Case Studies of How BP and Shell are Approaching Sustainable Development

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ABSTRACT

Firms in all industries must respond both to the changing dynamics of markets and to the expectations of stakeholders within those markets. Within the last two decades, non-governmental organizations and other parts of the public have been increasingly active in shaping public expectations for firms to conduct their activities in ways that minimize undesired social and environmental impacts. These expectations for firms to balance their short terms goals of profitability with the long-term needs of the society and environment can be broadly referred to as corporate "Sustainable Development." The current day debate surrounding SD as applied to global corporations is complicated for many reasons, as this document explains.

Large global oil and gas firms that are in the business of exploiting non-renewable yet strategic natural resources are by no means immune to these changing stakeholder expectations. These companies deal with the commodities that fuel both development and pollution. As a result, the debate surrounding SD affects their corporate strategy.

Increasing global connectivity via the Internet has provided concerned citizens with the ability to apply pressure in a collective and immediate way. In the last decade, negative media has highlighted the impact these public pressures have had on oil and gas firms’ image. It has also highlighted the potential scale to which these pressures can impact a company’s future as a profitable firm.

We studied two oil and gas firms, Shell and BP. Both have re-positioned and re-branded themselves by taking proactive measures to meet and even exceed the expectations of their various stakeholders. By entering into dialogue with their constituencies, they have increased innovation toward sustainable practices, and in so doing, have boosted public trust. By analyzing live cases, we reveal their approaches in bringing the ambitious ideals of sustainable development into practice.

Each case was successful due to its project-specific approach which catered to local needs. Additionally, each firm’s history, organization and culture dictates its SD strategy - i.e, there is no universal approach. However, regardless of individual styles, “transparency” and “engagement with stakeholders” are vital ingredients to success in SD. But these must be learned through practice.

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Chapter 1: Introduction

1.1 Thesis statement

This thesis uses case studies from the oil sector to demonstrate how leading global corporations develop/execute strategies aimed at promoting sustainable development (SD). Corporate SD, sometimes referred to as “Corporate Social Responsibility” and/or “Corporate Citizenship”, is a term used to describe companies concerned with social and environmental needs in addition to conventional business economics. SD further involves optimizing short-term goals balanced against long-term needs. These terms are increasingly becoming the “buzzwords” for business in the 21st Century. But more than simply a buzzword, SD is an important issue. The socio-economic implications, increased resource demands, and pollution associated with a rapidly growing population, combined with increasing expectations on the part of stakeholders, warrant this change in corporate behavior. Companies’ actions in balancing the quest for increasing profit with these numerous competing and sometimes incompatible demands is important. We argue that companies will “learn” how best to balance these competing needs of profit and sustainability by “doing” – i.e., by experimenting in a practical way, by completing the feedback loop to learn from projects, and by sharing throughout the organization and other businesses. The actual execution of solid SD strategies is best approached when compatible with the company’s history, organization, culture and existing competencies. We also argue that transparency and stakeholder engagement are both essential to corporate SD success. Finally, we believe that SD requires a holistic view of the business. One way to approach SD therefore is by “systems thinking”, which allows firms to appreciate and evaluate the complex dynamics and thus gives them a framework for acting.
To support our argument we present case studies of two companies in the oil sector: the Royal Dutch/Shell Company (Shell) and Beyond (formerly "British") Petroleum (BP). These corporations are leading the way in their industry in promoting various SD initiatives and thus provide a window to see how SD affects their various businesses. However, each company has approached the requirements of SD with different proportions and styles. These differences are due to the company's unique organizational styles and cultures.

**SD – A review of the issue**

The issue of corporate SD is an interesting but complicated debate that will shape the face of global competition and therefore of corporate strategy in the years to come. Since future development must be sustainable, how global corporations pursue this goal is integral to their future existence. A number of business leaders already recognize this growing dynamic and are therefore taking proactive measures to incorporate SD into their business strategies. They see it as a way to earn societal trust and, as a result, the "license to operate". We live in an era where a growing number of stakeholders want a say in many business decisions. In fact, the dynamics of stakeholder-businesses interactions in the last few decades show a progression from a "trust me" to a "tell me" to a "show me", and most recently, to an "involve me" mentality.¹

In traditional times, asynchronous information and lack of organization amongst stakeholders kept external parties largely passive while allowing firms to behave independently without allocating substantial resources toward maintaining their licenses to operate. However, over the last decade or so, technology, globalization of business and education have changed this dynamic. The "network effect" makes it easier to share information, and naturally

¹ Internal Shell Document (SD Briefing by the Shell International Sustainable Development Group).
reinforces the appeal for information. These new demands for transparency now become a hurdle that companies must overcome in order to earn their licenses to operate.

Many companies such as Nike, Phillip Morris, Monsanto and Shell have realized that these new expectations cannot be taken for granted. With increasing civil activism toward global corporations - with an aim to uncover and rectify human rights and environmental abuses - corporations are being forced to become accountable throughout their supply-chain. These changes are so rapid that even businesses in a fast clockspeed industry can find them difficult to cope with. Goliaths are particularly susceptible to this impact since their sheer size and global status attract activist scrutiny. The corporate strategy of "growth to become big" therefore becomes unsustainable unless preventive and pre-emptive measures are taken. Throughout the network, Non-Governmental Organizations (NGOs) and special interest groups act collectively, sometimes pressing for media involvement when highly concerned. The resulting force can be damaging to the firm's brand image, and an attempt is made to engage stakeholders and manage risk for possible backlash. This risk management takes the form of brand image protection. The alternative - brand resurrection - is indeed an expensive business.

SD is designed in part to manage these risks. But the larger discussion of SD and the debate that surrounds it take on multiple dimensions. SD is extremely contextual, depending on corporate culture and the environmental and social sensitivities of a given geography. Certainly the issue becomes more complicated in underdeveloped and politically sensitive parts of the world. These are areas which activists tend to emphasize, and where license to operate becomes more vital. Since the multitudes of stakeholders have competing demands, the corporation becomes responsible for sorting through and prioritizing the various concerns of
these different groups. The real challenge becomes balancing their needs while keeping the business economically lively and competitive. In this way, systems thinking can help a business map the causal relationships of these complex and competing demands.

In short, the issue of corporate SD is a complex matter surrounded by a great deal of controversy. In general terms, a significant part of the public is skeptical about corporate intent. They wonder whether SD claims by corporations are hype or are backed by genuine intent and action. For those companies choosing to pursue SD, the key is in demonstrating actions that meet with the firm's public words. Over time, this should help build trust and reinforce the brand image. But, at the same time as these exogenous pressures grow, many shareholders want proof that this new SD approach actually pays.

Many arguments exist which support SD as a viable business strategy. Risk reduction, or better yet, brand enhancement, as already mentioned, are both good examples. SD can also capture newly created value through differentiated products and services. On the investor side, a rising number of Socially Responsible Indices (e.g., the Dow Jones Sustainability Index) signal that they too have an interest in socially and environmentally responsible performance. Unfortunately, analysts are still unsure how to value corporate SD, or even measure its individual contributions. Thus these rating systems are not fully mature. Nevertheless, factors outside of conventional financial information are now considered, to a limited extent, in corporate valuation.

Perhaps these investors and analysts forecast that corporate responsible behavior will eventually add to the financial bottom line. In any case, any long-term advantage by risk reduction, brand enhancement or differentiation, or better investment ratings can be achieved only through sustained actions. SD must not become a mere functional add-on but instead
become woven into the cultural fabric of the organization. The means for this transformation lies in consistent and efficient organizational learning. It requires preparations for collective visioning and shared learning with the real challenge in determining how best to measure progress along the way.

Extensive literature exists on the topics of Corporate Citizenship (CC), Corporate Social Responsibility (CSR) and SD. The tendency, however, is to be prescriptive, abstract and normative for “why” and “how” a company should pursue SD. In our research we have looked at these issues in real terms by examining two companies within the oil and gas industry. The oil and gas sector is a good candidate for this analysis because it deals with a commodity that is rightly called “black gold” - a commodity for which wars are fought and political positioning regularly happens, and whose price changes make news headlines and affect the food chain of almost all industries across all nations. The oil and gas industry has not only a big environmental footprint, but also a large global spread in terms of capital allocation.

Effects of political and geological risks and the cyclical nature of the business are also significant. In fact, the sheer size and FDI of these companies have a substantial impact on the socio-economy of recipient nations. In addition, clockspeed in this industry is slow and requires long time horizons for strategic planning. The fact that oil company’s depend on a nation’s most valuable natural resources means they cannot afford to lose their license to operate in those areas. Brand image is therefore of utmost concern.

Most oil majors currently have a significant brand image, which brings them the biggest value in the media-savvy developed world. Since oil and gas are “commodities” these firms could be looking for ways to differentiate themselves from their competitors. Although SD might provide one means to do this, differentiating through SD in an industry that profits
from the consumption of non-renewable resources is a mammoth task and one that requires more in-depth analysis.

Our subjects for this analysis, Shell and BP, are comparable within the oil and gas industry in terms of their relative size and global spread in both upstream and downstream sectors. Both have publicly stated their intent to embrace and actively promote SD within their organizations. In fact, they are signatories and take a lead in supporting the UN’s “Global Compact” initiative. Each has already made organizational changes to bring this focus into their mainstream business and have tangible results to report for their initiatives. Finally, having already overcome significant barriers to establish operations in remote and difficult locations of the world, and having invested money in renewable energy businesses, both companies manifest a commitment toward SD.

Our evaluation of these companies starts with a look at their actions and attitudes as expressed at the corporate and operational levels. Next, we analyze two project examples from each company, thereby allowing us to probe more deeply into their SD approach. Since these companies have different cultures and processes, but are each successful in their own right, a comparison between companies and their select cases makes for rich analysis. We hope that our conclusions will highlight the success that SD can bring to each of the companies analyzed in this thesis.

We believe that studying these firms and these live cases provides a good view of the dynamic nature of SD-related strategy. We are able to study how newly initiated corporate changes manifest within the organizations. Moreover, comparing the cases without assuming homogeneity allows us to draw interesting conclusions about the nature, the driving forces and the cultural/stylistic dimensions of this transformation. Investigating the process in action
thus provides a dynamic story with practical outcomes for business leaders. Our intention is to
neither forecast nor prescribe, but to be of some assistance to corporate leaders who might use
the insights in prioritizing resource allocation decisions for managing this change in their own
businesses.

1.2 Thesis structure

In order to set the proper backdrop for the two case discussions, we first provide a
comprehensive background on the topic of SD and the complex nature of the current day
debate. Chapter 2 serves to define the concept of SD, explaining how it came to be important
to global corporations and the role they are expected to play. We then discuss why many
corporations are already pursuing SD in their businesses. In doing so we look at the intricacies
associated with the full variety of exogenous drivers. We also theorize about the many
competitive advantages expected by SD. We follow this with an explanation for why SD is not
more widespread in the existing global business climate. Lastly, we convey some available
conventional wisdom for how corporations may move forward in integrating SD into their
business strategies.

Also important for setting the stage for the case studies, is an explanation of the energy
industry - specifically the oil and gas industry. Chapter 3 describes the industry and its
characteristics and risks. We address the specific challenges posed by SD while emphasizing its
importance within this complex industry. Finally, to demonstrate the dynamic and complicated
nature of SD as it applies to the oil and gas industry, we use a system dynamics diagram to map
the causal loops.

Chapters 4 and 5 discuss SD within Shell and BP respectively. These serve as
illustrations of SD in action in two large, multinational firms. Each starts with general
information about the corporations and their businesses. They move into each company’s position on SD, first telling how they came to adopt this new approach, and detail what actions and procedures each has taken. Based on interviews and company documents, we address these issues first at the corporate then at the field levels using the example of exploration and production operations in Aberdeen, Scotland. We subsequently funnel down to a detailed analysis of two project cases at each company, examining how SD is incorporated into design and what drives it at the ground level. These cases, happening in very different parts of the world, should reflect the larger corporate style. Although we cannot conclude that SD is treated in the same manner at each corporate location, we get a sense of the underlying culture and the potential and capacity for the SD strategy within each corporation.

Chapter 6 concludes with the key insights from our analysis. This chapter compares and contrasts Shell’s and BP’s stylistic approaches to SD, at both policy and implementation levels. We summarize key points of each experience and draw insights from our observations. Finally, we leave the reader with implications of our observations on firm strategy for application and customization in one’s business arena.
Chapter 2: The Background of SD

This chapter looks at the general issue of sustainable development (SD) and specifically its application to global corporations. We start with an introduction of SD and its importance in global society, and then highlight the role for global corporations. This background, combined with some historical perspective, will provide an expansive view of SD. We then discuss the various drivers and their associated complexities for corporations undertaking these new responsibilities. This discussion addresses ideas in support of companies adopting this new approach and conversely, why SD is not yet a widespread corporate strategy. Finally, we raise important considerations for companies choosing to pursue SD.

2.1 What is SD and why is it important?

"Sustainable development (SD)” or “sustainability” can be simply described as a way of “meeting the needs of the present without compromising the ability of future generations to meet their own needs”.* But what does this actually mean for individual corporations? This is where the concept of “corporate citizenship” becomes relevant. According to the Conference Board, SD “is about taking responsibility for, and doing as well as possible in terms of social, environmental, and economic performance given competitive opportunities and constraints”.*

Three main issues drive the SD movement: 1) the economic and social effects of a growing population, 2) the increasing demand for resources and their consequent depletion, and 3) the effects of environmental pollution. Existing rates of population growth, especially in less developed countries, threaten to exacerbate existing problems such as poverty and disease,

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political instability, violence and corruption. Additionally, existing patterns of production and consumption cannot be sustained in the long run given existing natural resources, especially when populations from developing countries will eventually want to emulate the West’s consumption and living standards. The United States alone, with 270 million people (just 4% of the world’s population), consumes greater than 25% of the world’s energy resources. Other natural resource depletion such as soil erosion, disappearing forests, extinction of certain animal species and fish stocks, and falling water tables, is happening at alarming rates. And the current rate of pollution is unsustainable in the long term. Global warming is a good example of this. Since the beginning of the Industrial Revolution, the concentrations of carbon and nitrous oxides (CO₂ and NO₃) in the earth’s atmosphere have increased nearly 30% and 15% respectively, and methane concentrations have more than doubled. These changes result in heat being trapped by the earth’s atmosphere, ultimately increasing its temperature. Scientists forecast a temperature rise of 2-6°F during the 21st century.

Given these issues, it is not surprising that a school of thought exists which indicates that globalization as it currently exists is not sustainable. Concerns over human rights abuses and unfair labor practices have also gained momentum in recent years. So we see that SD encompasses a vast range of complex challenges, covering social, economic and environmental terrain.

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2.2 The role for corporations

Those who believe that these issues demand movement toward SD also believe that multinational corporations play an important role in the transformation. From an environmental standpoint, corporations can contribute by finding new conservation methods, raw material substitutes (for non-renewable resources), and less polluting ways of processing waste.\(^8\) Large, capital-rich corporations are also best positioned to perform the research and development (R&D) required for these innovations. They also have the abilities to transfer knowledge between markets and to coordinate actions among the various interested parties (e.g., other industry players, NGOs, governments, communities, etc.).\(^9\) Because many MNCs operate in less developed areas of the world, they also possess the potential to stimulate socio-economic improvements within their host countries. While the above explains "why" corporations should take on this Corporate Citizen identity, there is an accumulation of additional factors defining why it should happen now. These include:\(^{10}\)

- Globalization and associated growth in competition – competition drives companies to operate in parts of the world where operating costs (e.g., labor) are low.
- Increased size and influence of companies, particularly through mergers and acquisitions – the sheer size of many MNCs gives them power to set positive examples (potentially leading to standards) and influence governmental policy and rule.
- Retrenchment or repositioning of government and its roles – if government takes a back seat, the public looks to deep-pocketed MNCs to make the difference.
- Informatization – through information technology, society is much more aware of what companies are doing in all parts of the world, and what practices may be harmful to humans and the environment.
- Increased importance of intangibles – intangibles like knowledge, brand image, and license to operate are increasing in importance in today’s competitive business climate.
- War for talent – in order to attract and recruit the superior talent required in today’s knowledge based economy, corporations must demonstrate positive values and performance.

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Growth of global civil society activism – information technology enables concerned citizens to apply collective pressure on MNCs to act in a socially and environmentally responsible manner.

Most of these topics will be discussed in greater detail in subsequent sections of this chapter. In addition, Chapter 3 further builds on these business dynamics in the context of the oil and gas sector. In what follows, we expand on the importance of SD as part of the corporate vocabulary and explain why some companies are adopting this new approach.

2.3 The evolution of SD

The evolution of public opinion and involvement in the SD movement helps us to understand the progression in business/public interaction and perhaps, gives us a glimpse into the future of this issue. Although the discussions concerning SD are not new — debates over the accountability of corporations to shareholders or broader stakeholders goes back to the turn of the 20th century11 — they have taken on a new life over the last few decades. Beginning in the 1970s, public trust toward business began to diminish. According to one commentator “business lost roughly 80% of its public good will during this period”.12 Not only was the public concerned from a consumer or employee standpoint, but also from a broader societal perspective. Demands for higher ethics had also been mounting given the wave of high profile corruption scandals that were exposed in these years.

Some perceived problems contributing to the declining trust include environmental pollution, health and safety issues, discrimination, illegal campaign contributions, foreign government bribery, fraud, conflicts of interest, mismanagement and shareholder negligence.13 The 1980s brought a wave of legislation in the U.S, placing stringent rules on environmental,
and health and safety management. Some noteworthy examples include the Comprehensive Environmental Response, Compensation, and Liability Act (1980) "creating a tax on the chemical and petroleum industries and providing broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment," and the Emergency Planning and Community Right to Know Act (1986) "designated to help local communities protect public health, safety, and the environment from chemical hazards."

The 1990s brought yet more regulation and, more significantly, increased debate over globalization. Where human rights violations were involved in global corporate undertakings, there was intense skepticism and distrust toward the company or even the private sector as a whole. In general, more attention was and continues to be placed on finding connections between corporations and human rights issues. In this age of outsourcing, it has not been uncommon for companies to be held accountable for human rights abuses not directly inflicted by the company but rather somewhere along their supply-chain. However, it is a complex matter to command real influence over how a supplier conducts its operations. Nike, the Gap, and Starbucks, among others, have struggled with this issue and have responded by building SD into their corporate strategies.

Globalization is itself a controversial phenomenon. An October 2001 article on "Responsible Business" – a Financial Times Guide – cleverly stated that "[r]ef globalizaon were a brand, some of its promotors would be arguing for a name change and re-launch." Real

world concerns and differences of opinion regarding the direction and consequences of globalization have led to violent protests at meetings of international trade and finance organizations (Seattle, 1999; Genoa, 2001). These demonstrations are key, albeit extreme, examples of the public's concern for and involvement in this issue.

In addition to these negative reactions to globalization, the introduction and growing use of the Internet over the past few decades has made it much easier for concerned citizens to communicate with each other, while at the same time collectively demanding greater access to information about business. As a result, transparency has become the new business modus operandi. We have traveled in this short time from a "trust me" to a "tell me" to a "show me" and, most recently, to an "involve me" mentality.\(^{18}\) Peter Senge describes these dynamics and predicts their consequences in the following way:\(^{19}\)

> Ultimately, transparency is about awareness. With increasing awareness will come pressures for greater accountability for social and natural capital as well as financial capital. Gradually, this will lead to innovations in the larger social context as well.

One challenge many companies face is that expectations of society increase more rapidly than can be met by a slow clockspeed industry. This is especially true in the oil industry, as we will see in Chapter 3. There is also the potential that despite good efforts toward corporate citizenship, a company could be labeled as "greenwashing", defined by the activist group, CorpWatch, as "the phenomenon of socially and environmentally destructive corporations attempting to preserve and expand their markets by posing as friends of the environment and leaders in the struggle to eradicate poverty."\(^{20}\) This label is popular within industries with traditionally poor track records, particularly if certain industry members are less than fully

\(^{18}\) Internal Shell Document (SD Briefing by the Shell International Sustainable Development Group).


committed to SD. Unfortunately there have been real cases of companies disingenuously using green advertising to promote their products and increase market share.

2.4 Why are some corporations pursuing SD?

With the above background as context, this section more closely explores the three significant drivers behind the SD movement in global corporations: 1) societal activism and mobilization, 2) regulatory drivers and governance issues, and 3) precedent and perceived benefits by the companies themselves.

**Societal activism and mobilization**

Here we discuss the multiple categories of stakeholder demands, and how they translate into demands on individual corporations. This is by far the most complex feature of SD and therefore deserves adequate explanation. The following subsections address organized activism, other competing interests and the resulting effects on a company’s license to operate.

It is a widely held truth that the most visible pressure behind corporate SD is the power of civil activists through negative campaigning. The Conference Board calls this “civil regulation”. One organized and often effective form of activism, predominantly targeted at transnational organizations, is that of non-governmental organizations (NGOs). As mentioned earlier, the Internet facilitates the ability of NGOs to coordinate protests and rally support to their cause. The evolving phenomenon of “protest-without-borders” helps guide their focus. The media is an important partner to the NGOs by spreading the news of poor corporate behavior.

