it means that

⁶³ www.rh.edu/~stodder/BE/Shell1.htm

budget posts are not determined by the operating company alone and that, to a larger extent than before, Shell China's budgets have to be consistent with those of the Group.

Capacity, however, can be tricky even if financial resources are available, because the real requirements of an implementation process cannot be become fully known until it has begun, and will often change underway (Najam 1995). A system with some location-specific flexibility is needed to permit the content, including methods, to be changed to respond to new situations. There is room for this in the HSE policy, as long as the Golden Rule is not broken, something which may have implications for implementation capacity. Flexibility can facilitate its success by giving the implementers more room to maneuver in a context they know better than the policy-formulators do. In this way they have the possibility to act creatively in practice, in situations where 'thinking outside the box' may help the policy process. Problems related to HSE implementation occur in the 'everyday operations' of Shell China, as local employees and sub-contractors are reluctant to commit to it (interview, Shell China). In such situations, the proximity of managers and other implementers to the task and the local conditions means that their priorities are shaped not only by their agencies and own backgrounds, but also by the realities and concerns of their clients, the actors whose behavior is targeted by implementation (Najam 1995). Their level of discretionary power – their ability to make decisions on their own – 'grants them the ability to not only influence the implementation of the policy, but to *de facto* 'define' policy in action' (p. 43). Whether or not Shell China's implementers use the flexibility in HSE policy to improve it or to get away with doing a mediocre job, will be a product of their commitment to the task, since they are likely to be influenced by barriers in the Chinese context, such as short-term economic perspectives and conflicting interests. After all, '[t]he true test of commitment is not whether implementers execute a policy when their superiors force them to, but whether they carry out a policy when they have the option of not doing so' (Warwick in Najam 1995:43).

6.1.5 *Clients and Coalitions*

Policy implementation is also a factor of the support or opposition of *clients and coalitions* whose interests are enhanced or threatened by a policy, and the strategies they employ in strengthening or deflecting it (Rosendal 1999). Clients can speed up, slow down or redirect the implementation process by showing differing degrees of cooperation and refusal. The clients of Shell China's HSE policy are mainly its own employees, JV partners and subcontractors. My informant at Shell China explained that there are arguments about HSE standards all the time, in Shell's 'everyday operations' around China. He gave the example of safety equipment which is important to the workers personally and to the company indirectly. It represents an extra cost to subcontractors, he explained, so they may protest or simply not comply. This contradicts his view that Shell China always puts HSE first, because subcontractors are included in the policy. Indeed other informants (among them the journalist) were skeptical of this notion. The problem is that only a company whose license to operate is based on its social and environmental per-

formance needs to concern itself with such issues. Sadly, this is not the case with subcontractors operating in an economic reality where continued growth and low product prices are the only rationale for differentiation and competitive advantage, and where environmental pressure groups are largely nonexistent. This shows that the concept that a law is ineffective if it lacks local legitimacy (van Rooij 2006) is applicable to company regulations as well. To always put HSE policy above possible gains may very well be Shell's official policy and even its intention, but that does not mean that things work that way in practice. Indeed, this report demonstrates that a business environment hardly exists in a vacuum.

Due to the limitations on the activities of Chinese civil society, the *coalitions* that are relevant for Shell China thus far are largely interest groups, opinion leaders and other actors *outside* China, such as NGOs internationally and in Europe. As long as such groups continue their scrutiny of the energy industry, they play a significant role in awareness-raising and in pushing for policy formulation on the HQ and managerial levels. Whether or not they influence HSE implementation on the local levels in China is a tougher question. National and local groups and movements are likely to have a better chance of making a difference there, as long as the policy enjoys local legitimacy. The plan to give grassroots movements more room to maneuver could help improve this situation, and is something the Chinese state should take advantage of in promoting environmental protection. So far, the limitations on civil society activism have hampered this. Also, Shell's cooperation with both foreign and Chinese organizations exposes its staff to environmental ideas and demands that could influence their sense of commitment to the cause. Pressure from foreign groups could still facilitate implementation by forcing through the continued provision of resources contributing to implementation capacity, but the mental and physical distance between environmentalists in Europe who influence company policy, and implementers on the Chinese plant-level, is a gap not easily bridged. Clients and coalitions need to understand and agree what HSE and other related policies are good for; otherwise short-term economic perspectives and conflicting interest will impede their commitment. Shell China needs to apply real sanctions on subcontractors and other actors who defy compliance. For Shell China to be able to implement its HSE policy, training, strict monitoring and controls are needed. My Shell China informant emphasized that from the beginning of any project, material on HSE issues is distributed to everyone involved, enough to 'resemble a book in the end.'