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21 “Responsible Business in the Global Economy”, *The Financial Times*, October 2001, p. 05.
NGOs, with the support of the media, can in fact take a hard stance against multinational corporations, potentially destroying the company's brand image and eroding their market share. Companies like Shell and Nike have come under scrutiny and criticism by these NGO's. The reality is that many companies operate similarly in the name of competition, yet the NGOs concentrate on a select few to demonstrate their point. These same NGOs can make it extremely difficult for the targeted company to redeem its damaged brand image. Nike, for example, has recently made an effort to eliminate child labor in their supplier factories; nevertheless the NGOs and media continue to criticize them.

The fact that these NGOs are attacking large multinationals is not surprising. Perhaps they find it more efficient to target multinational firms with deep pockets to correct quality of life issues in poor, politically unstable countries, rather than pressuring the local governments who are less likely to be effective. A lack of regulation or limited enforcement, as we elaborate later in this section, also inhibits the government's motivation to enact the changes demanded by these NGOs.

Activism against human rights abuses is increasingly common. In fact, real progress has been made as a result of NGO action in this area. A 1999 Amnesty International Report, "Business and Human Rights in a Time of Change", sites a plethora of samples of related NGO work and publications, some culminating in codes of conduct signed by a variety of US-based multinationals and others, and some resulting in formal alliances between the NGOs and private companies.25

The words and actions of these NGOs should not be taken lightly. Their presence and effectiveness are rapidly increasing. This may explain why it is more common, not to mention

necessary, for certain global corporations to directly engage with these NGOs in correcting the problems. As so well stated in 1999 by Sir Geoffrey Chandler, previously employed with Shell and now working for Amnesty International:\textsuperscript{26}

Companies need the expertise of NGOs in tackling problems of which they have inadequate knowledge. NGOs need the huge and growing influence of companies if they are to maximize their impact. Protest may win battles, and is indeed a weapon that cannot be surrendered, but it will not win the war or the argument. For this, dialogue is required. And over the past two years there has been the beginnings of a sea-change as the mutual suspicions, hostility and ignorance of the two sides have given way to tentative engagement on problems in the solution of which both have an interest.

In addition to NGOs, there are a host of additional stakeholders with legitimate interests and concerns: governments, surrounding communities, employees, suppliers, and of course consumers and shareholders. A real challenge for business lies in understanding the desires of its various constituencies, weighing and balancing their competing interests in the decision-making process - all while maximizing returns for the shareholders and keeping the organization economically viable. This process will invariably require compromises and trade-offs.\textsuperscript{27} Along the way, stakeholders should feel as though their interests are, at the very least, considered. Regardless of the outcome, this process drives the clear and open communication these constituencies have grown to expect.

The agendas of these various groups are numerous and vary widely. For employees it is fair pay, equal opportunity, protective health and safety measures, financial security, quality of life, and freedom of expression sometimes stretching to include involvement in decision-making. If properly cared for and given a voice in company actions, employees are often more loyal and perform better all around. The value of human capital will be discussed in greater detail later in this section. Surrounding communities are interested in local employment,

\textsuperscript{26} Ibid., p.34.  
schools, traffic, pollution, health and recreation. Governments, the media, and academia – under the broader category of “society as a whole” – are increasingly interested in employer ethics on a multinational scale. Suppliers, especially if they are small as is often the case, want fair treatment and timely compensation.28

The power of the consumer should never be underestimated because it determines market share. But customer behavior is difficult to predict. A number of surveys conducted among U.S., UK and Canadian consumers throughout the 1990s support a strong will (upwards of 78 percent) to purchase products born of good corporate ethics (primarily working conditions), even if more expensive.29 Unfortunately, what people say and what they do in these circumstances does not always coincide. According to Dr. Richard Freeman of Harvard’s Department of Economics, “there is overwhelming empirical evidence that people act as if fairness toward others is part of their utility function.” 30 He refers, as one example, to the famous experimental game, “The Prisoner’s Dilemma”, where money is offered to one individual to be shared to an unlimited extent with another. In an overwhelming number of cases, the first party offers more money than the game administrators would have expected. Consumer behavior in the context of SD depends heavily on the availability of information concerning the circumstances by which the product was manufactured. For this reason certain NGOs, perhaps the most successful being the National Labor Committee (NLC), act as independent monitors and make their findings readily available to the public.31

The shareholders – clearly critical to the corporation’s livelihood – make up the final stakeholder category. The basis of their investment incentive is reliable returns. However, the

nature of their relationship with the company is evolving. Behavior within the investor community is showing signs that they, too, are interested in SD. Most activity is in the form of screening for socially responsible investing (SRI). The number of rating systems for SRI is on the rise. Traditionally, most weigh heavily on environmental performance, considering criteria such as greenhouse gas emissions, toxic releases, energy intensity, and regulatory compliance, to name just a few.32 But social factors are increasingly being considered.

The U.S.-based Social Investment Forum estimates that in 1997 roughly $1.2 trillion, or 9 percent of the United States’ total institutional investor assets were in some way tied to socially responsible investing, whether by social screening or shareholder activism.33 This was a 30-fold increase above 1984 statistics.34 In 1999, a survey by the Ethical Investment Research Service found that 77 percent of pension plan participants requested socially responsible investment policies but stipulated that returns not be negatively impacted.35

While these SRIs have traditionally worked by “screening” out companies with poor environmental and/or social performance, more recently they tend to pick stocks based on positive environmental and social performance.36 This provides a positive incentive for firms to perform well and to be innovative in SD as opposed to the previous practice of punishment for mistakes. The style of such funds is thus more proactive by promoting SD while offering public challenges and company advice.

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32 Reed, Donald J. “Green Shareholder Value, Hype or Hit?”, Sustainable Enterprise Perspectives, World Resources Institute, September 1998, p. 7.
36 Reed, Donald J. “Green Shareholder Value, Hype or Hit?”, Sustainable Enterprise Perspectives, World Resources Institute, September 1998, p. 7.
Research reveals evidence that socially responsible funds outperform their non-screened competitors. Examples are the Dow Jones Sustainability Index and the Domini Social 400 Index, “a leading socially screened index of 400 companies” performing above the S&P 500 from 1990 thru 1995. The combination of shareholder and consumer or NGO activism can additionally drive changing corporate policies, as was the case when Home Depot ceased all purchases of mature wood from endangered forests.

The combination of these afore-mentioned exogenous pressures defines the “new” corporate license to operate (LTO). It encompasses a variety of expected behavior, often including some combination (if not all) of the following: communicating well and being transparent, engaging with stakeholders to identify and acknowledge their interests and expectations, measuring performance in social and environmental terms in addition to the usual financial measures, flexibility in general, and otherwise contributing to sustainable development. Receipt of the LTO hinges on the corporation’s ability to earn the trust of the local community, the larger public, interested NGOs, and governments. Corruption in the form of bribes is clearly prohibited and, in fact, can do serious damage to the company’s reputation.

There are essentially two forms of LTO: those issued by local and global communities. The local LTO relies on good relations with the surrounding community, regulators, politicians and the local media; whereas the global LTO depends on the attitudes of civil society, the international media and, most importantly, NGOs. Again, the Internet plays a

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37 Ibid, p. 5.
38 Ibid, p. 18.
crucial role in the global LTO. *SustainAbility*, a UK based sustainability think tank, consultant
and campaigning agency, describes the Internet’s role as follows:41

The importance of the internet in the area of license to operate should not be underestimated. 
In making the world a smaller place, at least among communities with access to it, the internet 
allows for the sharing of community perceptions about a particular company, the dissemination 
of information of grassroots groups, among other things. This shared knowledge informs 
public perception of companies, thus shaping license to operate.

The SD activity required to uphold the LTO is contextually based in that it depends on 
the industry, geography, politics, socio-economic factors, and sensitivity to the environment, 
among other factors. At times the needs will be environmental and at others they may involve 
human rights, or socio-economic or political factors, or some combination thereof. Different 
industries and geographic/political complications will lead to different needs and approaches. 
The LTO is particularly relevant for companies who rely on the extraction of natural resources 
and who must often make significant, long-term investments in politically complex areas of the 
world. Many of these companies now recognize the importance of addressing concerns of the 
community and nation state as part of their license to operate.** These companies must 
therefore be well informed on the non-market intricacies of the environments in which they 
operate.

**Regulatory drivers and governance issues**

A second major source of pressure pushing demands for multinationals to become more 
sustainable is the “retreat of the state”. Whereas the 1980s and 1990s brought a dramatic wave 
of new and more stringent rules, particularly for the environment, more recently we have

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42 Zadek, Simon. “Doing Good and Doing Well: Making the Business Case for Corporate Citizenship” The 
witnessed "less rather than more regulations". This leaves it to the managers of big business to satisfy growing public expectations. Unfortunately, these demands are often cast by a public not fully aware of the delicate balance between viable long-run economics and the full array of SD requirements.

This phenomenon also introduces debate over whether companies should be allowed to set voluntary standards, whether governments should set global standards, or whether minimum standards should be set at all. The United Nation's (UN) Global Compact program, discussed in the next sub-section, makes a case for strengthening voluntary standards versus imposing regulatory rule. There are numerous new methods for self-auditing and reporting, such as the Global Reporting Initiative (GRI) described later in this chapter. Company "codes of conduct" are another means to meet the goals of SD. Nevertheless, some citizens are concerned that these self-regulating methods are not enough to drive responsible behavior.

Richard Welford, an author of SD strategies, argues this last point in the following way:

The rapid evolution of an international economic system has not been matched by international political integration or international laws to regulate that system. The consequence is that many transnational corporations operate above the law, above national boundaries and are able to set their own international economic agenda.

While there are numerous international conventions, including those set by the International Labor Organization (ILO), the UN Universal Declaration of Human Rights, or the Guidelines for Multinational Enterprises, these guidelines are frequently viewed as too general, ambiguous, and difficult to enforce. A contradictory view is that international codes can cripple less developed nations who are attempting to nurture corporations to compete in

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the open global market. Considering all viewpoints, perhaps the most legitimate idea is to appropriately balance voluntary corporate standards with outside, independent auditing and reporting. This broader debate is extremely complex and beyond the scope of this paper.

Precedent and perceived company benefits

The previous sections described drivers rooted in outside pressures. Now we introduce the fact that many corporations are already breaking new SD ground, thus setting an example for global business. Business leaders, such as Phil Knight (Nike), Bill Ford (Ford Motor Company), Ray Anderson (Interface), Ben Cohen (Ben & Jerry’s), Sir John Browne (BP), Phil Watts (Royal Dutch/Shell), are among those who believe conducting business in a socially and environmentally responsible manner brings value to the corporation and a key contribution to society.\textsuperscript{47} Membership in the UN’s Global Compact is further evidence that some corporations embrace the idea that SD is a necessary route to globalization. (See Exhibit 1 for a description of the GC initiative and its intent.) There are in fact a growing number of organized communities, such as the World Business Council for Sustainable Development (WBCSD) and Peter Senge’s Society for Organizational Learning (SoL) Sustainable Consortium, where business managers exchange thoughts about the role of SD in corporate strategy. Literature on SD supports the idea of sharing a vision and collectively learning how to move toward it.\textsuperscript{48}

Participants theorize that by embracing this new context for transnational operations, many of the afore-mentioned pressures become competitive advantages. There is a caveat to this theory, however, in that research in this area is not yet well developed. In today’s business environment there is a much greater emphasis on intangible assets such as brands, intellectual


\textsuperscript{48} Ibid, p. 59.
property, R&D, human capital and relationships.\textsuperscript{49} We postulate that strength in these assets also applies to success in SD. It is imperative that SD initiatives of the company meet with “current economic reality” in order to be worthwhile.\textsuperscript{50} The following paragraphs present what is believed to support the business case for SD.

**Corporate reputation and brand image**

Since the face of the company can make or break its business, we argue here that corporate SD, while often viewed as a defense mechanism against reputation or brand erosion, can actually earn the company trust and admiration, thereby enhancing the corporate image. Companies who act responsibly should naturally garner positive reputations, leading in turn to more customers and investors, better and happier employees, and improved productivity.\textsuperscript{51} However, in order to reap rewards, the company must publicly promote its SD initiatives. Unfortunately, some companies will not do this in order to avoid claims of “greenwashing” or the attention of antagonistic campaigners.

**Human and intellectual capital**

Earlier we hinted that war for talent contributes to the importance of corporate SD. An August 1998 issue of *Fast Company* magazine predicted, based on a McKinsey study of 77 companies and roughly 6000 managers/executives, that in the next 20 years, people with talent will be the most valuable resource in the corporation. The study further suggested that most talented people want a high performing employer offering a challenging work environment and

\textsuperscript{49} Ibid, p. 41.


an inspiring vision. A *Towers Perrin* report on "talent" states that high performing companies attract talented and high performing employees, who in turn reinforce and even strengthen the company's good performance – hence a virtuous cycle unfolds. This is particularly critical for knowledge-intensive companies. Studies based in Europe led to the Conference Board judgment that an SD strategy can heavily influence recruitment, retention and productivity. Monetary rewards alone no longer motivate these highly talented people. SustainAbility’s report, “Buried Treasure: Uncovering the business case for corporate sustainability”, cites a variety of additional evidence – both third-party studies and internal corporate statistics pointing to comparatively better employee recruitment, retention and loyalty in socially responsible, ethical companies. As one example, a “Students for Responsible Business” study found, pay being equal, 87% of respondents chose to work for the company engaging in SD.

**Operational efficiencies**

Many corporate environmental initiatives often lead to operational efficiencies and reduced costs. Today’s enlightened business managers also recognize that preventing pollution and reducing waste can be cheaper than cleaning it up. For a relatively modest upfront investment, pollution prevention alternatives can conserve raw materials and energy, minimize environmental impact, and in some cases even increase productivity. Baxter International demonstrated this phenomenon in 1996 when, after carefully documenting the impact to net

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earnings resulting from environmentally driven process improvements, they reported a contribution of $100M - roughly 12.7% of the company's earnings that year.57

Reducing risk

Proactively approaching SD should invariably decrease liabilities such as regulatory violations, environmental catastrophes, labor unrest, targeted NGO campaigning or negative media coverage. Economics frequently favor prevention over damage control. Negative events can expose the corporation to legal sanctions, damage its reputation and impair its access to capital.58 For this reason, many large companies employ the services of risk management consultants.

Inspiring innovation

SD is about reinventing our way of doing business. It calls for creating new products and processes, substituting raw materials, tapping new markets, and inventing new business models such as product-to-service. It requires creativity and imagination in challenging the status quo of procedural norms and protocol.59 The company, Interface, offers many good examples. They are currently exploring fully recyclable carpet, thereby making their product a service, and also producing carpets of biodegradable content like cotton, flax and hemp. They are even producing “solar-based carpets”, using only renewable and non-hydrocarbon based energy in the manufacturing process.60 For the energy sector, innovation can mean developing alternative forms of energy (e.g., solar and wind power). This type of thinking creates new

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57 Reed, Donald J. "Green Shareholder Value, Hype or Hit?" Sustainable Enterprise Perspectives, World Resources Institute, September 1998, p 4.
options and opportunities for the company. Innovation is clearly an important way to stay ahead of an industry competitor.

Product differentiation

Earning an SD reputation is one way to differentiate a product or service from the competitor's. It can additionally create new market opportunities for the corporation, such as alternative fuels in under-developed countries. Currently, however, only a minority of consumers uses SD as a criterion when buying, especially if it means paying more for a product or making the effort to seek out the more sustainable product.61

In short, success in SD can produce a variety of different benefits for companies while at the same time helping the company to earn its LTO.

2.5 Why then are others not pursuing SD?

Given all of the pressures behind SD, in combination with the perceived benefits described immediately above, why then is SD not more widespread throughout global business? The answer lies in a multitude of complexities and unknowns. Direct ties between SD and its positive outcomes are extremely difficult to measure, and there are no clear benchmarks for companies to follow.62 This means that no hard evidence exists to support the business case for SD. Without clear benchmarks, many global corporations may not know how to proceed, especially short of the necessary competence. Others may have mixed feelings concerning the degree to which the corporation should be responsible for SD. In fact, while some view the image of corporate citizenship as noble, others regard it as controversial for businesses. This is why it is so important to look at real examples/atttemps at SD to see what

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the experience has been thus far; we do this in Chapters 4 and 5 of this thesis. The following two sub-sections further detail two pressing issues corporations face which contribute to the "why not" problem. First, we amplify the complex problem of measurement. We then address related issues of valuation shortfalls.

**Auditing SD performance**

One complex question is how to account for all elements of SD in corporate performance measures. Increasingly popular among corporate SD circles is SustainAbility's concept of "triple bottom line" (TBL) reporting which assesses corporate performance based not only on financial indicators, but also on social and environmental. The issue is that most companies are not conversant in translating social and environmental factors into overall performance ratings.

One standardized form of TBL reporting is the Global Reporting Initiative (GRI), which is described as follows:65

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The Global Reporting Initiative (GRI) is an international, multi-stakeholder effort to create a common framework for voluntary reporting of the economic, environmental, and social impact of organization-level activity. The GRI mission is to elevate the comparability and credibility of sustainability reporting practices worldwide. The GRI incorporates the active participation of businesses, accountancy, human rights, environmental, labour, and governmental organizations. GRI is building momentum, but again, the tools are not well developed and corporations are not eager to convert their accounting. The key is that in order for SD to take root in multinational markets, everyone will eventually need to adopt this new way of measuring their company's success.
Considerations of SD in company valuation

Closely related to internal measurement and additionally complicated, is the issue of valuing corporate SD for shareholder purposes. While growing use of SRIs indicates that certain investors place value on corporate citizenship, others want to see “proof that it pays”. Few shareholders are personally involved in the corporation and most are more interested in short-term gains on their investment. Unfortunately, analysts still grapple with how to place value on the company’s stock, based on its SD performance. The traditional approach of Economic Value Added (EVA) is problematic in that it disregards critical non-financial components of equity valuation such as competitive advantage, reduced risk, and quality of management to name a few. However, there are indications that analysts also examine this facet of the business. For instance, an Ernst and Young study predicts “that only 70% of stock analyst’s recommendation decision derives from financial data, the remainder being based on non-financial proxies for the underlying strengths of the business.” Some of the non-financial measures now considered include: quality and execution of corporate strategy, credibility of management, innovativeness, market share, ability to attract and retain talented staff and leadership in research, among other intangibles. Environmentally driven operational improvements, while presently not well accounted for, may also positively impact return on equity. But, at present, determining how to record these advantages in stock ratings brings many unanswered questions to the surface.

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66 Reed, Donald J. “Green Shareholder Value, Hype or Hit?” Sustainable Enterprise Perspectives, World Resources Institute, September 1998, p. 2.
Following the progress of SRIs and SD impacts on equity valuation will be important to business managers. Governments and international policy agencies will also want to learn whether SD adds financial value to the firm since voluntary initiatives are frequently more efficient than legislation.\textsuperscript{69}

\textbf{2.6 Conventional wisdom for the way forward}

This last section offers some considerations for companies pursuing SD, as gleaned from our our review of this topic. Not withstanding that many multinational firms are already implementing an SD approach and have executed some impressive SD projects, one is not likely to find a multinational company that has holistically conquered the SD business model. Most are still trying to grasp what it means to journey toward what is sustainable, and to determine how to let this new mental model permeate the organization. There is no "one-size-fits-all" approach to corporate SD. Nevertheless, there are some key points applicable to all organizations as will be discussed in the following sub-sections.

\textbf{Must weave into business strategy}

A reasonable place to start is to ask in what way SD is compatible with the core business strategy. Only once this is identified and SD can be made a subset of corporate strategy is there a business case for such a pursuit.\textsuperscript{70} One concrete example within the area of new product/new market development is Monsanto's use of their existing core technologies to address potable water supply issues in developing countries. Another example of changing a product to create lifetime value and thus build customer/supplier loyalty, is Xerox's Asset Recycling Management Program which designs reusable parts into its copy machines and offers its customers a rebate incentive to exchange old copiers for new ones. Other strategies

\textsuperscript{69} Ibid, p. 9.
\textsuperscript{70} Ibid, p. 22.
might simply involve complying with existing regulations, guidelines or codes of conduct for
the industry in hopes of preserving the corporate reputation and license to operate. Some
require changing business processes to prevent pollution while gaining operational
efficiencies.\footnote{Reed, Donald J. "Green Shareholder Value, Hype or Hit?" \textit{Sustainable Enterprise Perspectives}, World Resources Institute, September 1998, p 3-4.} In each of these cases, SD must be woven into the business strategy, not be simply a functional add-on.\footnote{Zadek, Simon. "Doing Good and Doing Well: Making the Business Case for Corporate Citizenship" The Conference Board, Inc., Research Report 1282-00-RR (U.S.A: 2000), p. 30.} It may even entail reinventing business models using existing competencies, as was the case in Xerox's design-for-remanufacture example above.

\textbf{Mental models}

Perhaps more fundamental is the idea that mental models must change. In order to innovate new possibilities and solutions, personnel at any level in the organization must feel free to think outside of set procedures and norms. Ideally, the organization should work toward a collective vision and freely share their learning. In order to effectively define what sustainability means to the organization, internal advocates with a clear and consistent vision of the future SD organization must exist. It is important to recognize, however, that this SD vision is likely to be a moving target.

\textbf{Systems thinking}

Systems thinking is another key mastery in understanding the bigger picture of SD as it applies to the organization. It maps interrelationships, or causal loops, of various SD dynamics combined with business strategy. It is also about identifying solutions for the long term versus the short run - an extremely crucial dimension of SD, especially concerning stakeholder
relationships. Systems thinking treats the root of the matter, not the symptoms.\textsuperscript{73} We will demonstrate this technique on the energy industry in the next chapter.

\textbf{Top-Level commitment / raising awareness}

SD must be expressly endorsed, committed to and communicated throughout the organization by top-level management.\textsuperscript{74} Additionally, corporate policy must clearly state SD objectives.\textsuperscript{75} Training and awareness programs in the areas of human rights, the environment, the meaning of SD and its place in corporate policy, if conducted in an effective manner, are natural ways to communicate the concept and gain employee cooperation.\textsuperscript{76} The inter- or intra-net are additionally useful in raising awareness.

\textbf{Start with low-hanging fruit}

Another effective approach is to involve the workforce in developing the process, identifying intermediate targets, and aligning performance incentives with those SD objectives.\textsuperscript{77} A “broad-brush” analysis of business processes and potential SD applicability is a good starting point. Next, prioritize SD initiatives, and begin implementing those that are sure to demonstrate the best returns.\textsuperscript{78} This in turn will generate more incentive and enthusiasm, and thereby build momentum to identify additional projects. This should continue as long as benefits are visible.

\textsuperscript{74} "Buried Treasure: Uncovering the business case for corporate sustainability", UK: SustainAbility, 2001, p. 50.
\textsuperscript{78} "Buried Treasure: Uncovering the business case for corporate sustainability", UK: SustainAbility, 2001, p. 50.
Share experience

Sharing SD successes and lessons throughout the organization as well as outside the company are important. Additionally, demonstrated SD successes should be shared with the firm’s financial analysts in order that SD be factored into company valuation. This will ultimately help the company by attracting new investors.

Assessing SD in decision-making

Corporate executives must see that both environmental and social implications are being considered in all organizational decision-making. This will be difficult at first but will surely become easier with practice. With respect to targeted SD efforts, account for total and life-cycle costs when performing the cost/benefit assessments. Be forewarned, however, this should be done using existing mainstream data collection. Generating too much data for measuring performance may lead to meaningless analysis and, worse yet, waste time and resources, thus diminishing project returns. In other words, translate the business case of SD using existing language and systems.

Proxy measures

An additionally available, yet underused, way of guiding SD efforts is the selection and use of proxy measures of performance. For instance, media coverage, community reactions to specific events, or marketing survey data revealing consumer attitude toward a particular product, are all hard evidence of what is working and should be reinforced, or what potentially needs improvement within the company. Lexis Nexis is a useful tool for this practice.

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80 Ibid, p. 50.
83 Ibid, p. 50.
Screen your business partners

SD boils down to the value of relationships. Remember the earlier discussion of companies being targeted by NGOs for their supplier's poor behavior? The business therefore must remain aware and weigh in to environmental and social practices of all partners in the business venture. Companies are more frequently using sustainability screens in their business partnerships. Not only does this create assurances on the corporate reputation, but it also serves to establish a business relationship based on trust, integrity and ethics.84 This increases cost efficiencies associated with launching and maintaining those supplier, franchisee, and agent partnerships.85

2.7 Concluding considerations

As this chapter has illustrated, SD is incredibly complex in terms of its multiple facets and the demands placed on global corporations. It is equally complicated for organizations to pursue it without universally accepted benchmarks and measurement tools. Nevertheless, some corporations are making SD commitments, and for good reasons. The business leaders of these proactive firms recognize the value in terms of brand perception and license to operate. These both depend on the company's bonds with society – which is also the potential consumer of products or services. There are many helpful ways to address the requirements for managing constituencies and corporate strategy. Systems thinking and organizational learning are two we focus on throughout the document. Next we turn to an explanation of the oil industry and set the context for how SD might play out in the oil sector.

Chapter 3: The Oil and Gas Industry

This chapter explains the need of SD as a strategic tool for the firms within the oil and gas industry. We argue that SD is no longer “nice to do” but that strategies of firms within the industry must integrate them even more than in the past.

The chapter begins with a broad scope and impact of the oil and gas industry on society and business – which is why we chose to study it. It briefly covers the historical perspective to show the traditional drivers of business models. Finally, we explain the changing dynamics within this industry. The need for SD as a strategic tool is linked with the changing dynamics and, as such, forms the basis of our argument.

3.1 Energy at the heart of development

To study “sustainable development”, we looked at the sector within the economy that bears direct correlation with “development” itself. The energy sector was quite easily the sector of choice. Energy has played a pivotal role in the development of nations. Figure 1 below (taken from API’s website)\(^{86}\) tells a story of development and its link with energy consumption. It shows the consumption pattern of the world’s biggest economy – The United States. The consumption of energy and the growth of the US economy have happened along the same time horizon.

According to the “World Energy Outlook 2002” a report written by International Energy Agency\(^7\), over the past 30 years there has been a linear growth of energy consumption worldwide. It is projected to continue growing at a faster rate over the next 20 years. World energy consumption is projected to increase by 60 percent from 1999 to 2020. Much of the growth in worldwide energy use is expected to be in the developing world. Figures 4 and 5 depict various growth scenarios that the report evaluates. They show a direct correlation between the rate of growth of GDP and the rate of energy consumption. The energy industry is as a result regarded to be at the heart of development.

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3.2 Hydrocarbons take the cake

If we now look at the various segments within the energy sector, it is clear that hydrocarbons (oil, gas and coal) have been and are projected to be the main source of energy for years to come. Within the hydrocarbons segment, oil and gas together have clearly had the biggest share of energy consumed. Oil has been the biggest source of energy until now. Natural gas is projected to gain significant importance in the coming years. It is also projected that carbon dioxide (the principal Green House Gas or GHG) emissions from oil and gas will constitute a significant proportion of the total emissions. The following figures from IEA's report "World Energy Outlook 2002" elucidate the above points.

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**Fig. 6 World Energy Consumption**

By Fuel Type, 1970-2020

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**Fig. 7 World Energy-Related Carbon Dioxide**

Emissions by Fuel Type, 1970-2020

Production and supply of oil and gas have many common features. These commodities are therefore produced and sold by the same companies, as such. Together they form the "oil
and gas industry”. Let us look at some of the characteristics of this industry that motivated us to focus on it for our study of SD.

3.3 Both oil and gas are non-renewable

The industry supplies oil and natural gas - both non-renewable sources of energy. Projections vary as to how long these sources will last. It is clear, however, that the industry as a whole has to evolve dramatically as reservoirs mature. It is interesting, therefore, to see how firms within this industry are evolving. Some of the options for the industry include: extending the life of reservoirs, making presently uneconomical reservoirs more commercial, investing in technologies that make efficient use of the limited energy and investing in technologies that make use of renewable sources of energy on a commercial scale. All of the above options essentially aim to “sustain” development and therefore studying the various approaches made good sense to us.

3.4 Made to trade

Oil and Gas are produced in all parts of the world, the biggest markets being in the US and in Western Europe; the biggest producers being the lesser-developed countries – making trading of the commodities essential. This is apparent from figures 8\textsuperscript{89} and 9\textsuperscript{90}. The amount of reserve growth and undiscovered reserves are also higher in the developing world. The dependence of economies on oil and gas and therefore on producing countries makes these two commodities strategically important and is likely to remain so for a long time to come. The industry as a whole has to remain global in its approach when it comes to business strategy and

lends additional interest to the study of the SD approach of companies, particularly in a present globally "connected world".

<table>
<thead>
<tr>
<th>Region and Country</th>
<th>Proved Reserves</th>
<th>Reserve Growth</th>
<th>Undiscovered</th>
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<td></td>
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<td>United States</td>
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<td>83.03</td>
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<tr>
<td>Non-OPEC</td>
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</table>

Note: Resources include crude oil (including lease condensates) and natural gas plant liquids.

### Fig. 9 Nat. Gas Reserves by Region as of Jan. 02

![Diagram showing Nat. Gas Reserves by Region]


#### 3.5 Large global impact of the industry

The UNCTAD/Erasmus University database shows that in 1999, four out of the top 10 transnational corporations (TNCs) in the world (ranked as per foreign assets) were oil and gas companies. Data from the same database also show that three out of the top 10 TNCs from developing countries were also oil and gas companies. If one were to include the industries directly influenced by the oil and gas commodities – such as the automotive industry, the number would be 8 out of 10. The employment figures also show similar trends.

Oil and gas prices have a big influence on inflation figures, which in turn impacts literally all walks of economic life. Rarely does a day pass, without some news related to oil and

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gas. In the last century, political strategies, strategic investments and even wars revolved around gaining control over these commodities. Any changes that happen in the industry have both immediate and long-term implications on the society as a whole.

3.6 Environment knows no national boundaries

The development of national economies and their link with natural resources only tell a short-term story. Traditionally, the long-term impacts on the environment are usually treated as externalities and have rarely been evaluated in the context of overall development. There is a certain element of “tragedy of commons” when it comes to damage to the environment. In most cases, environmental damage is a slow process. In the case of oil and gas exploration, it usually takes place geographically far from the markets. This means that corrective action is taken only when cumulative damage is noticed and is noteworthy. As explained in the book, Business Dynamics, this is a classic situation when there is a tendency for damage to continue long after it can be sustained. \(^9^2\) There are stocks and flows in any system and the stocks such as the atmosphere create delays, which allow the rate of damage to continue for quite some time before any bad effects are seen. Overshooting creates oscillations in the system, which makes it very difficult to judge its state at any given time.

Greenhouse gas (GHG) emissions are a case in point. All through the last century, fossil fuels were increasingly used as a source of energy. Lack of control on its emission combined with the lack of understanding of the effects of greenhouse gases have left us in situation where there is a possibility that we may have overshot the level of GHGs in the atmosphere to a level where even drastic reduction of emissions today will have little or no impact until much later.

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The rise in global temperature as shown below is likely to continue. Figure 11\(^95\) shows that weather related losses have increased over the last 40 years. It is not clear if there is a correlation between these losses and the change in temperature pattern, but waiting for proof may be catastrophic.

Fig. 10 Average temperature at the Earth's surface, 1860–1998 (Degrees Celsius)
Source: Goddard Institute, Worldwatch Institute, 1999.

Fig. 11 Economic losses from weather-related natural disasters worldwide, 1960–1998 (Billions of United States dollars, 1997) Source: Munich Re Group.

\(^95\) "We the people", UN report, p. 57.

While it is not yet clear how large a problem global warming will be, it is certain that an attempt to stabilize atmospheric composition by restricting emissions of GHG will be a problem. It has been estimated that carbon dioxide emissions would have to reduce immediately by 75% to stabilize the concentrations at their present level. It is inconceivable that a rapid reduction of that magnitude could be achieved without massive economic dislocation. It is clear that in this sense there is a global warming problem.

The impact of drastic reduction of fossil fuel use is sure to be felt almost immediately by the oil and gas companies. The dynamics of how that will happen given the dependence of the world on these fuels makes for a complex study. Before looking at the evolving strategies of the oil and gas industry, let us look at its basic structure.

### 3.7 The oil and gas industry

The business of the oil and gas companies can typically be divided in three sectors: the UPSTREAM, MIDSTREAM and DOWNSTREAM. In the oil business, Upstream refers to the part of the business dealing with exploration and production. The Midstream deals with transportation to the refineries and the downstream part of the business deals with the refining/processing and distribution of the products. Sometimes the firms organize themselves to handle midstream and downstream in one organization. The gas industry is similar, although there are several stages of processing involved. Just as an example, here is the schematic arrangement of the gas industry.

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The profit rates of upstream and downstream (including midstream) segments of the petroleum industry can differ significantly and are subject to the volatility of the international crude oil marketplace. Figure 13 shows that over the period from 1977 through 1998, the upstream oil and gas production segment has generally been more profitable than the downstream refining and marketing segment. Oil and gas production profits (as measured by net income as a percent of net investment in place) averaged 9.6 percent during this period, compared to just 5.6 for refining and marketing. The international decline in oil prices, which began in the early 1980s, eroded the profitability of upstream production. At the same time, lower levels of petroleum prices stimulated consumption and created opportunities for investments in refining and marketing operations. This contributed to the upsurge in profit rates shown in 1988 and 1989 for the refining and marketing segment. In general, oil and gas production profits increase sharply when supplies are limited. They can also drop sharply when supplies are plentiful, as they were in 1998. Oil and gas production profits fell to an average of just 0.5 percent in 1998 compared to 7.9 percent for the refining and marketing segment, 3.9 percent for the overall petroleum industry, and 16 percent for the S and P Industrials.

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A brief overview of the major risks faced by international oil and gas firms over and above the usual operational and supply chain issues will help clarify their strategic choices. There are basically five risks: geological, project, social and environmental, financial, and political or nation related.

**Geological risk**

Includes both:

1) Exploration risk i.e. is there commercial quantity of oil? and
2) Production risk i.e. will the reservoir produce at a certain rate for a certain time?

Both these risks are usually mitigated through information gathering (high resolution seismic surveys, production profiles, reservoir mapping etc). Typically, for these risks, the companies are self-insured.

**Project risk**

The main component of this risk is associated with delays, although other factors like cost overruns/pricing etc are also involved. The time factor is important because delays associated with projects tend to be large and combined with enormous investments have a
major impact on NPV of the project. Once again, the firms have to be self-insured for these risks.

**Social and environmental risks**

Two main components are pollution risk while handling hydrocarbons on surface and subsurface pollution of aquifers. Although environmental liabilities are, to some extent covered by insurance, the insurance does not cover loss of image and future opportunities. Most oil and gas companies have policies and standards in addition to resources that minimize this risk.

**Financial risks**

Here again there are two main components: Price fluctuation of oil / gas and currency risks. These risks are usually hedged via market instruments or via long-term dollar denominated contracts

**Political or nation related risk**

This is the only risk where modeling is not possible. It can surface due to factors ranging from ability to exercise contractual rights, to war /civil unrest, change in tax regulations, export quotas due to international agreements etc. Individual firms usually manage it by using a portfolio methodology (investing together with others) or via contractual incentives. Usually executives appointed in areas of political risk are the most experienced and diplomatic, those having a competency of pragmatic negotiation and unlimited patience. The company image, level of transparency and stakeholder engagement can also help in reducing this risk.

Now let us look at a historical perspective of how strategies evolved in the age of black gold.
3.8 Evolution of firm strategies in the age of black gold

An editor of a trade journal in 1859 wrote the following about coal oil, "The growth of the coal oil business is the proof of impetuous energy with which the American mind takes up any branch of industry that promises to pay well." 96 This was certainly true about crude oil for 150 years since the Drake well in 1859. Drake's discovery ignited an oil boom, which was fed by strong demand for lighting fuel and lubricants.

Over the next four decades, the boom spread to Texas and California in the United States and to Romania, Baku (in Azerbaijan), Sumatra, Mexico, Trinidad, Iran, and Venezuela.

Overproduction temporarily drove prices down, but the rapid adoption and spread of internal combustion engines in the late 19th century helped create vast new markets. With only temporary interruptions, world petroleum consumption has expanded ever since. Until the 1950s the United States produced nearly all the petroleum it needed. However, by the end of the decade, the gap between production and consumption began to widen and imported petroleum became a major component of the U.S. petroleum supply. Beginning in 1994, the US imported more petroleum than it produced.

During the 20th century, no industry received as much focus on a sustained basis from governments and businesses as the petroleum industry. During the period, the world witnessed extraordinary events ranging from world wars, cold war, forming of OPEC, the oil crisis, environmental disasters, and the gulf war. Fortunes were made and lost because of this commodity. Controlling this commodity - both its production and distribution was the basis of creating the fortunes. Oil companies were the biggest multinational corporations, with attributes of sovereign states - their own terms of trade, a multitude of dedicated citizens, treasuries that overshadowed those of most nations, their own foreign policies and even their

own air fleets. Those were the days when the mystique of technology, market capital, logistics, global view and government backing meant that the corporate strategy of multinational oil companies was mainly to gain control of reservoirs and distribution channels. The geological risk of finding oil was the biggest business risk to cope with. Product differentiation was not a major issue, nor was environmental or social impact. Local governments were usually in a weaker position to negotiate terms. The firms’ brands were established long before brands mattered. Throughout the twentieth century the major oil companies have been the object of intense scrutiny, suspicion and mistrust. In his book, Daniel Yergin quotes Robert Anderson, the former Chairman of ARCO, “The oil industry is like a moose trying to hide on a barren landscape.” However, such mistrust and scrutiny did not affect the profits of the companies due to the relative importance of the scarce commodity that they were selling.

With the increased competition from “independent” oil companies, reduced influence of western states with the decolonization, much of the power was wrested from Western companies and sweeping changes like outright nationalization were brought about by oil producing nations. Thus, in the 1960s and 1970s, corporate strategy was a game of negotiations and differentiation. Although the upstream sector was more profitable, the firms started relying more than ever before on refining and distribution for their profits. The vertical integration pursued by the oil majors allowed them to appropriate decent profits to hedge against the schizophrenic nature of the markets.

The continuing exploration in many parts of the world meant that the oil industry and the soon developing gas industry kept the world flushed with hydrocarbons and just as these companies started to squeeze more out of the reservoirs, the markets started to squeeze their profits. Technology, better corporate programs, better compensation schemes, alliances,
investing in relationships with the governments and national oil companies were the means of keeping ahead in a commoditized market. In April 1998, PIRA Energy Group wrote an article in the Oil and Gas Journal describing the financial strategies of top 10 oil and gas firms. The article explains the way in which all 10 companies have had to refocus on their core activities in the upstream, midstream and downstream sectors. They had to downsize in order to improve ROCE. Companies were trying to find ways of further diversification. BP had chosen social responsibility and NGO engagement. Shell had also taken that approach. Both Shell and BP were also investing in renewable energy as part of their core business.

As we had seen in more general terms in Chapter 2, firm strategy within the oil and gas industry is also evolving. The oil and gas firms' strategic move towards social and environmental differentiation is a wave that Daniel Yergin calls the “third environmental wave”. According to him, the first wave started in late 1960's focusing on clean air and water. That wave provided the impetus for a rapid switch from coal to fuel oil. The second wave was narrow in its focus, with concentration on slowing or stopping nuclear power. The third wave started in 1980s. It is broad in its scope and cuts across traditional ideological, partisan and demographic differences. Perhaps the one event that catalyzed this wave, according to Yergin was the Chernobyl disaster in 1986.

The Exxon Valdez environmental disaster in Prince William Sound on March 24, 1989 when 240,000 barrels of petroleum were spilled in the pristine waters changed the landscape of the industry forever. The Montreal protocol in 1987, the Rio Earth summit in 1992, the Kyoto Protocol in 1997 and the Global Compact in 2000 are all part of this wave, which has yet to reach its crest.

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98 PIRA group, Oil and Gas Journal. April 1998, p. 27.
Now let us look at the effects of IT on this third wave and the consequences on the evolving firm strategies.

3.9 In the age of information - bytes bite

Shell’s experience with Brent spar and Nike’s experience with sweat shops in Asian countries have shown that the drama within the third wave is played out by actors that were unknown or insignificant in the past. These new actors are the NGO’s. They are the self appointed caretakers of this wave. Their activism can be damaging and at times lethal. The other key lesson learned is that the same information technology that has fueled productivity has a power to bite quick and hard. The speed of these unpleasant events for the firms is shockingly faster than their normal clockspeed of change. To add insult to injury, once bitten, the brand takes time to heal.

To see if there is a certain trend within the media, to which perhaps the firms should pay attention, we queried the Lexis Nexis database for various combinations of words within both the articles and the headlines. We observed that SD, CSR and NGOs are subjects getting increasing media attention. The charts below are self-explanatory. (For the purpose of uniformity, the 2002 figure is annualized). In the next section, we will see the relevance of this trend within the context of business dynamics.
3.10 Options and future in the bolemic world

So far, we have seen that the oil and gas industry is huge, complex, important and one that is at the source of major environmental issues. It has both shaped global events and has itself been affected by externalities. Business leaders surfing the third wave have had to wrestle with how to deal with some of the trends mentioned earlier. Are the customers willing to bear the extra cost of environmental and social programs? Is it the right time to be proactive? Most importantly, what should a firm do and what is the best way of going about it? These questions
are not easy. We have seen that only two major oil and gas companies have made conscious decisions to proactively promote the SD and to include it in their branding strategy. In doing so, are they visionaries or gamblers? In the next two chapters, we will review what the two companies are doing and what we can learn from their actions.

Before we do that, let us look at a simplified picture of the business dynamics using the causal loop diagram (CLD). The diagram attempts to show the dynamics of changes occurring within the industry. The diagram shown is for the purpose of illustration. We strongly believe that a detailed system dynamics model, although outside the scope of this study, could be useful in helping make informed decisions on some of the basic questions.