6.1.6 Prospects for HSE Implementation in China

In this section I will briefly comment on the current status of the five Cs in relation the HSE policy and next discuss the most important factors which may contribute to its successful implementation. Commitment, capacity and coalitions appear to be the 5C Protocol's most central variables in this case, even though context, clients and content also all have parts to play. Context, however, has been discussed thoroughly in relation to the barriers, not least the context of China, and needs no repetition at this point. The role of the clients is here closely related to commitment by

implementers and will be dealt with as part of that. As to policy content, suffice it to say that the vagueness of a few of the HSE goals can contribute to implementation, in that what constitutes 'success' is open to interpretation. How it appears to the public will be colored by for example Shell's annual environmental reports and 'alternative' reports like 'Failing the Challenge? The Other Shell Report 2002' published by Friends of the Earth (2002). In terms of actual goal achievement, and not rhetoric and image, it is commitment, capacity and coalitions that stand as out most influential.

First, capacity can contribute to the formation of a sense of commitment in clients through funding targeted at awareness-raising and training. Even though I have no specific information on this issue in Shell China, there seems, as noted above, little reason to think that it lacks such capacity. However, I feel that the relationship between commitment and capacity may not be as straightforward as Najam's (1995) notion that the presence of one can make up for insufficiencies in the other. The Chinese – Shell China's employees as well as the other actors involved – are increasingly, albeit slowly, exposed to environmentalist views and demands, but it will probably take a long time before, for example, subcontractors commit to environmental goals. Herein lies a commitment challenge which can be fought with capacity allocated for training, environmental awareness-raising, monitoring, sanctions and rewards. Commitment, however, is a *mental* process which does not necessarily come automatically with increased funding. For the allocated capacity to be able to create commitment, the focus must be on the *quality* of the capacity rather than the *quantity*. My Shell China informant explained how the company treats HSE matters as a 'competence ladder.' In the learning process, the 'student' goes through stages of HSE awareness, knowledge, skills, mastery and new developments. This shows that in Shell China, training in HSE matters is a question of *education* and not mere provision of information, something which will facilitate environmental policy implementation in the long run.

Second, policies which are universal within a complex system like a TNC will always be difficult to operationalize and adapt in the many different contexts they are meant for. When a policy is formulated on the international level, a range of more specific policies will have to be made on the national levels, and then again on the local levels, in order to adapt the goals and methods to the contexts. A paradox presents itself, because policies more context-specific and possible to operationalize than the Golden Rule are needed for HSE implementation. On the other hand, flexibility in implementation capacity can give implementers the opportunity to adapt to different situations and a chance to show their commitment. Targets for the improvement, measurement, appraisal and reporting of performance are part of the policy, meaning that punishment and rewards exist to give implementers incentives to commit.

Third, pressure on the Shell Group and thus Shell China from coalitions in Europe is unlikely to disappear. In fact, in the future, such pressure may grow stronger if the weakened limitations on grassroots movement activism lead to the emergence of a Chinese civil society capable of put-

ting pressure on companies.⁶⁴ Since environmental awareness seems to be characteristic of the upper echelons of society, higher standards of living are likely to raise general environmental awareness – but, of course, this will also mean, for example, that more people will be able to afford a car. The development of a Chinese civil society which may help counter the three barriers are thus dependent on continued economic expansion. Unsustainable as it is, China's economy may continue its growth for a while, but not forever. However, it is unlikely that the Chinese will voluntarily let go of this opportunity to catapult themselves into higher standards of living. Sustained economic expansion will thus influence the environment both positively and negatively – through resource consumption and pollution on the one hand, but higher environmental awareness on the other, which may facilitate the implementation of environmental policies such as Shell's HSE. Continued industrialization may also lead to product and process offsets like energy efficiency.