The CLD depicts the effects of various factors and their inter-relationships within the context of brand image. Even the simplistic causal loop diagram shows that depending on the loop dominating the dynamics at any given time, the firm strategy had to constantly re-allocate their resources for best results. In the days when oil and gas was scarce or not readily available, firms did not have to worry about NGO reactions. With commoditization and increased NGO activism, social acceptance started to be an issue. With the advent of IT, the increased effectiveness of NGOs did real damage to social acceptance. We have shown the brand as the main stock variable since it represents the long-term shareholder value. As a stock, it creates delays within the system; hence actions today show results much later. Brand creation and maintenance is traditionally a slow rate while as the erosion rate could become very fast if social acceptance were in jeopardy.
An interesting observation is that social acceptance could actually become a social "license" or "permit to operate" which directly affects the firm's existence. The withdrawal of a license might be as fast as "one strike and out"; on the other hand, it could be an advantage in product differentiation that could get the firm higher value than its competitors. The negative effects of social acceptance are evident from Nike and Shell's experience. The direct material gains due to SD are less evident. We believe that SD is in a phase of ferment. As shown earlier, the mere discussion of these issues is increasing rapidly. Regulations, society, the media are all singing the same tune and corporations such as Shell and BP are placing themselves to take advantage of doing well by doing good.
3.11 Summary

In this chapter we saw that:

- Energy consumption and development of nations are highly correlated.
- The developing world will see an increase in consumption of oil and gas.
- The biggest reserves of oil and gas are in the developing countries and the biggest markets are in the media savvy developed countries.
- Traditionally, only the market forces shaped strategy of firms within this industry. The strategic importance of the commodities and the relative size of oil and gas firms allowed them to appropriate value through traditional strategies of controlling supplies.
- The industry’s traditional clockspeed of change is slow.
- Global connectivity, NGO activism and media interest have added new dimensions to their strategy. These factors are fueling the third wave of environmentalism and of social awareness. These new factors have a high clockspeed of change and can potentially damage oil and gas firms’ future profitability.
- The combination of the inherently slow clockspeed of the industry and the fast clockspeed of the third wave is creating an urgency to act.
- One way to view the complex interrelationships of these factors is through systems dynamics modeling.
- BP and Shell are navigating these uncharted waters and leading the SD charge.

In the following chapters we will look at what actions are being taken by these companies via specific case studies.
Chapter 4: Case Study – Royal Dutch/Shell Group

This chapter introduces the business of the Royal Dutch/Shell Group of companies, describes how the company is managed, highlights its business principles, and then reveals the story of Shell’s journey toward SD. After addressing how they are approaching it at the corporate level we move into a specific implementation example at the Aberdeen exploration and production field office, and finally describe two specific SD project cases – one in the Philippines and one in Canada – to better illuminate how Shell attends to SD at the ground level. This analysis is based on company documentation and a series of Shell interviews.

4.1 The business of Shell

The Royal Dutch/Shell Group is currently the second largest global player in the oil and gas industry, having been in business for more than a century. They operate in more than 135 countries across the globe, employing 95,000 direct staff. They have over 2500 companies and joint ventures (many with the government). The Shell Group was born out of a 1907 alliance between Royal Dutch and Shell Transport. Through this alliance the two companies agreed to merge their interests on a 60:40 basis while keeping their separate identities. The diagram below depicts the relationships and governance structure of the company.100

Figure 16: Shell’s governance structure

100 Shell website, http://www2.shell.com/home/Framework.
As shown here, Shell's businesses include oil and gas exploration and production, power generation, manufacturing, marketing and shipping of oil products, chemicals and gas and power and renewable energy projects, including wind and solar power. The operating companies of Shell are further described as follows:\(^{101}\)

Table 1: Shell's business lines.

<table>
<thead>
<tr>
<th>Operating Company</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploration and Production:</td>
<td>Searches for, finds and produces oil and gas. Builds the infrastructure needed to deliver hydrocarbons to market.</td>
</tr>
<tr>
<td>Downstream Gas and Power:</td>
<td>Natural gas and liquefied natural gas (LNG) infrastructure and market development, marketing and trading of natural gas and electricity, power plant development, Gas to Liquids.</td>
</tr>
<tr>
<td>Oil Products:</td>
<td>Sales and marketing of transportation fuels, lubricants and specialty products. Refining, supply, trading and shipping of crude oil and petroleum products.</td>
</tr>
<tr>
<td>Chemicals:</td>
<td>Producing and selling base chemicals, petrochemical building blocks and polyolefins globally.</td>
</tr>
<tr>
<td>Renewables:</td>
<td>Generates green electricity and provides renewable energy solutions. Develops and operates wind farms and biomass plants; manufactures and markets solar systems and grows sustainably managed forests.</td>
</tr>
</tbody>
</table>

Economic data of the company for FYs 1996-2000 are as follows:\(^{102}\)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross sales proceeds</td>
<td>191,511</td>
<td>149,706</td>
<td>138,274</td>
<td>171,657</td>
<td>171,964</td>
</tr>
<tr>
<td>Net proceeds</td>
<td>149,146</td>
<td>105,366</td>
<td>93,692</td>
<td>128,155</td>
<td>128,313</td>
</tr>
<tr>
<td>Gross profit</td>
<td>30,315</td>
<td>23,527</td>
<td>17,018</td>
<td>27,761</td>
<td>28,862</td>
</tr>
<tr>
<td>Operating profit</td>
<td>24,500</td>
<td>15,232</td>
<td>3,104</td>
<td>15,942</td>
<td>17,129</td>
</tr>
<tr>
<td>Income before taxation</td>
<td>24,036</td>
<td>14,521</td>
<td>2,405</td>
<td>15,219</td>
<td>16,972</td>
</tr>
<tr>
<td>Net income</td>
<td>12,719</td>
<td>8,584</td>
<td>350</td>
<td>7,758</td>
<td>8,886</td>
</tr>
</tbody>
</table>

Shell does not have a formal mission statement; however, the following statement gives a sense of what they consider to be their priority: \(^{103}\)

\(^{101}\) Shell Annual Report and Accounts 2000 Summary.
Shell businesses exist to meet the energy needs of society in ways that are economically, socially and environmentally viable. All of our businesses are united by common goals; to make the most of our existing business; to gain new business and to break new ground.

Stated in a slightly different fashion in their annual report:¹⁰⁴

The objectives of the Royal Dutch/Shell Group of Companies are to engage efficiently, responsibly and profitably in the oil, gas, chemicals and other selected businesses and participate in the research and development of other sources of energy. Shell companies are committed to contribute to sustainable development.

From these statements we begin to clearly see the company’s stated commitment to SD. At the same time, they emphasize economic viability, business progression and expansion, they also make evident that achieving these objectives must coincide with concern and care for social needs and the environment.

4.2 A company with solid values

Shell structures its strategy around three primary goals as follows:¹⁰⁵

1) Making the most of what they have – continuous business improvement
2) Gaining new business – expanding into new businesses
3) Breaking new ground – creating new business

Their core values are honesty, integrity, and respect for people.¹⁰⁶ These values have been embedded within a set of Business Principles in place since 1976.¹⁰⁷ Over time these principles have been modified and have visibly shifted toward an SD emphasis. Nevertheless, from the beginning they addressed responsibilities to employees, customers, and society, using the words “which is in keeping with good citizenship and pays proper regard to safety and to social and environmental standards and needs”.¹⁰⁸ In addition, they also include principles regarding “Grants and General Community Projects” and “Integrity of Accounting and Bribery”. Today

¹⁰⁷ Internal Shell Document (SD Briefing by the Shell International Sustainable Development Group).
¹⁰⁹ Ibid, p. 22.
there are nine business principles, provided at Exhibit 1. From these Shell makes it very clear within the company that the elements of SD should be the standard way of doing business. The evolution toward this most recent set of principles will be elaborated further in the following sections of this chapter.

Speaking very specifically to their environmental efforts, in addition to mere words within a corporate value statement, Shell has demonstrated responsible behavior dating back to the late 1970s and early 1980s. They have always followed the multiple, evolving rules with rigor, and in fact more typically stayed out in front of the legislation. Perhaps where Shell was less prepared in the wake of increasing societal expectations was to make their actions more visible to the public, and to actually engage their input where the local community would be impacted. This discussion will be expanded in the next section.

Another strength of the company, and certainly noteworthy in the context of SD, is that of Shell’s unique scenario planning expertise. Shell has for a number of years used scenario planning to make important strategic decisions. The need for this strength in planning came to the fore at about the time of OPEC and the ensuing energy crisis. In 1972 they began to map possible future trends and the possible responses to those trends. For example, their scenario analyses revealed the need to explore for oil in new countries while stabilizing the operations at existing refineries due to growing prices and slowing demand. This type of preparation positioned them well ahead of their competitors at the time of the 1973-74 oil embargo. Shell was far and away more flexible in responding to fluctuating prices and demands than competitors were capable of matching. As a result, where in 1970 Shell had been considered

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109 Personal Interview with Shell Expro HSE Manager, New Business Development (Exploration) Department, January 24, 2002.
the weakest of the seven large oil companies, by 1979 they were ranked on the top with Exxon.110

As it turns out this strength is indeed an important skill in the sustainability business as well. The possibilities for sustainable process improvements are frequently born out of the scenario planning process. In fact, Shell has documented a report entitled Energy Needs, Choices and Possibilities: Scenarios to 2050. The following is an extract from this document that serves to illustrate the meaning, importance and use of scenario planning as it pertains to Shell and SD.111

Scenarios are a tool for helping managers plan for the future – or rather for different possible futures. They help us focus on critical uncertainties. On the things we don't know about which might think the unthinkable, anticipate the unknowable and utilise both to make better strategic decisions. Scenarios are alternative stories of how the world may develop. They are not predictions – but credible, relevant and challenging alternative stories that help us explore 'what if' and 'how'. Their purpose is not to pinpoint future events – but to consider the forces which may push the future along different paths. They help managers understand the dynamics of the business environment, recognize new possibilities, assess strategic options and take long-term decisions.

Shell companies pioneered the use of scenarios for strategic planning in the 1970s and have used them for a wide range of studies. Shell planners have also been involved in developing scenarios with such bodies as the World Business Council for Sustainable Development and the Intergovernmental Panel on Climate Change (IPCC), as well as to help build a shared vision of the future in divided societies, such as South Africa in the early 1990s. Shell first developed long-term energy scenarios for the first half of the 21st century in 1995.

From this we see the real value in looking to the future, taking great care to document a strategic course along with associated contingencies given any possible scenario. This especially plays well into the demands of SD, and for this reason we believe Shell is positioned well for the future.

4.3 “Why SD?” – the events of the 1990s

While Shell has always had value principles embedded in the organizational culture as previously mentioned, the force behind their dramatic shift toward transparency and SD was a series of image-tainting events in the mid-1990s. First, Shell had taken a great deal of heat from their exploration and production business in Nigeria.

While Nigeria is the 6th largest producer of oil (6 million barrels a day), most of that production is exported to other countries (90% of Nigeria’s foreign exchange revenues), leaving the natives with a fuel shortage. In the early 1990s, Shell was accused of exploiting the Nigerian people and the environment. This led to a great deal of unrest. In 1993, a protest by hundreds of thousands of ethnic minority Ogani people suspended Shell’s production operations. The Nigerian government eventually (1995) took an extreme response by executing many members of the Ogani rights organization and, most notably, its leader, Ken Saro-Wiwa. Rightly or wrongly, Shell was attacked for not stopping these human rights abuses, or worse, having a role in them.\textsuperscript{112} Also in 1995, Shell’s compliant yet opaque plans to sink its expired Brent Spar oil exploration platform in the North Sea were met with vehement protest by Greenpeace and other governments.\textsuperscript{113} Soon the company was reacting to a plethora of negative press - not all of which was accurate - which continued for over a year. This became a defining moment for Shell. The combination of these incidents created for them a brand image nightmare. Shell outwardly acknowledges that it was at this point they began to think about sustainable development and to realize the value of transparency in their actions.\textsuperscript{114}

\textsuperscript{112} White, Jerry. “Who is responsible for the oil explosion in Nigeria?,” 21 October 1998.
Just prior to the events of 1995, Shell recognized that it had deficiencies that needed to be addressed. The Chairman at the time accused Shell of becoming bureaucratic, arrogant, and complacent, among other things.\textsuperscript{115} This realization led to a more business-focused reorganization meant to inspire innovation, and ultimately to address attitudes on company values and principles. Then, in the aftermath of the 1995 disturbances, Shell delved intensely into a discovery of people's expectations – both internal and external to the company - and examined their internal processes and organizational alignment to determine what if any adjustments would be necessary. They evaluated the Group's Health, Safety, and Environment (HSE) practices, setting consistent policies and procedures throughout the entire organization. Additionally, the Committee of Managing Directors (CMD) agreed to do a thorough review, in concert with academics, government, the media and NGOs, of the company's business principles. The results of all this activity were 1) the acknowledged need for better communication with the outside world and transparency in general, and 2) the linking of fundamental values and operating principles, and eventually renewed policies and procedures where pertinent. The renewed Business Principles (at Exhibit 1) were documented in 1997.\textsuperscript{116} Also during that year, Shell made its commitment to the public to contribute to sustainable development. To help consider sustainability in their daily business, Shell established seven sustainability principles provided as Exhibit 2.

4.4 Getting it right

In the course of investigating the realm of societal expectations, Shell identified a set of forces changing the competitive business world as they knew it.\textsuperscript{117}

\textsuperscript{115} Ibid, p. 4.
\textsuperscript{117} Internal Shell Document (SD Briefing by the Shell International Sustainable Development Group).
• ‘Trust me’ to the ‘Show me’ world
• rise in the ethical agenda
• consumerism the new ‘democracy’
• world forces: globalisation, liberalisation, technology
• CNN world
• retreat of the state

They depicted this new stakeholder phenomenon, referring to it as “a principled approach to business” and “the key to long term success”, in the following way:118

Figure 17: The ‘trust me’ – ‘show me’ trend

Shell believes that the combination of its business principles as they relate to human rights and SD, their HSE policies and procedures, and its social accountability in the form of openness, transparency and engagement are indeed the keys to long-term success for the company. The following quote from Shell’s 2000 Annual Report demonstrates this understanding and emphasizes the importance of SD for their shareholders:119

Shell companies need to be profitable to deliver returns for shareholders and fund investment. But to thrive we must respond to a range of non-financial issues, such as transparency, respect for human rights and tougher environmental standards. Being trusted to meet societal expectations is key to long-term success.

Shell’s approach to SD is simply stated in three key bullets:120

• INTEGRATING economic, environmental and social considerations into decision making
• BALANCING short term priorities with long term needs, and
• ENGAGING with Stakeholders

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118 Ibid.
But where the real challenge would be was with “embodying SD into strategy, planning and daily conduct of operations,” then measuring their progress toward that end.\textsuperscript{191} Shell’s efforts in these regards are addressed in the sections below.

4.5 “What” measures have they taken?

As already discussed, the first steps for Shell were acknowledging that changing expectations must be addressed in a very serious and noticeable way, and setting clear standards for getting it right — hence, the plethora of SD jargon throughout company documentation and public advertisement. Shell’s website, for instance, is filled with explanations of their SD philosophy, accomplishments, strategies, methods for recruitment, etc. Reputation management: This excessive use of the term “SD” was in large part (and still is) for the sake of combating the negative perceptions that followed the incidents of the mid-1990s. As explained in Chapter 2, once victim of activist pressures, it can be extremely difficult to overcome the negative image that has been painted, regardless of how accurate or complete the information that fed it.

A Lexus-Nexis title press search over the past decade of activity revealed an interesting progression. Not much came to the fore concerning “Shell” and “the environment” in the early part of the 1990s with the exception of an oil spill which Shell was quick to remedy.\textsuperscript{192} Then came a surge of media coverage of the events of Nigeria and Brent Spar in 1995. Continuing into 1996, the face of this press took the form of “lessons learned” for other industries and companies with an undertone of the need for tighter standards. Finally, in 1997 Shell started

\begin{footnotesize}
\textsuperscript{191} Internal Shell Document (SD Briefing by the Shell International Sustainable Development Group).
\textsuperscript{192} “Business and the Environment; Shell chairman to lead green group.” \textit{Financial Times} (London), May 8, 1991, sec. 1:.31.
\end{footnotesize}
to get some positive coverage for its efforts in being more open and looking to alternative forms of energy.\textsuperscript{123}

For the period from 1997 through 2001, the title press was a mix of reviews. Mostly it served Shell fairly by presenting an objective account of the company's efforts and experiences in different aspects of SD (although it never quite uses the term "SD"). In any case, the company to this day is under the microscope with respect to its human rights and environmental activity. The NGO, CorporateWatch, gives a harsh and detailed profile of Shell at their website, covering aspects such as "corporate crimes", "climate change", "human rights violations", "renewable energy", "oil leak and drilling muds", "health and safety", and even has a section titled "missing the big picture."\textsuperscript{124}

Shell recently undertook an "External Affairs Review" to identify its progress and to outline the objectives for reputation management for internal country and line managers and the external affairs community. The review also served to educate about and emphasize the value of SD and reputation management as an inherent part of business strategy. It predicted increases in the following tangible benefits as a result of this new approach:\textsuperscript{125}

- probability of winning new business opportunities
- buffering and quicker recovery times in the event of crisis, due to the 'trust bank' and goodwill generated by strong stakeholder relationships
- ability to operate on the ground with maximum freedom and minimum constraints
- ability to attract high-quality staff
- ability to attract joint venture partners
- customer loyalty
- market value
- trust and confidence in the company
- value/attractiveness to investors of Shell stock
- willingness of customers to pay premium prices for products or services


\textsuperscript{125} Internal Shell Document (External Affairs Review), p. 3.
Shell sees it as a way of earning and retaining society's license to operate. The document outlines what they have done and are doing and its impacts, describes the complicating factors associated with strategic changes of the company, projects the groups challenges for moving forward, and, finally, outlines the functional responsibilities for getting there. Another recent Shell International publication serves a similar purpose, but more specifically targets the importance and details for stakeholder engagement. Finally, an internal periodical called "The Review" helps keep the external affairs community tuned to the latest activity and accomplishments within the company.

Message from the leadership

The top-level commitment for SD dates back to the Chairmanship of Sir Mark Moody-Stuart. Sir Moody-Stuart made the following public statement in the company's 2000 annual reports:

We believe a major challenge facing society today is posed by three inextricably linked issues:
- the world's increasing demand for energy
- the need for economic and social development of a growing population
- the need to assure a viable world for future generations
This threefold challenge has serious implications for the energy businesses, and concerns over climate change are at the heart of it.

He further stated the company's commitment to SD as follows:

Sustainable development underlies our strategy and is being integrated into everything Shell companies do – in oil and gas as much as renewables. How we succeed is as important as what we achieve. We are committed to delivering excellent returns and building value for the future – for the planet and its people, for our customers, employees and shareholders.

Thus, through his leadership and direction, SD was born within the company. During 2001, Mr. Phil Watts took over as Chairman of Shell's CMD, and upheld his predecessor's commitment to SD. Mr. Watts in fact steers an SD panel (or committee) in setting the

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priorities for the Group level SD work agenda for future years. Starting in January 2002, Mr. Watts was elected as Chairman to the World Business Council for Sustainable Development (WBCSD), and thereby represents the SD mission to the world's business community.

The Shell Report

Transparency and communication with the outside world has certainly become the name of Shell's new game. Their famous pioneering annual report, "People, Planet & Profits, The Shell Report," first published in 1998, is chalk full of details about SD within the company and the measures they are taking. Shell refers to it as "the flagship of the new integrated communications plan." Inside the company, it is acknowledged, "The Shell Report is important in communicating and motivating [SD] throughout the organization."

Mark Wade, a then member of Shell's social accountability team and now the Director of the Shell Sustainable Development Group, explains what went into the first report as follows:

We went through every business principle and asked ourselves 'what is the most relevant information that would help people make up their own minds whether we were living up to that principle?' It was a massive task because many of the questions had never been asked centrally before.

The report even publicizes public criticisms about the company in a feedback mechanism coined "Tell Shell". This invitation for feedback is further publicized and managed in a forum on the company's website. The list of contents for the total Shell Report can be seen at Exhibit 3.

A November 2000 Oil & Gas Journal article, covering Shell's report and SD efforts in extensive detail, gives the following review:

Shell seems to be attempting to stake out new territory here, proclaiming the efforts to be integral to a sound business strategy in a new world order. Through that prism, SR2000 can be seen as both a response to the megamerger trend and an assertion that a company's role in the social order, not just its size, is now central to competition.

**Investments and efforts in alternative energy & other SD innovations**

Shell recognizes that there is growing potential in renewable energy commercialization, and therefore, invests $500 million to $1 billion annually to evaluate renewable energy technologies. In 1997, Shell created the 'Shell Renewables' business unit as here described.\(^{133}\)

Shell Renewables is one of five core businesses of the Shell Group, established to develop commercial opportunities in solar and wind energy. Renewable energy sources are expected to meet an increasing percentage of the world's energy demand and we plan to be a significant player in this sustainable energy market.

Examples of their wind energy investments include an offshore wind farm in the North Sea and wind turbines in their Germany refinery. Their work with solar energy includes a network of solar centers in Germany and rural projects in South Africa, Bolivia, India, Sri Lanka, Morocco and the Philippines. Additionally, in 1999 Shell established ‘Shell Hydrogen’ to investigate business opportunities related to fuel cells and hydrogen based energy. Their new hot fractured rock technology is a form of geothermal energy that holds future potential as a sustainable energy option.\(^{134}\)

In addition to the above sustainable energy examples, Shell has many technology and product innovations contributing to SD. Following are a few select examples:\(^{135}\)

- A revolutionary gas processing technology, called "Twister", will result in cheaper, more efficient and emission-free natural gas processing.
- "Smart Wells" manage the oil field automatically and re-inject produced water before it is surfaced.
- A gasification technology partially oxidizes coal (or oil or biomass) to produce synthetic gas.
- The "Shell Middle Distillate Synthesis" process processes natural gas to produce ultra clean fuels.

\(^{133}\) Shell website, [http://www2.shell.com/home/](http://www2.shell.com/home/).


\(^{135}\) Internal Shell Document, "Business Case for Sustainable Development" (draft).
• “Active Asphalt”, a new product currently being tested, will attract dust and vehicle exhausts thereby reducing airborne particulate matter.

Additional examples of innovative strategies will be highlighted later in the “live case examples” section of this chapter.

Shell Foundation

The Shell Foundation is a $250 million trust fund for social investment. It has three program components: 1) sustainable communities, 2) sustainable youth, and 3) sustainable energy. This fund supports charitable initiatives such as income generation and livelihoods creation in under-advantaged communities, a Youth Enterprise Program, and promotion of sustainable energy services to poor communities in under-developed countries without modern energy.156

Corporate Identity Campaign

Shell also has a Corporate Identity Campaign to enhance listening and responding to the interests of their audiences. This campaign is currently being broadened to link with other business strategy themes, build and reinforce local SD examples, and to localize the campaign in new countries. The campaign additionally serves to increase staff awareness.157

4.6 “How” they go about it - top-down SD structure

Shell has a central SD Group at the London corporate office. This group is responsible for all central planning and policy development, as well as the external affairs and internal communications. All progress is routinely updated to the SD committee made up of high-level executives and chaired by Phil Watts. The SD Group carefully documents all its initiatives and

157 Ibid.
eventually shares it throughout Shell in the form of policy and procedure. The Shell SD Group Director acknowledges that "Shell has been thoroughly systematic in its approach," a predominant theme to Shell’s way of SD.

Beyond this central effort, each business is responsible for having its own specific program of SD planning and initiatives. Each business group, with the help of SD experts, maps its stakeholders (level of interest vs influence) and aligns its SD objectives. The focus is on the "hot spots" of their business unit climate. In other words, where human rights are an issue, heavy emphasis is placed on this particular responsibility. Sitting down with the corporate experts, each business management team looks at its business model, with an eye toward the necessary steps for SD and how they can map them (i.e., take the basic concepts and evaluate how to integrate SD into business processes).\textsuperscript{158} The key is in testing assumptions, identifying what may have been missed, and most importantly, finding a way to make the biggest impact. The central SD group emphasizes the importance of addressing "incomes" vs. "outcomes." "The portfolio of solutions comes out of this."\textsuperscript{159} After identifying his or her priorities, the business unit communicates an action plan and resources necessities to the higher headquarters.

The Group’s Self-Assessment Tool allows each business management team to reflect on its performance as it applies to the three issues of SD importance: integrating, balancing and engaging.\textsuperscript{140} Again, someone with the competence to apply the tools facilitates this identification and assessment process. Shell emphasizes the importance of "change agents" present in all operations, and thus places the responsibility for SD behavior with the

\textsuperscript{158} Personal Interviews with SD Group, Shell Corporate Headquarters, London, January 21, 2002.
\textsuperscript{159} Ibid.
\textsuperscript{140} Ibid.
operational managers. They want to “impress the SD mindset among the SD innovators, not the HSE advisors.”

Shell’s planned progression with SD moves from risk management to integrating innovative processes to, finally, maximizing value to the company.

How they measure

One essential element of the Shell SD strategy is its measures program. Initially they reported progress around the Group’s business principles. Then, in 1999, they began using the revolutionary “triple-bottom line” approach. Now Shell has a set of Key Performance Indicators (KPIs) they use to measure and drive progress in those areas that are critical to business success and relevant to both internal and external stakeholders. A total of 16 KPIs, compiled from surveys and qualitative measures (proxies), have been identified in consultation with the stakeholders. These are listed here:

Table 2: Shell’s KPIs

| Robust Profitability | • ROACE  
|                      | • TSR  
| Competitive Edge    | • SD Alignment  
| Customers & Stakeholders | • Brand Performance  
|                      | • Reputation  
|                      | • Quality of Engagement  
| People & Community  | • Critical H&S Data  
|                      | • Staff feelings on Respect  
|                      | • Diversity  
|                      | • Human Rights  
|                      | • Social Performance  
|                      | • Business Principles  
| Environment & Resources | • Critical Env. Data  
|                      | • GHG Emissions  
|                      | • Accept. of Env. Perf.  
|                      | • (Innovation)  

141 Ibid.
Five of these measures are already being reported. The other 11 are being evaluated for their practical implications. The “SD alignment” KPI is important to Shell in order to eventually measure the alignment of SD penetration and knowledge from the top to the bottom of the different group businesses. Shell sees its performance reporting cycle in the following way:

Figure 18: Shell’s reporting cycle

Aligning incentives to actions (group scorecard)

Shell uses a scorecard to appraise itself in SD activity. This scorecard is designed to drive SD behavior and motivation. It is comprised of a set of select, weighted indicators and milestones covering the full scope of SD principles. The design is meant to be consistent with the overall strategy and focused on priority areas. In 2001, the Group Scorecard consisted of two conventional financial measures in combination with customer measures (brand and

reputation), people measures (leadership development, talent availability, and diversity), and sustainable development measures (HSE and social – most admired company and the business principles). The Self-Assessment Tool referred to earlier is another way the business units evaluate how they have done. In addition, Shell is currently developing award schemes to promote SD thinking throughout the organization. This scorecard process continues to evolve today.

**Involvement in SD learning networks**

Shell believes a “really good part of the agenda is the openness and sharing among companies.” They indeed place a fair amount of energy in sharing lessons and collaborating with other businesses in SD circles, accepting that others are looking to Shell for leadership. The WBCSD and GRI initiative (discussed in Chapter 2) are particularly useful for this purpose, and also in learning what others are doing. But, in reviewing the internal SD documentation of the company, it is clear that Shell is still conscious of staying competitively in the forefront as compared to other multinational companies (not even necessarily oil companies) in their SD initiatives.

**Supply chain efforts**

Shell recognizes a need for further improvement with SD in its supply chain. They see the key opportunities as “local business development (capacity building),” which would maximize local employment, and “greening of the supply chain”. While Shell spends an average of 63% of its budget for goods and services inside the countries where it operates, there is a disproportionately lower balance for developing countries versus the OECD countries. Although Shell does not have a systematic approach to manage this shortfall today, they

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144 Internal Shell Document (SD Briefing by the Shell International Sustainable Development Group).
recognize the need and are addressing it in their “Group Procurement Strategy”. In quickly perusing their future objectives and priorities in this area, it is evident that Shell has command of the situation and will soon institute systems for integrating SD into the supply chain. As their efforts here mature, the penetration of SD in the company will eventually be both vertical and horizontal.\textsuperscript{146}

\textbf{Training and internal communications}

Soon Shell plans to build SD training modules and incorporate SD into existing courses. Its learning initiatives spill over to other collaborative study processes involving local universities and other businesses. For the purpose of cross-sharing, Shell is developing an SD portal which will allow for the sharing of best practices and other illustrations of how SD can be successfully implemented throughout the organization.\textsuperscript{147}

\textbf{Specific milestones}

Shell shies away from openly committing to concrete SD targets. They are happy to provide specific performance after the fact – even if not a positive story – but are less likely to set specific goals or promises that they may not be able to fulfill.\textsuperscript{148}

\textbf{4.7 Does it make business sense?}

Shell believes that an SD strategy provides them with a competitive edge in the following ways:\textsuperscript{149}

- Attracting and retaining high caliber staff
- Sustaining loyalty and commitment of own people
- Enhancing image & reputation

\textsuperscript{146} Ibid; & Internal Shell Document (SD Briefing by the Shell International Sustainable Development Group); & Internal Shell Strategy Document for presentation to the SD Panel, “SD work agenda 2002-2004”, pp. 10-11.
\textsuperscript{147} Internal Shell Document (SD Briefing by the Shell International Sustainable Development Group); & Internal Shell Strategy Document for presentation to the SD Panel, “SD work agenda 2002-2004”, p. 8.
\textsuperscript{148} Personal Interviews with SD Group, Shell Corporate Headquarters, London, January 21, 2002.
\textsuperscript{149} Internal Shell Document (SD Briefing by the Shell International Sustainable Development Group).
• Lowering cost of insurance and capital
• Attracting customers and partners of first choice
• Launching new business opportunities
• Creating wealth for shareholders and society at large
• Securing long-term license to operate

Through its performance indicators outlined above, Shell hopes to see whether an SD image actually increases its market share. At the moment, unfortunately, “there is no hard evidence to suggest market share has improved from SD.”\(^{150}\) On the other hand, key evidence exists that suggests an SD stance is important. For instance Exxon is currently being exposed to fuel boycotts over their resistance to participate in global climate change initiatives.\(^{151}\) At a minimum, Shell believes that the key for achieving the business case of SD is in engaging with stakeholders.\(^{152}\)

4.8 Barriers and challenges

Having presented this optimistic approach and attitude toward SD, Shell recognizes there are many challenges before true success can be declared, not the least of which is overcoming the limited understanding of what SD really means and how to address it in a holistic manner - particularly with no clear industry benchmarks. Shell’s sheer size and diversity makes it especially difficult when trying to apply consistent standards. In fact, they admit that there are a multitude of cultures within the company. So, while on one hand the company is extremely systematic in its approach, at the same time they are aware that the variation in internal cultures and external circumstances makes it difficult to use one uniform model in all elements of the business. This leads to trouble “in translating the [SD] strategy

\(^{150}\) Personal Interviews with SD Group, Shell Corporate Headquarters, London, January 21, 2002.
\(^{151}\) Ibid.
\(^{152}\) Ibid.
into reality”\textsuperscript{155} – in other words, figuring out how to make it practical, especially at the same time that competition is doing business as usual.

Another continuous challenge lies in educating the end-user of their policies, and then in measuring how well the message has been penetrated.\textsuperscript{154} As expected, it also requires “overcoming the natural barriers to middle management.” They see these issues as “a major change management challenge.”\textsuperscript{155} They additionally struggle with measuring how SD is implemented and what impact it has. Shell constantly strives to find the opportunities that give the “biggest bang for the buck.” This involves “innovating better products which will generate better creativity.”\textsuperscript{156} Setting relevant and achievable goals internally is yet another difficult matter – one which is handled on a more or less trial and error basis.

Last, but by no measures least, a fair amount of effort is necessary to overcome public misconceptions. In this industry especially, the pressures are great for swifter change – again, the clockspeed issue. The most vocal critics want alternative energy now and believe that is the only way for the company to be truly sustainable. Hence, educating the public about the business and the necessary and long-range steps toward SD is of utmost importance.

4.9 SD efforts at the field level - the Aberdeen example

Up to this point, we have focused on the efforts on the part of the corporate office. Shell’s strategy is indeed heavily top-down driven. But principles and procedures are taking effect at the field level. At least in the case of Aberdeen, Scotland’s Shell International Exploration and Production B.V. (Shell Expro) - the personnel with which we made contact - know what is expected and exhibit genuine belief in the reasons for the company’s commitment

\textsuperscript{155} Ibid.
\textsuperscript{154} Ibid.
\textsuperscript{155} Internal Shell Strategy Document for presentation to the SD Panel, “SD work agenda 2002-2004”, p.3.
\textsuperscript{156} Personal Interviews with SD Group, Shell Corporate Headquarters, London, January 21, 2002.
to SD. The level of documentation above and beyond what gets produced at the corporate headquarters is yet more evidence that they take SD seriously. Examples of supplemental guides and awareness-raising tools at Shell Expro are as follows:

- **Shell Expro Guide to Sustainable Development**: describes how they will address SD over the next few years, providing direction and outlining functional responsibilities.
- **Sustainable Development in Shell Expro**: raises awareness for SD by describing Shell Expro’s commitment to contribute to SD and specifically what it is they are trying to accomplish.
- **Contributing to sustainable development: The Way Forward for EP**: A fold-out pamphlet which explains more on the expected contributions and ways forward for EP Business Units (not unique to Shell Expro).
- **The Plain English Guide to Sustainable Development**: A staff-to-staff communication on what SD is and why it is important, presented in layman’s terms (this is not an official Shell publication).

Based on finding from an interview with the Shell Expro HSE manager responsible for SD implementation, social and environmental assessment procedures appear to be tightly in place. The manager emphasized that the environmental component of SD has been solid for some time, originating before much of it was even required by legislation (late 1970s/early 1980s). Shell has been ISO14001 certified, which spells out for them many environmental systems and processes such as Environmental Hazard Identification. They also have a Chemical Management System that looks at things like less hazardous chemicals and more environmentally friendly use of chemicals. And they have an environmental information system (database) that measures and tracks the discharge of environmental pollutants among other environmental performance indicators. ISO14001 has also led them to more thorough training in the environmental arena.

During project development, each business undertaking has a plan detailing SD and HSE along with the principle requirements of the effort. They additionally conduct institutional “Value Assurance Reviews” requiring approval at five different phases of the project. These reviews involve people at all levels of the organization, all the way up to The
Hague corporate office. SD and HSE intents are closely evaluated during this process. The last phase is a "post project" review, which gives them a chance to see how the project went in these areas. With respect to external communications and coordination, larger projects hold periodic town meetings in order to involve the public. The External Affairs department of Shell Expro is responsible for making sure that the operations have good relations with the community, media and academics.

In terms of performance measures, Shell Expro uses a scorecard system based on the expectations of the department's Leadership Team, which contains measures such as environmental incidents (e.g., number of oil spills) and accidental injuries among other indices. Bonus payments are attached to overall scorecard performance. Regarding cost/benefit assessment, environmental costs are accounted for but they see no real way to capture and track the tangible benefits of their prevention efforts. No mention was made of social measures.

The above-described systems and procedures, while well established and extremely effective for routine HSE management issues, lack real clarity when it comes to social responsibility and sustainable environmental practices. Implementing SD clearly has its set of barriers. For instance it was difficult for the HSE manager to articulate a well-defined vision for heading toward true sustainability. He admits that the level of understanding of SD is incomplete, but at the same time believes that the business principles are ethical and are SD. Embedding SD principles into every day activity becomes extremely complicated. Furthermore, he believes that there should be a SD business plan that takes a more comprehensive approach to the social factors and HSE. As it stands, the functional responsibility for SD is given to the HSE manager, while the responsibility for social and labor
elements remain separate. Finally, it was pointed out that it is difficult to emphasize SD in an existing climate of threatened layoffs.157

We also interviewed an Expro line manager to get his perspective on SD as it applies to his operations. He too recognizes the increasing importance of SD. He explained that each business unit is required to have an SD component to its business plan. However, he confessed that much of the content is focused strictly on environmental matters. His biggest challenge as a Well Engineering Manager is to find ways to further reduce - ideally eliminate - flaring during production. So far, they have been able to reduce the flaring by 80% in the past two years. They are also very good at waste segregation. The rig deck in fact has 20 different containers for separating waste streams. According to this interviewee, the crew likes the idea of being environmentally responsible. But he believes that these efforts just add extra costs with no measurable benefits.158

This line manager also described many efforts in the way of new technology research. Some examples include reductions in hydrocarbon emissions from diesel engine generators and slimming the well designs to minimize “drilling muds”. These “best practice” innovations are freely shared within the North Sea operations, but less well with distant affiliates. Shell Expro also participates in various forums to dialogue and share visions and innovations with smaller companies in the region. And they get involved with universities and communities for various SD activities such as cleaning beaches.

Our interviewee claimed that the business case of SD is continuing in the North Sea and gaining society’s acceptance. Younger employees seem to be attracted by the idea that the company is interested in SD. New contracts have SD clauses and tighter standards, so they

157 Personal Interview with Shell Expro HSE Manager, New Business Development (Exploration) Department, January 24, 2002.
158 Personal Interview with Shell Expro Well Engineering Manager, January 24, 2002.
gain from the supply-chain effects. At the same time, however, he believes that the impact of SD would be different with geographic and timing variations.

Finally, concerning the stated challenges of SD, our interviewee feels that a great deal more public relations effort is in order to help society fully appreciate what Shell Expro and others are doing in this area. He believes there is still a strong perception that the oil industry is a very dirty one. With respect to new technology, he suggests that more effort be placed on preventing the potential for pollution versus better ways to manage it. He further promotes a focus on more efficient operations and the idea of a holistic approach. His last observation concerned the need to change from simply focusing on processes and systems to looking at changing behaviors.

4.10 Live case examples

This section takes the analysis down to the project level, using two examples occurring in environmentally and/or socially or politically sensitive parts of the world.

Malampaya Deep Water Gas-to-Power Project\(^{159}\)

This project, executed as a joint venture between Shell Philippines Exploration B.V. (SPEX) as leader, and Texaco Philippines and the Philippines National Oil Company-Exploration Corporation (PNOC-EC) as partners, is an effort to develop the Malampaya deep water gas reservoir (3000 meters below the sea bed) and to transport it more than 500 kilometers to the Philippine shore through an underwater pipeline. Its success “heralds the birth of the country’s natural gas industry” by enabling development of a 20-year supply of clean fuel that fulfills 30% of the whole country’s energy requirements. Prior to the advent of

this new power source, the Philippines relied heavily on fuel imports. Now the Philippine government not only expects to generate a revenue stream of roughly $8-10 billion over the life of the project, but also to save that amount in foreign exchange. Furthermore, this $4.5 billion investment represents the largest and most significant industrial investment in Philippine history.

The Malampaya gas field was first discovered by SPEX in 1992. Then, in 1995 they recognized its commercial gas potential. By 1998, it was officially declared as commercial. Finally, in October 16, 2001 the project was formally inaugurated.

The project's SD angle

The idea and motivation for drilling for gas is not in any way distinctive from the traditional oil and gas exploration and production business model, though the fact that SPEX implemented the best technological approach possible (and perhaps the only one practicable for such a scenario) was certainly a tribute to Shell’s innovative strategy. What makes this project unique and appropriate for this analysis was its stakeholder engagement activity, which helped to guide the project through its complex environmental and social challenges. In fact, this project touches on nearly every aspect of SD due to the environmental and social sensitivities of the country.

In the Philippines it is common for companies to experience strong public pressure, mostly generated by emphatic NGOs, as well as political pressure through extensive government involvement. Thus Shell recognized early on the necessity to work side-by-side with members of the local communities. While extensive social and environmental studies are undertaken in the course of Shell’s normal business approach, this time stakeholders were consulted in all key decisions. For this project in particular, precious land resources and pristine marine environment at the site meant navigating with great care to ensure the least
possible amount of impact. A good example is with the design of the route for the deep-water pipeline. Due to the huge importance of these marine resources to the local fisherman, engaging them in the design process actually resulted in something more like a snake than a straight line. At the same time these concerns were given significance, there was also a big push to maximize social outcomes of the project. Most obvious were the energy and financial returns from this domestic field, along with the employment from its local operations.

**Process mechanics**

The specific SD ideas generated while designing and implementing this gas production project were a collective contribution of the Shell business unit, the Philippine government, and interested members of the local communities, all working together in a collaborative process. The "Sustainable Development Council", comprised of SPEX senior management and these external parties, was the process formed to identify and to pursue key SD opportunities.

On the more formal end of the spectrum, regulatory requirements and government involvement were undeniably intense. Shell undertook its usual, regulatory-driven procedures for performing an Environmental Impact Assessment (EIA) to carefully evaluate the project design and identify environmental alternatives that would reduce emissions and minimize overall impact. Built into this process is a formal community consultation procedure. In the case of Malampaya, workshops were periodically held and well attended by local governmental agencies, NGOs and members of the indigenous communities. Through these engagements, there was an intensive amount of dialogue focused on potential impacts to the following: the rich biodiversity areas (Mindoro) that may be in the way of the pipeline, the pearl farms used by the Parl fisherfolk and indigenous peoples, and the presence of underwater ancestral burial grounds.
SPEX was also required by this regulatory process to attain Environmental Compliance Certificates (ECCs) from the local environmental regulatory authority, the Department of Environment and Natural Resources (DENR). These ECCs comprise all aspects of the project and require an extensive amount of dialogue with and approval by this governmental body. In addition to these consultative processes, a Multipartite Monitoring Team (MMT) made up of the DENR, the Department of Energy (DOE), the Palawan Council for Sustainable Development (PCSD), various national, provincial and local government agencies, NGOs and peoples organizations was formed to independently monitor the project at will.