Fourth, the emergence of a civil society represents a slight weakening of the state's influence and guidance of public opinion. This may exert a positive influence on foreign companies susceptible to civil society pressure because their licenses to operate depend on having a responsible image. Whether or not an emerging Chinese civil society will influence Chinese economic actors is a harder question. I have seen few indications in the interviews and the literature to suggest that such economic actors are susceptible to civil society pressure for environmental responsibility, as yet. One exception is the Chinese environmental consultant's notion that Sinopec and PetroChina have begun 'greening' not only because they need an alternative resource base for the future, but also due to pressure from the European Union. They need a good image in order to do business with European companies, she said. Moreover, Mol (2006:43) claims that PetroChina is 'acutely aware of the need to acquire internationally-recognized environmental management knowledge, and to meet standards and emissions levels, allowing it to compete on a global market.' This could mean it is starting not take its social legitimacy for granted – and that could facilitate Shell's HSE implementation in future JV projects.

'We have a rigorous annual assurance process to make sure we are working to live up to our principles,' writes executive Merer (Shell 2003:2), adding that 'it is a tough learning journey. We must always keep a sense of humility about our ability to effect change.' More targeted funding to create a sense of policy commitment among clients and implementers as well as more stubborn insistence on HSE, both its inclusion in JV projects in the first place and its thorough implementation, may clear the way for putting the policy into practice. Considering the challenging context in which it operates, however, implementation of Shell China's HSE policy becomes a matter of feasibility, of what it is reasonable to expect Shell China to be able to do under the current conditions. Shell China can surely do more, but this is, as we have seen, not simply a matter of the company's own efforts. Rather, it is highly context-dependent.

⁶⁴ <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/EASTASIAPACIFICEXT/CHINAEXTN/0,,contentMDK:20600359~menuPK:1460599~pagePK:141137~piPK:141127~theSitePK:318950,00.html>

6.2 Summary

In this chapter I have used Najam's (1995) 5C Protocol to analyze how barriers in the Chinese context influence and impede successful implementation of Shell China's HSE policy. I have thus analyzed the dynamics between policy content, context, the commitment and capacity of implementers, as well as the clients and coalitions involved. In this case, 'policy content' refers to the goals and methods of Shell's HSE policy. The 'context' is the institutional and geographical frames of the Shell Group, Shell China and China. While 'commitment' refers to the will to act, 'capacity' refers to the ability to act. Last, a policy's 'clients' are the people whose actions it is meant to regulate, and its 'coalitions' are the people or groups which may, for various reasons, support or oppose its implementation. Among these five variables I see commitment and capacity as especially important in the case of Shell China's HSE policy. Implementers' commitment to this policy is hindered especially by the two barriers in the Chinese context which I have identified as short-term economic perspectives and conflicts of interest over goals. With continued economic development as its main priority, the state also sets an example for the people, enforcing these barriers in people's mindsets. A great challenge for Shell China is thus to counteract short-term economic perspectives in order to create a sense of commitment among its employees and, especially, its subcontractors. Commitment can be enhanced through capacity allocation, which is a matter of quality rather than quantity, the difference being for example that of education and simply providing information. Successful HSE implementation is a matter of what it is reasonable to expect Shell China to achieve in China. In my opinion, much can be done to enhance commitment. True, much has been done, but due to the nature of the context, the clients, the company and the concept of implementation itself (which is not as straightforward as it may at first seem), successful HSE implementation will necessarily be a long-term project.

7 Conclusions

In this chapter I will draw conclusions based on the empirical and analytical contents from the previous chapters to answer the two research questions. I will also discuss to what extent Shell China is able to extend and renew its social legitimacy, as well the prospects of ecological modernization in China. In the last part, I discuss the transferability as well as some theory impacts of the findings of this study.

7.1 What Changes have Happened in the Shell Group in the Past Decade to Make It a More Environmentally Responsible Company?

Major changes have taken place in the energy industry in the past decades, and the Shell Group is one of the companies where the transformation has been most profound. After comparing it with the situation in 1995, I have found that Shell as of 2007 is closer to the *creative* category than before, for several reasons. First, internal changes have been made to establish a comprehensive environmental management system. The company emphasizes that the aim is to deal with the environment in the same way it does everything else, which shows that Shell is taking such matters seriously. Second, Shell has acknowledged the climate change threat and is promoting its mitigation through its self-imposed internal emissions trading system, by taking part in various CSR initiatives and instruments, and through adapting to the challenges by focusing on new technology and energy diversification, thereby discovering new directions for future development. Third, by establishing a Renewable Energies Unit and focusing on innovation, Shell is providing cleaner fuels, while at the same time enhancing its own competitiveness through product and process offsets as well as image-based differentiation. Fourth, in donating funds for and cooperating with civil society movements, Shell enables such movements to take on some of the state's old responsibilities. Fifth, by being at the forefront regarding CSR compliance as well as influencing its business partners and other companies, it creates precedents for efforts that go beyond regulatory compliance. I therefore conclude that significant changes towards becoming more environmentally responsible have taken place in the Shell Group since 1995, when none of the Oil Majors studied by Estrada et al. (1997) merited the creative label.

7.2 Do These Changes have Relevance for Shell China, or Will Barriers in the Chinese Context Influence Its Prospects for Operating in a More Environmentally Friendly Way?

On the basis of fieldwork interviews and literature, I have identified barriers to a more environmentally friendly energy production in China, and discussed how these barriers influence the implementation of Shell China's HSE policy. I conclude that the following are the main barriers to a more environmentally friendly energy production in the case of Shell China:

- the role of the state;

- short-term economic perspectives;
- conflicts of interest.

First, the *strong state* is a barrier in its role as JV partner for Shell China through the national energy companies whose licences to operate depend mainly on their ability to provide energy for the further creation of wealth. In addition, SEPA, China's main environmental agency, is too weak to counter other agencies and ministries and create good conditions for diversification of the energy mix. The state is also a factor hindering the development and competitiveness of renewable energy sources by creating unstable markets for long-term investments, and by limiting the potential for social movements to influence private and state-owned companies through activism and cooperation. The fact that Shell China is a business partner of state-owned companies like PetroChina may affect its ability to contribute to more environmentally friendly energy production, as seems to have been the case with the West–East Gas Pipeline.

Second, the media focus on the Chinese 'economic miracle' can make it hard to remember that China is still very much a developing country. In a situation of economic insecurity it is difficult to see matters in anything other than *short-term economic perspectives*. China can thus legitimize industrializing in an environmentally unsustainable manner in order to raise its living standards. This does not, however, mean that short-term economic perspectives are not a barrier to environmental protection in general, and to more environmentally friendly energy production in the case of Shell China in particular. Environmental protection and clean-up, the implementation of environmental policies and diversification away from coal as the main energy source – these are all long-term efforts. Short-term perspectives on economic and environmental issues thus influence how the actors involved – including Chinese policymakers and Shell's employees, managers, business partners, subcontractors, competitors, customers, investors and neighbors – view environmental issues and thus their understanding of and adherence to both Chinese environmental legislation and Shell's regulations. Environmental education could counter this, but has so far has not managed to make the Chinese public realize the *how, what, why* and *how long* of environmental protection necessary for them to commit to the cause. There may be signs of an institutionalization of environmental issues which can help solve this, however (section 7.3). Focus on short-term economic gains is also a barrier to environmentally beneficial innovation offsets, because these often require upfront investments in R&D.

Third, *conflicts of interests* that arise both within a company and between companies and external actors may hamper the implementation of environmental regulations and policies. This is a consequence of the involved actors having different goals. For Shell China's foreign staff, acting in an environmentally responsible manner is a question of social legitimacy vis-à-vis pressure groups and governments in Europe and of having realized that being 'green' can be good for business. In addition, it is about higher levels of environmental awareness on the personal level. By contrast, for local staff, JV partners and subcontractors, matters like

environmental protection, HSE policies and time-consuming ESIA's may simply seem additional expenses. It is not likely that this is because they do not see the importance to the individual of for example taking safety measures, but because energy security, economic development and their own salaries are more important. Importantly, in the case of the state-owned JV partners, they have to act in accordance with the state agenda – which brings us back to the first barrier.

These three barriers contribute to and reinforce the challenges related to the *successful implementation of existing legislation*. Using the 5C Protocol I have discussed the prospects for successful implementation of the Shell Group's HSE policy in the case of Shell China, including how the three barriers influence it. On this I conclude tentatively that while *content, context, commitment, capacity* and *clients and coalition* are all important factors in policy implementation, the one that seems to stand out as most significant in our case is *policy commitment*. Rules and policies already exist and are continuously enhanced, but without commitment by the clients as implementers, effective implementation is unlikely to occur, regardless of optimal methods included in the content, favourable context, allocated capacity, complying clients or supportive coalitions.