**SD contributions**

A substantial amount of cooperation and ingenuity were required to make this project the success that it was. The process of involving, listening and responsively acting on legitimate concerns was what allowed the project to flow so smoothly. In the end it became a win-win outcome for those involved. Here we list the types of benefits the Philippines received through SPEX’s efforts in this project (not an all-inclusive list):

- Boosting the capability of the Philippine industry to attract foreign investments.
- Identifying key local skills and other resources, providing training, and employing people in the local community for the production platform. (Key is that this platform could have been built anywhere, yet SPEX decided to build it in the Philippines to provide this social benefit.) Those employed receive a certificate as proof of their involvement which of course helps in their future employment endeavors.
- Transferring of technological know-how and skill to local staff.
- Re-routing the pipeline to avoid environmentally and culturally sensitive areas.
- Replanting 10 trees for every one removed in constructing the platform.
- Planting 20 hectares of fruit trees to protect and restore habitat for the endangered Philippine giant fruit bat.
- Helping community health care by sharing facilities needed for SPEX emergency medical support.
- Evaluating (in conjunction with Shell Renewables) the potential for supplying solar power to communities outside of the electricity grid.
- Establishing a position for a professor at a local university to raise SD awareness throughout the country.
According to Shell's Social Development Manager, three essential drivers made the SD elements of this project possible. First was the Shell Group Policy that expresses "a strong commitment toward operationalizing SD". Second was the strong Philippine public pressure and government involvement. And, third, and perhaps most significant, was the role of David Greer, the project's Managing Director, who, according to the Social Development Manager, is "one of Shell's most enlightened managers". "Mr. Greer saw that SD was integral to everything we do." 160

Recognition for success

After completing the project, Mr. Greer was moved to The Hague corporate office to run a department responsible for ensuring that similar projects are completed under budget and within schedule. This was a testament to his vital role in the project and proof of true recognition and reward. The project itself received numerous awards in the Philippines, although no details can be provided here.

Measuring outcomes

The most notable measure of SD performance in this project was the fact that the effort was completed under budget and under time. It is widely acknowledged within the SPEX project team that, had it not been for the SD approach, this would not have been achieved. Unfortunately, the literature and interview associated with this project were otherwise unable to produce hard measures of SD success. In fact, our interviewee acknowledged the difficulty in measuring these benefits. In his way of thinking, SD is rather about avoiding crises and thinking outside of the box, in addition to dedicating the appropriate resources to make sure things go well.

160 Telephone Interview with Shell International Limited's Social Development Manager, April 5th, 2002.
Reporting and crossfeeding results

Documentation for this project is quite extensive. Even a video is currently under production. This information is shared with Shell corporate headquarters who in turn make much of it available on their Shell Wide Web (internal website) and in other public documents – something Shell has no shortage of. Malampaya even has its own website link. This information is thus easily accessible by other Shell production facilities located throughout the world. The case is additionally being documented in an HSE External Report, to be included in the Shell SD Portal.

Key lessons of the case

Probably the most worthy aspect to note in terms of “lessons learned”, is its context as a “Greenfield” project. This circumstance afforded Shell a clean slate to conduct the project in a way more appropriate to the current day environment of high stakeholder expectations and a greater need for involvement. In the course of our research on this effort, we identified no visible mistakes or hindrances on Shell’s behalf. On the contrary, it seems safe to say that Shell got this project completely right. In so doing, they have set for themselves, as well as other oil and gas companies, an exemplary benchmark for future Greenfield projects of this nature.

Athabasca Oil Sands Project.\(^{161}\)

This second case is another joint venture effort with Shell Canada Limited (Shell Canada)(60%) as leading partner, along with Chevron Canada Resources (20%) and Western Oil Sands Inc. (20%). While the project offers a great deal of future potential, Shell’s contribution thus far is on the order of a $7 billion investment. The project’s overall objective

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\(^{161}\) All details for this case write-up came from a combination of the Shell Canada “EA Case Study” (Athabasca Oil Sands Project), Shell’s corporate document “Progressing towards sustainable development,” an internal company document “Business Case for Sustainable Development,” an Athabasca Oil Sands Project leaflet “Sharing our Plans,” and a Telephone Interview with Shell Canada’s Senior Oil Sands VP and public affairs officer, April 3, 2002.
is to mine for oil in the Oil Sands of Alberta where a substantial amount of the precious resource exists – an estimated 100-yr supply. Once mined, the oil is converted into high quality, low sulphur transport fuels (light fuels) for delivery to North American customers. Despite the fact that this oil field was discovered as early as 1956, a number of technological hindrances prevented its mining and production until now. According to a senior Oil Sands Shell Canada official, since the lease of the nine billion barrels in 1956, three attempts had been made to put this project together. It was on this third attempt, commencing in 1996, that they were able to make it happen.\textsuperscript{162} In early 2002 the first oil was produced, with additional efforts for further gas production continuing today.

**The project’s SD angle**

Much like the case of Malampaya above, Athabasca’s oil project - not an uncommon oil and gas business undertaking - was uniquely steered by social and environmental sensitivities and community need for involvement. The sheer size of this gas production effort brings with it an equally significant range of complexities along the social and environmental lines. One senior project official referred to it as a "poster project for SD."\textsuperscript{163} Essentially every element of SD is involved. Most notable is the big environmental footprint associated with the mine and the 300 miles of pipeline. In fact, developing the Oil Sands of Canada has been perceived by outsiders as questionable at best in terms of environmental practices and limited affiliated benefits to the local communities. Shell Canada’s challenge, therefore, was to turn these perceptions around by showing the local, national and even international audiences the

\textsuperscript{162} Telephone Interview with Senior VP, Oil Sands Shell Canada, April 5th, 2002.
\textsuperscript{163} Ibid.
acceptability – perhaps even “attractiveness” – of the project based on environment, socio-economic opportunities and SD.\textsuperscript{164}

A sampling of the more prominent concerns of this and subsequent projects at this site are as follows: production of greenhouse gas emissions and other effects to local air quality, impact to the local rivers and forests, handling of generated wastes, rehabilitating the mine sites, social impacts, and the infamous ‘what’s in it for the welfare of local indigenous populations?’ Given this set of difficult circumstances, Shell Canada recognized the value and necessity of involving the local, provincial and national stakeholders early on in the project, so much so that it became part of the business plan. As a result, the specific SD ideas generated through the course of this project were by no means the result of one person, or an internal Shell team for that matter. Rather they resulted from an intensive consultative process involving all interested stakeholders. We expand on this point below.

\textbf{Process mechanics}

In the way of background, Shell Canada has elaborate goals and associated documentation for expected performance concerning the environment, health and safety, and SD, and places heavy emphasis on “being a good neighbor”. In fact our research and interviews for this project corroborate what was told us about Shell Canada by their corporate headquarters – that indeed they are very mindful of SD in their operations. While this section is not meant to drill into Shell Canada’s strategy as a whole, it is certainly a useful backdrop to understand the essence of this particular project.

Once again, the project commenced with detailed environmental and social studies in the course of Shell’s routine environmental assessment process. These studies were carried out to look at short and long-term effects of the project, and subsequently factor findings into the

\footnote{\textsuperscript{164} Shell Canada “EA Case Study” (Athabasca Oil Sands Project). p. 2.}
preparation of project details. In our interview with project officials, the approach was described as “top down and bottom up at the same time.”165 Along the way, quite a bit of trial and error was involved. The real key to progress however was with the formulation of a panel of environmentalists, to include NGOs and aboriginals.

After accumulating a laundry list of anticipated economic, social and environmental benefits of the Athabasca effort, the Shell Canada team set out to solicit involvement and support from environmental NGOs by way of workshops held in Washington, London and Amsterdam. These NGOs provided frank feedback, which ultimately helped guide Shell Canada’s design for emissions reductions. This engagement activity subsequently led to an external Advisory Panel of NGOs and community representatives who helped to shape Shell’s CO₂ reduction program. The project team then further expanded this consultative process to the international environmental NGOs, such as Friends of the Earth, Greenpeace, and the Worldwide Fund for Nature. This latter level of interaction, while relevant, extends well beyond the climate change issues of Athabasca alone.

Remarkably, senior Shell Canada project officials involved themselves in these consultative processes with the local community and government officials and therefore played a key role in defining the SD course for this project. In fact the Senior VP met on numerous occasions with the indigenous people in order to build trust. These senior officials believed up front that the efforts going in were a part of the overall license to operate.166 Important to note, Shell had the project ready for implementation - to include obtaining regulatory approval - prior to its partners coming on line. Shell Canada’s partners therefore signed into the SD

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165 Ibid.
166 Telephone Interview with Senior VP, Oil Sands Shell Canada, April 5th, 2002.
elements of the project through a formal joint-venture agreement following the project development phase of the effort.

Internal to Shell Canada, an "Oil Sands Team" was created early on to address regulatory needs, public affairs, community relations, and environmental management. Throughout the project, Shell Canada was almost constantly engaged with the media to pre-empt any negative press. They also entered into partnership agreements with the local Aboriginal people to address the need to identify economic and employment opportunities. Finally, at the same time that the full array of external affairs activity was underway, Shell Canada also engaged its internal staff and educated them on the SD value of the project.

**SD contributions**

In the course of this participatory, collective approach, many noteworthy benefits were once again accumulated. The following list demonstrates the kinds of advantages the community of Athabasca realized through this project:

- 1000 permanent jobs were established within the local community with as many as 12,000 employed during the construction peak.
- The community benefits from substantial tax revenues.
- The project helped in building skills of the Aboriginal people, and in enhancing the benefits of those skills.
- Process water was recycled thereby reducing demand on local rivers.
- No chemicals were utilized in the oil separation process, and mine lands will eventually be restored to a natural condition.
- A groundbreaking climate change program was developed to address international concerns and to identify ways to reduce CO₂ emissions. ([Greenhouse gas emissions resulting from this project will in fact be less than what would have otherwise been incurred by the primary alternative - imported crude oil.])
- An independent panel of experts continues to identify other means for carbon offsets as well as renewable energy alternatives.
- A domestic supply of gas results in less dependency by North America for oil imports.

Given the scale of this energy project, it is no surprise that so many concerns were raised along the way. Clearly this part of Canada is sensitive to its pristine terrain and rightfully the Canadians take great care in how development is pursued. In this controversial
atmosphere, Shell Canada can be proud of how relatively smoothly this project was conducted. Unlike other cases where NGOs speak their concerns openly, often even using the media to further amplify their voice, this time they handled them in a private, face-to-face fashion directly with Shell. In general only a few critical articles, generated by Greenpeace and a few other Canadian environmental groups, appeared in the Canadian media during this project. Shell Canada expended a great deal of effort to work with their critics behind the scenes in order to listen, cooperate, educate and eventually reach acceptance, or at a minimum prevent protest, concerning how Shell would proceed.

**Recognition for success**

As mentioned in earlier sections, Shell Canada “hardwires” its key performance measures, in this case through a process called “individual performance contracts.” Indicators such as being on budget and on schedule, meeting commitments to the community, and positive performance in health and safety as well as the environment affect how well the project team and the individuals get paid. The process is handled in two parts. At the division level it is called a scorecard, and pays incentives based on things such as capital, schedule, safety and SD management. The second part is at the individual level and has similar drivers. Based on the portfolio of successes in this project, we imagine that the Shell Canada Team is pleased with the outcome of this process.

**Measuring outcomes**

Shell Canada acknowledges that the environmental factors of SD are more easily measured than the social aspects, yet even they pose a challenge. Shell’s commitment to reduce greenhouse gases by half brought the environmentalists on board right away, which in turn allowed the project’s EPA applications to be quickly approved. These efficiencies ultimately
translate to the “time value of money”. In fact, the project being ahead of schedule is perhaps the best measure of success, as also held true in the case of Malampaya. Senior project officials also believe in the importance of looking to the community to see how well they are doing, especially in the “softer” areas.\textsuperscript{167} But, again, these benefits are not easily translated in quantitative terms.

Yet, other commitments of the project have actually cost Shell Canada time and money because they go beyond the regulatory requirements. A good example is with the nearby (less than 1/3 mile) aboriginal people. Shell Canada set them up in the heavy-hauling business. They recruited and trained them, and also helped buy their equipment. The costs and benefits of this activity are indeed difficult to interpret, but again the local approval and smooth flow of the project seem to make it worthwhile.

Additional benefits include valuable input from external groups on critical issues of the project. Shell Canada’s willingness to listen and to work with the whole array of stakeholders helped the business plan transition smoothly and ultimately kept the company’s reputation intact and possibly even improved it. Here again, this impact cannot yet be quantified.

\textbf{Reporting and crossfeeding results}

Documentation for this project is abundant and clearly comprehensive. A video production is available for general public viewing; the Shell Canada website has extensive coverage; and the case has been written in the format of an “external affairs case study”. Additionally, Shell has prepared a loose-leaf folder with multiple stand-alone inserts organized by topic. This gets into matters that would traditionally be thought of as “internal affairs”, such as the process for hiring and details for employment, contractor and construction information, along with other information about the joint venture and project design details.

\textsuperscript{167} Telephone Interview with Senior VP, Oil Sands Shell Canada, April 5\textsuperscript{th}, 2002.
This documentation is available for review by other Shell production operations, in addition to the general public.

**Key lessons of the case**

Shell Canada freely admits that the chief "lessons" of the project are to do with the value of extensive dialogue with stakeholders. In their words, "[t]alking to stakeholders has changed the team's perceptions as much or more than those of stakeholders."\(^{168}\) It guided the team in managing risk and addressing legitimate concerns. Shell Canada outlines its key learning points in the following specific ways:\(^{169}\)

- Don’t start with the premise that a project will be automatically acceptable to stakeholders – that a traditional approach will work.
- Briefing and listening has to be part of the stakeholder engagement programme.
- Talking and listening to shape perceptions of the project team – how they view what they are doing alerts Shell to the true risks of the project.
- Involve stakeholders so they are part of the decision-making within the context of ‘directly affected’. Must agree on boundaries for their input into decisions.
- The business approach should take account of real stakeholder concerns in a way relevant to these groups.
- Act on what you hear: be willing to change your approach based on input from concerned parties.
- Operating Unit, the Businesses, the Corporate Centre and the CMD can work successfully together over critical project issues.

Above all, Shell Canada now has the foundation for future dialogue with local, national and even international stakeholders on other business initiatives. The processes have been defined and very nearly perfected for future following.

Finally, much like in the case of Malampaya, this project involved a combination of green and brown field efforts. Again, where Greenfields are involved, the opportunity to get things right are much greater. But, as Shell Canada's officials say, “[I]ike everything else,

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\(^{168}\) Shell Internal Document, "EA Case Study" (Athabasca Oil Sands Project), p. 7.

\(^{169}\) Ibid, p. 3.
you've got to take a risk."170 Athabasca Oil Sands happens to be one of the better growth prospects for Shell International, which makes for a pretty attractive incentive.

4.11 Conclusions from the cases

Although not explicitly mentioned, in both cases above Shell made maximum use of standardized automated tools for tracking health, safety, and sustainable development. The procedures and systems in place are heavily structured toward detailed tracking and performance management and reporting, and more than satisfy the requirements of ISO 14001 certification – a credential that Shell takes great pride in. A structured methodology seems to be the name of Shell's game, and is a strategy that they have well mastered. It is this structure and rigor that enables Shell employees to approach their business at the project level in a way that is more appropriate to the "show me" and "involve me" atmosphere, and most importantly, to a sustainable way of doing business in those particular communities. Not only do their efforts bring value to Shell and their shareholders, but also to their neighboring communities – socially and environmentally.

Quite possibly the most valuable ingredient to Shell's success in these cases is their open style of communicating with their stakeholders, bringing them into the discussions to identify the best design for the project. In both examples, the true SD innovations started with Shell's policies and openness, but ultimately ended with a collaborative effort by Shell's joint venture team in concert with the indigenous peoples, other community members, local governments and NGOs. Through this consultative process, many ideas came forward that Shell might likely have overlooked, such as the best route for a pipeline. But, most importantly, Shell recognizes these communications and cooperation as part of an overall license to operate in

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170 Telephone Interview with Senior VP, Oil Sands Shell Canada, April 5th, 2002.
those sensitive areas. Without local approval, Shell would probably not have gained access to such valuable resource reserves.

Important to note is that, in both project cases, Shell was working in "Greenfields" (this is true only in part for Athabasca). The significance is fundamentally about timing. Starting with a "clean slate" in an extremely slow clockspeed industry affords ample opportunity to meet the demands of today's environment while doing things smarter and better - i.e., sustainable development. While in both examples project milestones were met ahead of schedule and under budget, possibly those schedules and budgets were derived from different criteria than in the old way of doing business. How the data compares between the scenarios is left to be determined. In any case, it is clear that Shell is meeting their financial goals. It may be premature to predict, but we believe that these examples provide a true success story and exemplary point of reference for businesses in similar circumstances. Of course we must also point out that this is merely an upgraded way for a very traditional sort of business. Had it involved the production of sustainable forms of energy it would represent a "complete" SD approach. Keep in mind that there are many examples of this within Shell, too. In our opinion, those presented here serve as more practical examples for corporations getting started with a journey of sustainability.

4.12 Chapter summary

We conclude from this in-depth analysis that Shell is genuinely committed to SD. The combination of its Business Principles and scenario planning skills make the company primed for what SD requires. We observe that Shell is most heavily focused on transparency and open communications. This is one direct effect of their image mishaps with Nigeria and Brent Spar. Therefore, Shell is still in a brand redemption mode. Nevertheless, their efforts to actively and
consistently engage stakeholders are indeed impressive and become a benchmark for future global business. Above all, Shell sees value in this new approach. But they also see a number of challenges in the road ahead, not the least of which is in the act of measuring performance. Lastly, we note that Shell is extremely thorough, structured and systematic in its approach. Our next chapter provides a similar analysis for SD strategy and implementation at the BP Company.
Chapter 5: Case Study - BP

This chapter introduces the business of BP as a corporation and its approach to SD. We begin with a brief history of BP. We describe some interesting and relevant facets of how business is carried out within the company. We look at small cases that illustrate the approach that individuals and business units within BP are taking towards SD. This chapter is based on information gathered from various sources such as BP's web site, our interviews with employees, official documents, case studies done by others, and media articles.

5.1 BP history and evolution

BP is one of Britain's biggest companies and the world's third largest oil and petrochemicals group based on 2000 revenues. BP owes its origin to one man, William Knox D'Arcy, who, shortly after the turn of the century, invested time, money and labor in the belief that worthwhile deposits of oil could be found in Iran.

In the company's first six decades, its prime focus lay in the Middle East. But from the late 1960s the center of gravity shifted westwards, towards the USA and UK. Political events in Iran in the 50's and Middle East in the 70's made BP shift to new geographical areas. The upheavals of the 1970s led BP to conclude that it should broaden its activities so that it could operate in the future with more balanced sources of income. Accordingly, from the mid-1970s there was increased emphasis on diversification into new areas of activity. BP had entered the nutrition business in the 1950s. From the mid-1970s, it became involved in animal feed, animal breeding and consumer foods and related products. BP also had household cleaning and personal care products — successors of the former detergents business. Another industry, which BP entered in the mid-1970s, was minerals. BP expanded its minerals interests considerably in

1980. Meanwhile, in the 1960s, BP had become involved in the information technology industry through its acquisition of Scicon.

With a view to the effective management of this now more diversified group, the company underwent major restructuring in 1981. The organization that resulted consisted of international business streams, national associate companies around the world and, at the center, the supporting services and corporate head office. These elements were co-coordinated by a matrix system of management.

During the early 1980s, BP's refining, shipping and chemicals operations were suffering from the effects of industry-wide overcapacity and economic recession. Consequently, these activities were thoroughly rationalized. In chemicals, BP had augmented its interests substantially when, at the end of 1978, it acquired European assets from Union Carbide and Monsanto. However, the difficult trading environment that emerged shortly afterwards led BP to make severe cuts in its operations. Between 1980 and 1984, it closed a number of chemical plants discontinued certain products. 1987 was dominated by three historic events in BP's development: the company's offer for the 45% of Standard Oil it did not already own; the sale by the British government of its remaining holding in BP; and, as the year ended, the start of BP's successful bid to acquire Britoil, the UK-based oil exploration and production company. These events changed BP's asset base (primarily to US and UK based).

After the diversifications of the 1970s and early 1980s, BP found - like other companies that followed a similar course - that it experienced mixed success in managing its 'new' businesses. Towards the end of the decade, in a change of strategy, the company decided to concentrate on its core, hydrocarbon-based activities. To that end, it began a series of divestments. In early 1988, BP sold its subsidiary, Scicon, and so withdrew from the computing services industry. After developing its minerals interests successfully during the 1980s, the
company sold most of the business to RTZ in 1989 and disposed of the balance during the next few years. Similarly, most of BP Coal was sold in 1989 and 1990. The company did not begin to sell its nutrition interests until 1992, but by the middle of that year the divestments program was well advanced.

In 1989, the company launched a campaign to introduce a stronger corporate identity, featuring a restyled BP shield and an emphasis on the color green. In a complementary program that was to prove highly successful, BP started to re-image its global network of service stations in a new design and package. At the same time, in the quest to find new sources of oil and gas, BP's explorers began to focus their skills more and more on the regions of the world that for political or technical reasons remained relatively unexplored — Colombia, the republics of the Former Soviet Union, and the deep water areas of the Gulf of Mexico, for example. In 1998 BP and Amoco merged and a year later the ARCO merger took place. Amoco and Arco's big gas reserves and geographical spread complemented BP position.

To equip itself for the challenges of the 1990s and beyond, the company introduced, in a program called Project 1990, major changes in its organization and way of working to improve efficiency and flexibility. To help further in the running of BP, the roles of chairman and group chief executive were split in 1992. In late 2000, in the aftermath of the mega mergers, BP did a major $7million re-branding exercise to a more futuristic brand that lays even heavier focus on being "green".