I therefore conclude that not all but some of the changes in the Shell Group have had some relevance for Shell China. First, there has been a diversification to include renewables. Second, the Business Principles and updated HSE policy have influenced the ways in which the company interacts with its business partners and the coalitions relevant to its energy production, as seen in the case of the pipeline ESIA. Third, by donating money to the funding of environmental social movements Shell China is enabling them to take on some of the nation-state's old responsibilities, which could in the long run contribute to environmental awareness-raising and protection. The barriers that exist in the Chinese context, however, are strong enough to hamper many of Shell China's environmental efforts, as seen with both the pipeline incident and the analysis of HSE policy implementation in this report.

7.3 Shell China's Potential for Continued Social Legitimacy

The social legitimacy of energy companies is no longer a product only of their ability to provide energy and employment in a competitive way. It is rather a mirror of how the public sees their role in society, and how well they cope with new and increasingly demanding environmental and social challenges. I do not presuppose that anyone in the general public or activists in the environmental social movements think of companies in terms of such an abstract concept. I nevertheless expect the notion of the Shell Group's environmental profile approaching creativity to be of importance to its own social legitimacy and that of its national operative company in China. Environmental social movements are increasingly globalized, concerned with global environmental degradation and with access to information about industry and business operations world-wide. Thus, Shell China's social legitimacy depends on its ability to 'impress' not only the Chinese public but also as international and European environmental social movements. This will is unlikely not happen in the

same way in both contexts, however, since social legitimacy in China to a greater degree than in Europe will be granted on the basis of more than environmental and social issues. This means that the company has to act in a way which satisfies coalitions for the sake of its environmentally-based social legitimacy, while at the same time not neglecting its clients, coalitions, investors and other stakeholders in energy provision and profit-making, which is also of importance to its social legitimacy. For its increasingly creative behavior to lead to extended social legitimacy, Shell China has to communicate its efforts, as well as the reasons for these efforts, and achievements to China and Europe as well.

It is therefore in the interest of both the Shell Group and Shell China to make progress on the environmental arena. Such progress could involve more environmentally friendly energy production, but as we have seen, there are certain barriers in the Chinese context which will have to be overcome. It is nevertheless my view that renewed and extended social legitimacy in the case of Shell China is possible. Our discussion has focused on the relevant elements in the Chinese context: suffice it to say that social legitimacy from Europe is likely to depend on climate change mitigation efforts, CSR commitment and adherence, energy diversification, and emissions reporting.

Regarding the legitimacy stemming from China, this should be possible for several reasons. First, Shell China is in a mutually beneficial relationship with the Chinese state in which the company provides the country with energy while also making voluntary environmental efforts (admittedly, due to pressure from civil society and governments at home) that go beyond mere regulatory compliance. It also funds environmental social movements and environmental education, helping to fill the gap left by the state's withdrawal from this field. Second, Shell has the capacity to contribute to environmental awareness-raising among its own employees and other actors, mitigating the short-term economic perspectives which impede policy implementation, employing annual processes to make sure this happens. Third, awareness-raising and innovation offsets may contribute to new dynamics in the conflicts of interest in the shape of dilemmas between economic and environmental goals. There can be no guarantees that innovation will lead to product and process offsets in the form of diminished expenses, but this is nevertheless consistent with Shell China's view that environmental responsibility promotes innovation which helps it 'understand the business opportunities arising from changing values' (Shell 2003:4) and increases their effectiveness through eco-efficiency. Innovation is not likely to occur only in the form of 'low-hanging fruits,' but neither will all offsets be hanging on the top of the tree. In China, local issues are likely to take precedence over less tangible, global issues like climate change. Thus specific examples of Shell China's responsible behavior are needed, such as its emphasis on HSE policy, its provision of solar and wind energy to remote areas, and its Environmental Awareness Initiatives. If this is successfully communicated to the public at the same time as cleaner energy is securely provided for both industry and private homes, Shell will appear to uphold the 'social contract' that it, as a part of the energy industry, has with the people, by responsibly managing the natural resources.