The history of BP shows that the company has constantly responded to change. The BP of today is an international company, having operations in over 100 countries. Its key strengths are in oil and gas exploration and production, the refining, marketing and supply of petroleum
products, and the manufacturing and marketing of chemicals. Here is a summary of some financials and other pertinent data:172

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<table>
<thead>
<tr>
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</tr>
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<tbody>
<tr>
<td>Revenues</td>
<td>$148 billion</td>
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<tr>
<td>Earnings</td>
<td>$8.4 billion</td>
</tr>
<tr>
<td>No. of employees</td>
<td>107,000</td>
</tr>
<tr>
<td>Reserves</td>
<td>15.2 billion barrels of oil and gas equivalent (50% oil, 50% gas)</td>
</tr>
<tr>
<td>Service stations</td>
<td>29,000 (USA 17,300, Rest of World 11,700)</td>
</tr>
<tr>
<td>Solar revenues</td>
<td>$200 million a year</td>
</tr>
<tr>
<td>Community expenditure</td>
<td>$81.6 million</td>
</tr>
</tbody>
</table>

5.2 BP's strategy and brand

Perhaps the best way to describe the strategy and brand is by quoting Lord Browne - BP's CEO. When asked, "50 years from now, when someone pens the history of BP, what will she write in the chapter titled 'The era of Sir John Browne'. He replied, 173

The history should reflect the organizational changes brought about within BP and subsequently within the combined BP Amoco group, which enabled people to achieve a level of performance that set it apart from its peers. Our very flat organization, strong and accountable business units and peer group support will be part of the story. The author will also note the influential role the company played in shaping the world of the 21st century through its stance on clean energy and sustainable development. Fifty years out people will recognize how the principles and values integral to the global BP Brand impacted the company and society.

When explaining the brand strategy, he said,

As we move into the 21st century, the Internet and our interconnected world are quickly transforming business. Our new BP brand identity is being designed in the context of the new economy and will help connect all our activities around the world under a single company. The reason for that shift is that in a global market place branding is crucially important in attracting customers and business. It is about the identity of the company, and the values that underpin everything that we do and every relationship that we have. For us the fundamental values of the company are about innovation and creativity, about being environmentally creative and green, about being progressive - looking always for improvement and positive change, and about a constant drive for performance. 174

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172 Ibid.
173 Ibid.
174 Ibid.
The brand plays a major role in the business of BP. Our experience during our visit to BP's corporate and field offices was that the employees referred to the brand and the four element described above quite often and had a very clear idea of what it meant.

5.3 BP's stance on SD

Lord Browne's stated position which we found on BP's website was,

We recognize the necessity of developing ways that will enable people to live productively and sustainably while conserving natural resources for the future. However, I believe that the transition to sustainable development is a dynamic process - a journey - in which the actions of governments, local communities, businesses, financial institutions, voluntary bodies and many others must continually interact. My approach is to build BP's organizational capacity to respond continuously and appropriately over time as circumstances evolve. This is becoming an integral part of our internal planning process and of each individual business unit's performance contract with the company.

In the company's official documentation as well as in the vocabulary of the employees, the word sustainable development did not figure prominently. Both the Director, Sustainable Development the corporate office as well as the HSE manager within business units acknowledged that SD is not the concept used formally within the company. Our observation, as can be demonstrated by the cases that follow, was that although SD terminology was not used, the methodology (mainly focusing on eco-efficiency) is being actively and enthusiastically promoted.

5.4 BP's stance on global climate change

BP left the Global Climate Coalition (GCC) in 1996 of its own accord, and was the first to do so. The GCC was a lobbying and public relations organization, based in Washington, to which most oil companies as well as utilities, coal and auto companies belonged. It opposed any government regulation with regards to climate change, primarily because the science underlying the activist' case was unproven. BP did not make the departure public - they just did

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175 Reinhardt, Prof. Forest. "Global Climate Change and BP Amoco", HBS case.
not renew the membership. Although BP still thinks that the science is inconclusive, they were not comfortable with GCC's dismissive approach. In the early 90's, its chemical business after the Exxon Valdez disaster, had taken steps to halve its emissions. Similarly, Shell's experience with Brent Spar had been a catalyst for BP's leadership stance on climate change. BP had noted that during the Brent Spar incident Shell had relied on explaining facts based on science and that had clearly not been helpful.

Instead, in spite of insufficient scientific evidence, John Browne in 1997 said, "It would be unwise and potentially dangerous to ignore the mounting concern". He outlined BP's intent to make a difference through research, by helping in public policy, and by controlling its own emissions. The speech was not actively promoted due to the fear of backlash from environmentalists - but it did receive positive media reports. With Browne's philosophy of "doing well by doing good", BP took initiatives like corporate targets and monitoring of GHG emissions, internal system of emissions trading (which was more stringent than that envisaged under Kyoto protocol), cutting down flaring of gas from wells, etc. According to the managing director of exploration and production activity, "this was a cold and hard way of getting the competitive advantage by taking a distinctive position."

The above approach coupled with peer groups and business unit structure (covered in some detail later) within BP, produced positive results. In February 2002, BP announced that they managed to surpass the targets set, 3 yrs ahead of schedule.

Along with voluntary cutbacks in emissions, BP highly publicized its solar energy venture although both BP and Amoco were in the solar energy business since the early 80s. In 1999, it established a company called BP Solarex, which boasted 20% of the global solar electric equipment market. BP expects the annual revenues to reach 1 billion dollars by 2007, from the current 200 million. An investment in solar energy is economically a good business for BP even
without accounting for the advantages due to government subsidies. As we will see in one of the cases, the application of solar energy in remote areas of developing countries is not only is a viable option, but can be a sustainable model from the perspective of energy needs and climate change. By growing the solar business, they would actively contain and in some cases reduce levels of CO2 in the atmosphere. BP believes that solar energy offers its greatest potential, within the renewable energy options because it offers energy at the point of demand and when demand is the greatest. It is scaleable, and can be built into both existing and new structures.

5.5 BP stance on corporate social responsibility

BP is a performance driven company; so, they try to define the social responsibilities, manage them proactively and measure the resultant performance. They have defined social performance as: Their behavior, that is, whether they live up to the values expressed in their group business policy document,

- 'What we stand for'
- Their impact on people,
- Their overall contribution to society

BP realizes that there are significant business risks if they get social performance wrong and real opportunities for competitive advantage if they perform well. Their approach is much from a perspective of value addition to their business. The element of social permission to operate - which is ultimate determinant of long-term value is always in the background. The overarching brand principles guide people's behavior.

In an interview with Charlie Rose on WGBH, Lord Browne explained that CSR is neither pure philanthropy nor an alternative mechanism for development replacing the normal government mandate. CSR, he explained, can be aimed at capacity building in terms of skills and knowledge. He considers the role to be primarily in investment of knowledge and
information by the corporation. They actively pursue local capital investment via their employees that improve the sustainable business environment within the locale.

BP realizes its obligation to consider the impact they have on the communities where they operate and to create a positive and sustainable contribution towards progress there. They use the term Global Social Investment (GSI), as a progressive and performance-driven approach to their relationships with the many communities in which they do business. On the BP website, the following explanation is available,

We recognize that our social performance is the subject of rising expectations of major companies. GSI is about the strategic and innovative use of investment to support positive social performance. It demands a major shift away from the philanthropic tradition of corporate giving towards investment geared to mitigate any negative impacts of the business and enhance its positive impacts. With a focus on the success and self-reliance of the communities where we operate, our social investment is fully aligned with our business objectives. It helps us to fulfill our commitment that the places where we operate should benefit from our presence.

The explanation explains the difference between corporate philanthropy and GSI as follows:

First GSI is integral to the relationship between the business and the communities that it affects. The purpose of social investment is to help mitigate any negative impact the business may have and enhance its positive impact, as well as to contribute to overall community needs. Second, GSI will look beyond the immediate impact of the business to the long-term future of the community. We will try to help communities become more independent and self-reliant. Our global focus is on sustainable progress.

5.6 Structure and processes within BP

Our observation was that the mission statement does not figure a lot in either the language of the employees, or on the website. But in a section of FAQ on the website, we did find the following:

Energy and materials used safely and efficiently, are essential to the prosperity and growth of the world. Sustaining and enhancing our quality of life ultimately depends on energy. Demand for energy continues to rise by 2-3% a year. BP's goal is to play a leading role in meeting these growing needs, and so aiding global development, without damaging the natural environment. We believe our involvement in the global economy is a positive and progressive one. Innovation is the hallmark of how we work with people, technology, assets and relationships. Our objective is always to be constructive and to use our expertise to produce creative solutions to every challenge. Our success depends on our making, and being seen to make, a distinctive contribution to every activity in which we are involved.
On the other hand, business policies are quite central and form the basis for all actions. They provide a clear statement of values and standards of behavior across the company. The company gives its employees great degrees of freedom to achieve clear performance targets. They are expected to operate in strict adherence to the business policies and brand principles.

5.7 BP's structure, processes and incentives

We looked for an organization chart, without success. When we asked a former business unit leader, her answer was "if you find one give me a copy - as far as I know there is no central company organization chart."

Currently BP's operations are conducted through 15+ Business Units (BUs), each focused on a particular asset or market. Each Business Unit has a wide measure of freedom to decide how it will deliver its agreed performance.

Ten years ago, BP had eight layers of management. Now Business Units are separated from the company's executive management by one layer. BU leaders today are able to operate in many ways as if they are running their own separate businesses, subject to compliance with group policies, and absolutely accountable for the fulfillment of annual Performance Contracts which they negotiate with the Executive Committees of their businesses. Executive management articulates how it counts on this organization working. It sets targets and accountabilities for specific roles across BP in the Executive, Streams, Business Sub Segments, Business Units, Functions and Regions. This enables individuals, to understand how their contributions fit in achieving these expectations and how their interdependence impacts the overall success of the Group. Executive management also sets the strategic direction for the Group and develops performance expectations within broad policies.
These cascade down through the organization (Streams, Functions and Regions). Each unit of the organization is accountable for establishing its direction of activity, for shaping expectations and for delivering performance. The Functions and Regions are additionally accountable for supporting the development of Group policies, for function guidance and for bringing innovative advice to the business streams. The role of leaders is to provide direction, establish clear boundaries, and to provide space and support. The figure below from BP's website shows the interlocking aspect of the organization.

The learning organization that relies on Peer Groups, Peer Reviews, and Peer Assists with heavy reliance on their Intranet requires that above roles be interlocking. In this way, BP tries to achieve universal alignment. The idea is to accesses fully the collective brain of the company and to cement strategic connectivity with organizational connectivity by using physical connectivity coming from IT and logical connectivity through processes that empower people to contribute and to be recognized.

While the self-standing BUs are excellent for delivering financial performance, they are not ideal for transferring know-how which tends to be distributed around the company. For this reason, BP has created a number of "Peer Processes".
- Peer Groups share know-how amongst senior group managers at the portfolio and resource allocation level;
- Peer Reviews expose specific business activities as a challenge to the scrutiny of senior professionals and leaders from similar business activities around the Group; and
- Peer Assists are used at the professional specialist level to make sure that the right expertise gets to the right place at the right time.

In addition to the above BP, senior executives have "turtles". Named after the cartoon characters called Teenage Ninja Turtles, the turtles are special assistants to senior executives. They are meant to be skillful and agile. They travel with the executives and perform a wide variety of special projects. Turtles are supposed to be the promising young executives - the future leaders. The one to two year assignments as turtle achieve both training and motivational goals while giving the senior executives assistance and fresh viewpoints.

BP’s Operations Value Process is a web-based approach which allows businesses to assess their own capability, and from this to recognize their own strengths and weaknesses. They can make requests for help, where there is scope for improvement, and also offer help and assistance where they have a recognized strength.

Staff is also encouraged to become members of lateral networks across the organization - where they belong to communities with similar interests. The idea is to create "connectedness and openness" rather than "secrecy and empire building" This is particularly important for an organization that has recently grown through acquisitions.

In the September 1997 issue of Harvard Business Review, there is an article called "Unleashing the Power of Learning". It is an interview with John Browne where he described the learning organization to Steven Prokesch. He explained how BP in the past was mired with procedures while it now has processes that foster learning. Before it had a multitude of baronies and now has an abundance of informal communities that are eager to share

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knowledge. Diffusion of knowledge, Browne claims, is at the heart of the company's ability to adapt and is therefore a competitive advantage in generating value. However, in order to get the best of efficiency and effectiveness he says that the business has to have a clear purpose and employees have to be able to access and to judge critical knowledge and skill sets.

In a 1995 pilot program, BP spent $12 million to establish an intranet with the help of external behavioral scientists. They made the network available on a demand basis and at a cost to the business units. There was no other control. The network grew exponentially. Most BU leaders had their own home pages. This relatively early application of Web technology has now grown into a norm. As one of the BU leaders in Aberdeen told us "BP is a very Web based company".

BP is a technology focused company because technology has created value. According to the company's estimates, new technology has allowed them to cut our costs by 40% in the last decade. They have also used technology to significantly reduce their emissions to the environment, and the emissions of their customers. They claim to have made their operations five times safer than a decade ago. BP currently spends well-over $1 billion each year developing and applying new technology.

5.8 Observations during visit to BP offices

We visited the corporate office in London and the exploration and production office in Aberdeen. The idea was to meet with line managers and functional managers to know more about BP's action relating SD. Our first contact was with the Director of SD within BP at their corporate office. In the meeting, he explained that BP has not formed any articulated policy on SD although their day-to-day activities are performed in the general rubric of SD. He said that
BP wants to manage SD as a challenge and bring the thinking into the BUs in its evolving context.

BP was not pushing the agenda of SD but rather managing economic value in the context of SD. Risk mitigation by BUs creates the value in the short run. Metrics in SD have not yet been established since it is not yet completely understood. A lot of collaborative work had to happen in this field and, corporations in general do not have a way to measure the traction of SD in their performance. Issues like creating buying power in poor markets are other aspects that are integral to competitive strategy. BP did not seem to have a lot of documentation available on the subject of SD.

We then went to the Aberdeen office where we met the BU leader (Terry Hughes) for the Clair field and the former HSE manager (Dave Cutteridge) who was currently the SD coordinator in the Aberdeen office. We were interested in the story of how he became an SD coordinator and what he had managed to achieve so far.

During the four years of being an HSE manager in the Clair field, Dave had taken up SD as a “hobby.” After the Clair job, he proposed to Terry that he would like to work in this field. There was no such position in the organization at the time, but Terry agreed and kept him for a year within the BU while he was working and educating himself in the area of SD. In mid 2000, Dave was given a formal position of SD coordinator in the Aberdeen office. He divided his job into three main areas – generating awareness, building tools and external relationships. He contacted “Natural Step,” an organization that trained people in SD. 5 courses were run in which managers and BU leaders actively participated.

He had also started working on a way to measure the impact of projects from an SD perspective. Terry, who was keen to get a numerical feel for the impact of SD and to develop a methodology of assessing big development decision, helped Dave to get in touch with the
Aberdeen University and Genesis Oil and Gas consultants to build an easy to use decision support tool. The external team had expertise in areas where they did not have local expertise. The team built a tool called SAM for “Sustainability Assessment Model”, which essentially takes into account the various major categories of environmental, resources, economic and social impacts of a proposed major development. After applying the various weighting factors, the tool produces a single figure that can give an indication of the sustainability of the project. As a tool, this has been successfully used within BP’s formal Capital Value Process of approving projects (coming from Amoco) in 5 projects so far and the respective BU leaders have been quite satisfied with the approach.

When asked whether he likes the tool, Terry said, “I like it not because I’m a tree hugger, but it solves problems. With several different proposals from many stakeholders, decision making is very difficult and a tool such as this gives an objectivity to the decision”. Dave also showed us 2 other models that other people within BP had made. Dave did not see the need to use any particular model as a standard at this stage. He realizes that they are at the beginning of a process that will need several iterations before some standard means to evaluate projects could be recommended.

Dave has also initiated a “green drinks” club within Aberdeen, which meets once a month to chat about SD. The distribution list includes people from all walks of life and many different companies although 50% of the membership consists of BP employees.

Dave wants to continue building awareness, improving the SAM tool and connecting with BP people worldwide (so far about 100 within his network). Dave told us that while John Browne articulates SD in his external communication; internally BP tends to follow brand principles and business policies. He concurred that BP did not have any formal policies on SD.
As we left, we picked up the only two complementary documents, kept in the reception area of the office. One was called “Celebrate the Helios Awards” and the other was a quarterly company magazine called “Frontiers”. The former document is all about a 2001 celebration of success of performance by 112+ teams worldwide - a well presented and simple document that lists winners of an annual award called Helios awards (after the brand) under each of the 4 brand values and an additional category called Human Energy. A brief and clear summary of the achievements by the winners was shown with pictures. Names of each individual within each of the 112+ teams are listed in the last few pages of the document. The company magazine was full of stories of innovation happening with the company.

As our case vignettes, we chose the two winners listed in the Helios award document. We contacted the respective teams and managed to correspond and communicate with one representative of each team.

5.9 Case 1: Magnus enhanced oil recovery project

Case description and evolution

Magnus field is in the UK Continental shelf (UKCS) of the Northern North Sea (NNS), 150 miles North East of Shetland. It was discovered in 1974 and production started in 1983. Magnus platform is a single steel jacket drilling and production platform in 186 meters of water. It exports oil via a Ninian Pipeline System to Sullom Voe Terminal in Shetland. It exports gas via Far North Liquid and Associated Gas System (FLAGS) pipeline to St. Fergus Gas Terminal in Aberdeenshire, Scotland. (Figures below are taken from BP's website).

177 Telephone Interview with Archana Bhatia and the project environmental statement.
The Magnus field is fast depleting. Conventional production leaves a lot of oil unproduced. For the field life to be extended, enhanced recovery is needed. The objective of this project is to increase the recovery of oil from the field by injecting natural gas, rich in liquefied petroleum gas (LPG), into the edges of the Magnus reservoir via six seawater injection wells. The injected rich gas helps in sweeping oil from reservoir rocks to the production wells. After a period of gas injection, the wells are switched back to seawater injection to control the rate at which the gas penetrates the reservoir. This alteration has to occur about every six months.

**Magnus field characteristics**

- **Size of field**: Large - 795 million barrels and 288bcf recoverable
- **Development consent**: December 1978
- **Number of platforms**: 1
Oil export pipeline: 24-inch to Ninian Central
Gas export pipeline: 20-inch to Brent Alpha Northern Leg Gas Pipeline then
FLAGS
Start-up: August 1983
Peak: 156,000bpd oil, 12,000bpd gas condensate, 60mmscf/d gas
Current production: 80,000bpd
Participants: BP Amoco, Nippon, Agip, Talisman and Petrobras
Development cost: £1.1 billion
Drilled depth of wells: Up to 5,200m in deviated holes with 85 deg max. Deviation.

Additional supplies of rich natural gas need to be imported because gas production at Magnus is insufficient to support this method of enhanced oil recovery.

Exploration in the UK sector of the Faroes/Shetland Trough began in 1972. However, it took twenty years and over 100 exploration and appraisal wells before the first commercially viable discovery was made - the BP operated Foinaven field. A year later, the Schiehallion field was discovered with total proven recoverable reserves of approximately 400 million barrels of oil equivalent (mmboe), which has since increased to almost 600 mmboe. The nearby Loyal field was discovered in late 1994.

Schiehallion and Foinaven fields are 110 miles west of Shetlands, in much deeper water depth (between 350 to 550m). These fields are producing oil via floating production, storage and offloading (FPSO) systems. There were no pipelines to terminals and no gas export. Consequently, the gas from these fields is being re-injected into gas disposal wells (to avoid flaring it).

The problems for the individual fields where Magnus needed gas for EOR and Schiehallion and Foinaven required an export route to make use of the gas produced, created a unique opportunity. With $500 million of investment and 32 months of work, new facilities will be built at the four-brownfield sites in addition to a major new pipeline. The gas from 3 fields
west of Shetlands will flow to Magnus via the Sullom Voe terminal. The terminal will use some of the sweet gas for its own power needs rather than the diesel fuel, thereby having better emission performance. The life of Magnus field is likely to extend by 3 yrs delivering some 72 million bbls of extra oil and being able to export 300 billion cubic feet of gas.

**Project objectives and SD philosophy meet**

Critics of the oil and gas industry would be quick to comment that anything related to non-renewable sources of energy is not sustainable since the source itself is not sustainable. While that is a very valid argument, we believe that our definition of SD has to be pragmatic and contextual. It should not be taking a “perpetual motion machine” type of corner solutions – because true sustainable development, one can argue, defies even the basic laws of thermodynamics. In our opinion, in the short run it is therefore important to look at any corporate effort in SD using three filters:

- Is there Intent for triple bottom line performance?
- Does innovation support the intent?
- Are there winning solutions/results from actions towards triple bottom line performance?

When compounded, over time in several projects and several corporations, this can lead to significant change in the long run.