In a scenario of economic growth *status quo*, higher living standards and economic security are expected to make the Chinese more aware of the damages to human health and ecosystems that the energy industry has been causing. Environmental protection will thus become a personal matter contributing to policy commitment. It is in no way given, however, that China's economic development will be able to continue its expansion since its scope and pace make it highly unsustainable. It is hard to say whether, in a situation of economic insecurity, environmental awareness among the common people will have a foundation on which to develop by itself unless some special impetus is provided, like an increased focus on environmental education. It is to the implications of this concept for an analysis involving the concept of social legitimacy that we now turn.

7.4 Prospects for Ecological Modernization in China

If any form of ecological modernization is taking place in China, it would involve an institutionalization of environmental interests. And this, according to Mol (2006), is indeed happening, albeit slowly. Subsidies on natural resources are gradually being abandoned, to stimulate resource and waste efficiency. Increased environmental pollution fees have been developed, but because they are still low and weakly enforced, industry actors will often rather take the risk and not pay them. Moreover, market demands are slowly beginning to include environmental and health implications of products and production processes, a typical consequence of higher living standards. The developments in pricing, market and competition have not yet resulted in many non-state actors actively promoting environmental interests, because they do not feel any significant pressure or see any market opportunity. As noted in Chapter 6, Mol (2006:43) claims PetroChina is an exception to this as an example of 'larger Chinese and joint venture firms that operate for and in a global market [and] are subject to stringent environmental standards and practices.' This would mean that PetroChina actually takes into consideration the public questioning of its role in society. Mol (2006:43) terms this a 'call for upward harmonization among all players in the Chinese petrochemical sector.' However, the fact that Shell China was dropped from the pipeline project would seem to contradict the notion that PetroChina is responsive to foreign pressure on environmental issues. On the other hand, to focus solely on how the state and PetroChina did not 'want' Shell and UNDP's ESIA and acted only according to economic goals is too one-sided, since the purpose of the pipeline was to provide Eastern cities with an alternative to coal for fuel. After all, if China had no concern whatsoever for the environment, it could stick to its traditional energy mix. The state and PetroChina had to balance needs and priorities, and in opting for gas provision to the Eastern cities, they made a real effort to counter these cities' environmental degradation.

Mol (2006) cites several key differences between European and Chinese ecological modernization. First, environmental interests have only partially been institutionalized in China, and there are no routines or any automatic or full inclusion of environmental considerations in the institutions that govern production and consumption practices. Second, other institutions are taking on environmental responsibilities in China than in Europe. There has not yet been developed enough pressure from environ-

mental interests to influence economic actors and institutions; and even if they wanted to, many economic institutions are dependent on the political, which may inhibit them from incorporating environmental interests into their operations. Civil society movements remain undeveloped and unable to perform the roles they do in Europe. Third, when it comes to the mechanisms, processes and dynamics that trigger environmental reform and push for institutionalization, there are important arrangements in China that have no European equivalent. Examples include the GONGOs; the environmental responsibility system in which examination, rewards and punishment mechanisms are meant to ensure that community leaders take responsibility for environmental quality; the focus on the synchronization of design, construction and operational aspects of environmental management and production; and the range of informal networks and institutions (Mol 2006).

The environmental domain has recently been included in the official Chinese definition of 'modernization' (Zhang et al. 2007). What this means is that even though there are few clear indicators of the development of ecological modernization along its traditional European trajectories, there is potential for including elements from this body of theories in future Chinese development strategies. Zhang et al. (2007) share with Mol (2006) the view that there *is* some degree of ecological modernization underway in China, but emphasize that there is neither one optimal model nor one unique strategy towards this end. Rather, it is a concept that is highly time- and place-dependent.

Perhaps the biggest challenge to ecological modernization following the European trajectory in China today is the need to develop new forms of environmental governance including environmental social movements. My informants agree that loosening up restrictions on civil society activity is linked to the need for state actors to fill the gap between the state's own need and capacity to improve the environmental situation. One reason why the Chinese state has limited civil society activism is to avoid clashes and uprisings which could shatter its harmonious image. SEPA's compromise of allowing some activism is perhaps a better strategy, because if people are allowed to promote environmental awareness and pressure industry on the local levels, with partial support of the state, unwanted clashes might be avoided.

The cooperation between foreign companies and social movements or NGOs in China is a more likely tool for ecological modernization than expecting the national energy companies to be influenced and spread this influence within the national industry. Europe has a long history of conflicts between companies and civil society and social movements, as they tend to represent opposing interests. Since such movements are a recent phenomenon in China, their relationship to private companies may become quite different, not least because these companies have to some extent already had to improve their performance. It is also in the companies' own interests to cooperate with civil society movements for the sake of image differentiation. Since social movements and NGOs in China do not receive government funding, contributions from private companies will be important, and may also help form positive relation-

ships. On the other hand, it may prove negative for the achievements of a movement if it is forced to take the wishes of benefactor into consideration in its activism. That, however, is another debate.

In Chapter 2 I mentioned how, even if there turned out to be few clear signs of it in China, I expected ecological modernization to influence Shell China because the Shell Group is to such a large degree subject to pressure and influence from European social movements and pressure groups. However, as I have concluded, the barriers in the Chinese context are proving quite resistant to pressure, at least in the short run, and more influential in the case of Shell China than environmental social movements in Europe. My initial expectation, based on Mol (2006), therefore needs to be modified.

7.5 Theory and Methodology

In qualitative studies, transferability is not a goal *per se*, since the purpose of the study may be a greater general understanding of the study object in particular and not so much its general relevance. For example, the way Shell China handles environmental demands in combination with the identified barriers and policy implementation challenges in China is likely to have a great impact in any case due to the size of its investments, and is therefore worthy of study in itself. When dealing with transferability, however, one must differentiate between, on the one hand, the possibility to transfer the findings to other countries and companies by *re-contextualization*; and on the other, the prospects of using one's findings to *refine theory*. An analytical generalization or re-contextualization of my findings would allow the results to be used in studies of similar cases like other energy companies operating in China, especially other European companies. Since the barriers I have identified are elements belonging to the Chinese context and not to the Shell Group or Shell China, it would not be unreasonable to think that they could be similar in the cases of companies like Total or BP. In accordance with Yin's (1994) replication logic, the theory that is ultimately formulated thus becomes the vehicle for analytical generalizations to other case studies, as long as they belong to the scope of the theory – what Lincoln and Guba refer to as 'fittingness' (1979).

In this case study, employing an analytical framework based on a twelve-year-old study has proven useful, since it has allowed for a comparison of the situation in the same company before and after major changes have taken place. This case study, however, also shows that both *context* and *time* matter greatly in the responses to environmental challenges made by transnational energy companies. My analysis differs from that of Estrada et al. in that they analyzed the Oil Majors with little regard for the differing geographical contexts and change over time, omitting important dimensions of the forces that shape industry and business. Thus, on the one hand, my comparison of the Shell Group's environmental profiles of 1995 and 2007 made it possible to include the time perspective. On the other hand, Najam's (1995) 5C Protocol enabled me to include contextual elements, solving a problem not addressed in Estrada et al.'s framework: this is the idea that *social legitimacy is context-dependent*.

A matter in need of some clarification is the question of what the levels of environmental awareness in China have to say for a study involving this concept. Estrada et al. emphasized a company's stance on climate change as an important denominator of its position on the environmental response axis, and thus its prospects for renewed social legitimacy. Low awareness and a focus on local environmental matters in China, however, probably mean that the general public is *not* very concerned with climate change, making it less relevant in how they grant social legitimacy to companies. If this is in fact the case, then not only is environmentally responsible behavior not going to be the sole key to modern-day social legitimacy, but Estrada et al.'s framework may not be as applicable to developing countries and less environmentally aware populations as it is to industrialized countries. After all, that framework presupposes a certain level of environmental awareness to produce the kind of pressure needed to influence the big energy companies. In my case, however, this is partially compensated by the globalization of environmental social movements made possible by the revolutions in information technology. This, together with the fact that the Shell Group is among the world's most (in)famous companies, means that both it and Shell China have remained under the scrutiny of European civil society and environmental social movements. In addition, Chinese economic nationalism helps in restraining foreign companies, giving them less room than the national companies to act wastefully.

My study of Shell China has shown that Estrada et al.'s framework is relevant to this analysis, but that the three environmental response categories should be made more nuanced to reflect new challenges. The characteristics of the 'creative company' need refining, since it is likely that being a frontrunner today takes more than merely acknowledging climate change and initiating an embryonic diversification to renewable energies. A greater focus is needed on the influence of geographical contexts, especially when one is dealing with present and future key actors like China.

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