In this case, it is clear that the intent of Business Units was to “sustain” the reservoirs and to use the source of energy as best and as economically as possible. This intent is clearly supported by the corporate values of BP. The Magnus EOR project challenges the status quo and is an example of practical innovation. The corporation supported it by the mere fact that over $500 million were allocated for the project. The value to the corporation is clear and, as can seen later in the case, benefits to society are manifold. The entire project cost included environmental costs related to planning the project, which tries to minimize the environmental
effects. The entire process of identifying an economically beneficial opportunity that not only produces a win-win solution, but is also executed in a fashion that minimizes environmental impact, is interesting from an SD perspective. Our opinion is that it creates a pragmatic framework for development and is therefore sustainable. There had to be extensive engagement of stakeholders and elaborate work in finalizing options that meet the environmental criteria spelled out by both the UK regulation and BP's goal of "no damage to the environment".

How the idea was generated and approved

From our conversation with Archie Bhatia, the project's environmental manager, the idea of Magnus EOR was conceived by two people in the different business units while smoking a cigarette outside the office. The two people exchanged the problems they were facing which led to the "possible" solution of EOR. The approval of the project is done through a 5-stage capital value process. At each stage, there is a "gate" and multiple gatekeepers who are experts in the area under question. For example, if environmental feasibility of running a pipeline through a sound is being considered, there are marine biologists, diving teams etc that get to input in the process and only after the gatekeepers are satisfied that adequate measures and options are considered, can the project go to the next stage of approval. The process is done via peer reviews and not by taking it to the higher level of management, which only ensures that the due process has been carried out. It signs mainly because of the spending approvals and limits. It took about a year from the idea creation to its approval.

The approval process is not only subject to expert reviews – but is an automatic mode of sharing ideas and therefore, rather than resistance, the BUs tend to challenge the logic and share real expertise – not create barriers. The process seems to be smooth. One BU leader told us of an example: when BP was a JV partner with another oil company that the difference between approval processes between the two companies was about 6 months. BP tends to be
satisfied with and trusts the peer review process. It does not need a lot of documentation to justify projects.

The Magnus EOR project received the top award for human energy. John Browne, in a ceremony in London presented the Helios award to the team; recognizing their efforts was a motivating event according to Archie Bhatia. They received glass cubes as momentos. There were no financial rewards given at that time.

In our earlier interview about the Clair project, Terry had told us about incentives in BP. The incentive scheme is in the form of team share bonus when the key performance targets are achieved in that year. The executive committee sets financial targets (normalized for oil prices). The project KPIs (at most 3) are selected by the BU leader in discussion with his/her peers and then approved by the executive team. The idea was to have enough stretch and uniformity but rather than top – down, have ownership of targets. This system is followed for all projects.

**Measurement of costs/benefits**

The cost of the project is in excess of $500 million. The project is currently under construction. The main economic benefits of the project will be:

- Revenue from incremental oil recovery in excess of 50 million barrels (conservative estimate)
- Revenue from gas production in excess of 320,000 million standard cu ft from Foinaven and Schiehallion.
- Construction work in excess of $300 million will create local jobs. (Approx. 500 jobs counting direct and indirect work force).
- The viability of Sullom Voe terminal is critical for local economy. This project improves the viability by improving revenue.
- The infrastructure of pipelines improves flexibility of producing hydrocarbons as fields mature and new ones are discovered.
- Life extension of reservoirs of non-renewable hydrocarbons with all the indirect benefits accruing from taxation, derived products etc.

The environmental benefits of the project are:
Maximizing efficiency of oil recovery and utilizing rather than disposing of gas. No sustained drilling activity or increased consumption of fuel is needed for additional recovery of hydrocarbons.

- Use of gas power in Sullom Voe and more gas available for burning. Gas produces significantly lower amounts of GHG than oil.
- Reduction in tanker movements through the Yell sound since there will be a pipeline export route.

The dimensions of stakeholder engagement are fascinating. Although this practice has become a norm in the UK sector of North Sea, it is important to highlight. The natives of the Shetland Islands depend for their livelihood on fishing, limited shipping and from the work done in terminals and ports. The project team, by their constant visits to Shetland, made sure that all the local concerns, from how the pipeline will be built to who will be employed, were discussed. The concerns were included in the design phase of the project and its approval. As an example, we were told that the local fishermen and their boats would be hired during the pipeline construction to stand watch in the vicinity of the construction since they were close to the shipping lanes. Local understanding and sharing of concerns (in presence of environmentalist groups) has so far led the project to go smooth. The project is being executed as this is being written. It is early to see both the results of the project and the difficulties encountered in the projects.

5.10 Case 2-BP solar: rural development projects

BP Solar has been supplying equipment and systems to rural development projects for over 15 years as part of the company's commercial business offer. In remote locations, particularly for poor un-electrified communities, solar products and services can be a highly effective means of meeting essential needs such as lighting for homes, schools and community centers, as well as remote telecommunication, fresh drinking water and vaccine refrigeration.
The MSIP project\textsuperscript{178}

BP Solar, a wholly owned subsidiary of BP is one of the largest solar companies in the world with an annual turnover of $300 million and the production of more than 60 MW of solar modules per year. It employs more than 2,000 people in 10 manufacturing facilities and 6 marketing offices around the world. Since its inception 20 years ago, BP Solar has developed a number of large-scale development projects utilizing solar energy. The knowledge gained from these projects has been folded into all its current and future projects. BP Solar has created a division, called Solar Solutions, especially to develop such large-scale sustainable development projects.

In the Philippines, BP Solar undertook the Municipal Solar Infrastructure Project (MSIP), in conjunction with Philippine and Australian Governments. This rural infrastructure project uses solar energy as an "enabling technology" to target specific needs and upgrade basic facilities in remote un-electrified communities. This development project provided health, education and governance benefits to more than 721,140 poor Filipinos in 11 Provinces, 53 Municipalities and 435 villages in the Mindanao and Visayas regions. The project, one of the largest solar contracts in the world was completed at a cost of $27 million.

The challenge

The project was targeted to the Mindanao and the Visayas Provinces. Generally, these Provinces face the following difficulties:

- Access by either land or sea is difficult.
- There is little regular transport and virtually no transport infrastructure such as roads and bridges or passenger wharves.
- More than 50\% of the Barangays have limited or no supplies of electricity.
- Where electricity is available, it is usually for less than 12 hours per day and grid connections are restricted to densely populated areas.

\textsuperscript{178} Case details supplied by Roebym Heintz of BP.
As a result, these communities have been deprived of economic opportunities that will enable them to join the mainstream of the country's growth and development. Basic services are inadequate for effective health programs. In most cases, medical facilities can provide only first aid because they have no means of storing medicines and vaccines. The majority of the Barangays have only Level I water systems and water borne disease is endemic.

The objectives

The Philippines' Presidential Council for Countryside Development identified a wide range of constraints to development in rural communities and they included: lack of adequate infrastructure and support services, inefficient delivery of social services and inadequacy of local government capability. While the economic vision of the government was to attain the status of a "Newly Industrializing Country" by the year 2000 and to base economic development on internationally competitive activities, it also recognized that people suffering poverty have neither the resources nor the access to markets to start competitive industries. The Government has stated in the Medium Term Philippines Development Plan that where people are unable to meet their basic needs in food, health and potable water, there is a case for intervention by the government to assist in and to set aside the principle of "user pays" in favor of social equity. For the Philippines government, this project was a first step toward enabling these rural communities to improve their livelihoods.

The initial objective of the project was the provision of 1,003 stand-alone solar powered equipment packages to be installed in 400 Barangays within 49 municipalities. The project aimed to deliver these systems so that the recipient communities could gain better health services and water supplies, and improved opportunities for education as well as safety. Beyond this, the use of packaged systems was meant to place control in the hands of the end users, empowering them to fulfill their functions and meet their responsibilities more effectively.
The projects aimed to strengthen Local Government Units (LGU) in the poorest provinces, using solar energy as the enabling technology to upgrade infrastructure facilities that would enhance the LGU abilities to deliver essential social services and elicit the participation of community organizations and individuals in governance.

Further, a crucial feature of the project was that each Barangay receive specific training in management, operation and maintenance of all systems, and that they in turn accept responsibility for all future costs to sustain the services.

The perceived benefits were that the project would have a direct influence on almost half of the population of the seven provinces involved in the project. Through the improvement in hospital facilities and vaccination services, a total of almost a million people (995,796 according to survey data) living in the areas serviced by the District Hospitals, Rural Health Centers and Barangay Health Centers would benefit directly.

All groups in the served areas would share in the health benefits. Reductions in infant and maternal mortality would result from improved capacity to store and utilize vaccines and medicines of all kinds and this would assist adults in tetanus prevention and general treatment of illness.

Community safety lighting could be expected to reduce accidents on fishing wharves during night unloading as well as providing safer navigation for fishing vessels. In areas where Level 2 water systems are provided, women in particular would benefit from easier access to potable water, resulting in reduced illness within their families. All groups would benefit from the reduction in water-borne disease.

Poverty alleviation would be served by the improved quality of life associated with improved health and easier access to potable water. In addition, in Barangays receiving
education systems, there would be a further improvement in quality of life through evening access to the school facilities for adult education or entertainment.

For BP Solar, such a project was an attractive business. The company is developing a great deal of experience in this form of comprehensive project delivery. Rural infrastructure projects are now at the core of BP Solar's business strategy, and in the future the company intends to 'clone MSIP' in other regions, incorporating the lessons learned.

Getting started

Following the successful completion of an AIDAB-supported project in Sri Lanka, in 1992/3, BP Solar presented Government officials in the Philippines with a concept for a large-scale project using solar power for empowering remote communities. Officers in the Department of Interior and Local Government (DILG) recognized that such a project could help meet objectives for social and health development programs.

Funding was provided by way of a "soft" loan (under the OECD guidelines) from the Australian Government, which incorporated a grant component of 35%. As part of the initial feasibility study, BP Solar conducted an extensive field study in these Provinces during January and February 1995, to obtain the data necessary to define more accurately the scope of the project.

The feasibility study did not include an evaluation of every Barangay, however. Existing information was unreliable; in some cases, Barangays marked on the map did not exist; in other cases, existing Barangays had a different name. Essentially, the national data was unreliable and a full review and validation was necessary. Therefore, as a first stage of the project a more detailed evaluation phase began. This included detailed surveys and community consultations to determine the Barangays that would be included, the items of equipment to be installed and the associated training to be provided.
Social preparation phase

The next step was the social preparation phase. It was necessary to provide the communities with information regarding what might happen under this new project were they to become involved. A particular challenge was that electrification was new to these regions and many had never paid for government provided services before. This phase commenced with a visit to the Municipality and Barangay to explain the project, and to describe the maintenance commitment and payment program that would be required. If the Mayor and municipality were interested, then the group met with the Barangay and its captain and agreed to proceed.

To undertake the social preparation and training work, approximately 150 community development officers were trained by BP. These individuals were primarily selected from the areas they were to work in to enable communication in local dialects. Where possible, these people had at least a small amount of community development experience.

The next step was to evaluate the infrastructure and the future needs of the community of each Barangay. Did they have a school? What were their requirements for acquiring a clean reliable water supply? Were the women traveling lengthy journeys to find water that was unclean? If so, was it necessary to build a new well and install a new pump or could a nearby well be improved?

It then became necessary to bring Barangay community members together in an assembly. The purpose of this was to conduct a needs assessment and to explain the project and the new systems that were to be installed and what the community could expect to receive from this new service. It was also necessary to explain the commitment that needed to be made to maintaining the systems and the need to undertake revenue-generating activities to enable each community to pay for the systems and components that accompanied them (lights, refrigerators, televisions etc.).
Based on an evaluation of infrastructure, individual income, means of employment and revenue generation capabilities, the DILG determined what could be offered to each Barangay. The field teams then moved on to the next Barangay to enable the previous community to continue to develop their own planning work prior to implementation.

Before BP left each Barangay, interested individuals were gathered together to form ad-hoc committees that would continue discussions. In most instances, there were 3 committees in each Barangay - the health committee, the school committee, and the Barangay water committee. BP trained these individuals in running these committees, managing budgets and addressing procedures such as conducting meetings and documenting discussions through effective minute taking.

BP also spent time with each Barangay, exploring revenue-generating opportunities that would enable them to pay for the services provided by the solar systems. They explored activities such as growing onion bulbs, animal breeding, and basket weaving. These activities would cover the service costs of receiving the benefits of the solar energy, such as amount of water pumped from a new solar energy powered water pump. This was also required to fund maintenance and parts replacement, as well as upkeep of the service systems (such as light bulbs for the lighting systems). This money could also be allocated to upgrading products and services, such as the purchase of new videos to play on the new solar powered televisions and videos.

**Provision of systems**

Each system was supplied to a specified location and installed. In each location, arrangements were made for operating, servicing and maintaining all equipment locally through training and support programs. Documentation, extra service kits and basic spares for
solar equipment for up to ten years were provided and located to ensure that each packaged system could be repaired.

The initial reaction at the first stages of construction of the systems was one of skepticism. Many Barangays had been promised electrification for some time by the Government, but previously these promises had not delivered any power. BP was greeted by amazement when the first deliveries of equipment started to arrive in the Barangays.

There were no pre-payment meters in this project. Rather, each Barangay captain made a commitment to pay for the maintenance of some systems (communal light, Barangay hall) from their Internal Revenue budgets. Villagers were then expected to commit to undertaking revenue generating activities to make financial contributions to the maintenance of the other systems (school, water, and health systems). In many cases, villagers were quite motivated to undertake revenue-generating activities because of the immediate benefits they were recognizing. Women who had previously had to walk long distances back and forth carrying heavy containers to transport water for their families were now saving hours (and a great deal of effort) by using the well-situated pumps that guaranteed clean, reliably flowing water.

Training

In each Barangay, elections were held for the Barangay Technical Team (BTT). This involved 2 people in each Barangay, and these individuals usually had at least a small amount of electrical experience. They were trained to ensure that modules were washed correctly, checking electrolyte levels of batteries, topping up batteries etc. Each BTT was provided with a set of tools. Local BP employees were trained; they trained the BTTs in each Barangay. Additional positive impacts included raising the self-esteem of the individuals, since they were treated with increasing respect and they were able to maintain the new systems. On the down
side, in some instances these individuals are leaving the Barangays to build on this training and find work elsewhere.

In addition to this very basic level of training, three complex levels of training were offered to support the systems:

1) In each town, a Municipal Operative was trained. The person typically operated a small, private business; usually a small-scale operator who already was familiar with repair jobs.
2) In addition, a Municipal Engineer was trained. This individual was someone already employed by the government.
3) High level training was given to the Universities. They were at an advanced stage, being able to fully dismantle, repair and reassemble components of solar units.

Results

This rural development project provided health, education and governance benefits directly to more than 400,000 poor Filipinos in 11 Provinces, 53 Municipalities and 435 Barangays in the Mindanao and Visayas regions. The project, one of the largest solar contracts in the world, cost $27 million. In total 1,145 packaged solar systems were installed in 435 Barangays. On completion of the MSIP the community facilities upgraded and provided with a packaged solar system were:

- 4 District Hospitals
- 11 Rural Health Centers
- 104 Barangay Health Centers
- 260 Barangay Potable Water Supply Systems
- 6 Municipal Halls
- 201 Barangay Halls
- 266 Schools
- 289 Communal area lighting for markets and fishermen's wharves

Overall, 8000 people were trained as part of this program. At the peak, there were 340 individuals working on MSIP at the one time; the general figure ranged from 180 to 200 per month. It is difficult to evaluate at this stage the impact on local businesses. Municipal
operatives were likely to have undergone an expansion in their operations as they include solar activities in the businesses.

As this was a tied-aid project, BP was obliged to source a minimum of 87% of components from Australia. TV’s and videos were sourced from the Philippines, however. In addition, some construction materials were sourced from the Philippines, such as cement for the solar system foundations, as well as wood and taps, among a number of other such items.

In particular, women who previously suffered most as a result of the labor and time intensive tasks of collecting water from far away wells and rivers have derived great benefits. These women are now able to walk to a nearby pump, access reliably clean water and complete tasks in a considerably shorter time. With the removal of such arduous tasks, many women are now able to seek further education; and more women are now attending night classes, in particular for literacy education.

Electrification is also benefiting children, both for their health and for education. The provision of solar systems and vaccine refrigerators to health centers means that children no longer have to wait a week for a doctor. Addition of video programs into the curriculum also benefits education – this was possible because MSIP provided TV’s, videos and videotapes. Many children are now witnessing scenes from outside their areas and outside the Philippines – places they may never have seen or heard about before.

Challenges faced

Revenue

Levels of understanding for the need to generate revenue differed greatly between Barangays. BP conducted multiple visits to each Barangay to encourage ongoing activities for revenue generation; however, the level of enthusiasm and success varied among villages. In
some instances, efforts were meeting with considerable success and Barangay members displayed great commitment to these enterprises in order to maintain the system and purchase additional items. The lethargy and indifference of other Barangays resulted in little revenue generating activities and low-level commitment was displayed.

One problem is that many inhabitants never had to pay for any sort of government service before, so comprehension of this concept has not always been straightforward. Some people were of the attitude, "why should we do anything", whereas others saw the benefits quite clearly and understood the connection between saving money and an increase in the benefits from solar electrification. BP now sees that it is necessary to try to develop a sense of enthusiasm and ownership among villagers.

Infrastructure

The implementation of over 1,100 solar systems in 400 Barangays within 49 Municipalities, spread out over a large geographical area (nine Provinces) and locations that are very difficult to reach, within a time period of three years was extremely challenging. Logistics are a problem; the difficulty of getting into Barangays with all the required construction materials and the systems and equipment was an impediment to the project. In many cases, it was necessary to travel using Caribos; a major challenge for the future is the need for improved infrastructure.

Community expectations

At the outset of the project, some communities were skeptical, which hampered motivation and ownership. In addition, as the MSIP program was the first to focus specifically on the provision of solar electrification to community areas, it encountered frustration on the part of inhabitants who questioned why they couldn’t all have these things in their own homes.
As the funding at this stage does not extend to such an extensive deployment, BP is unable to meet all these needs.

**Political uncertainty and security problems**

It was necessary for BP Solar to pull out of several areas due to political uncertainty. These were predominantly in the Mindanao region and were the result of a very real threat of attacks on employees and vehicles, as well as the increasing occurrence of theft of systems.

The project has experienced security problems from the NPA (Communist rebels), the Abu Sayef (Commander Robot's group) and the MILF. In all instances, the problems were dealt with satisfactorily, and no one was hurt. In two provinces the project implementation had to be stopped completely, (Tawi Tawi and Sulu) and in Basilan the project never began, due to insurgent activities. However, additional provinces benefited from the project’s withdrawals from these areas.

During the time BP was working in this region, there was an incident of a Christian Muslim shooting as well as the highjack of a BP vehicle. BP had initially hoped that the visibility of their efforts might overcome previous negative perceptions of aid agencies and of the Philippines government who had been under fire for doing little for their people. BP had hoped that in witnessing the large implementation of solar systems and the provision of electrification and electrified products, there might be a reduction in the threat from these areas.

**Success factors**

The development need has to be the starting point for any (solar) project. The MSIP project assessed the exact development needs in each community, and how solar energy could be used as the enabling technology to meet these needs to maximize the community benefits in
terms of health improvement, education, economic development, etc. The project was designed to enhance Local Government Units (LGU) to deliver essential social services and to elicit the participation of community organizations and individuals in improved governance.

For the project to be successful, the community has to be committed and involved throughout the entire project, well beyond the implementation phase. Participation and a sense of ownership from communities and individuals in the design, implementation, and maintenance of the project is key; a central element of the MSIP project was community organization. Community ownership can also be enhanced by building incentives to perform in project design, for example, by paying a fee to the BTT for maintenance of the equipment.

The MSIP project experimented with this concept by making communities pay for clean water, it was important that such a scheme included the education of people to understand health and other benefits of clean water.

For communities to be fully committed to the success of make the project, they must see its clear and direct benefit. It is important that the project design incorporate not only community benefits (health, education etc.) but that the project also identify areas where individuals and companies can accrue direct economic benefits, such as enabling fishermen to navigate or to unload their catch at night. The MSIP project has indirectly generated substantial economic benefits (e.g. lights and television in schools increased children’s attendance and motivated women in some villages to take up education), but has paid limited attention to research direct economic benefits.

A key success factor of these projects is to ensure their sustainability, the interpretation of which is that the project elements (technology or equipment, as well as governance and maintenance) should function in 5, 10, 15 years, after the project has been implemented. Training was a key element in the design of the MSIP project, to ensure its sustainability. Over
1000 people have been trained - including 'training of trainers' - on the governance of the project (how to organize meetings, accounting and reporting; how to collect fees/local revenues for sustaining services/maintenance, etc.) as well as technical aspects (maintenance - including local repair and replacement of parts).

To some extent, the MSIP project has built an infrastructure or network of spare parts, by stimulating existing technicians and LGU to take on solar maintenance and to manage spare parts. Widespread use of manuals proved efficient. The project benefited from the University of San Carlos in Cebu, which met BP Solar’s high standards for the repair of defective electrical components. This existing capacity was beneficial.

The management and implementation of the project relied largely on local people. The MSIP project was implemented with help of two full time BP staff from Australia. All other staff involved was local.

A key to the success of this project was the simplicity of its funding arrangement. The project relied on a single recipient, the Department of Interior and Local Government (DILG). On the community level, any revenue collection scheme needs to ensure affordability and fairness. (e.g. it would not be fair to charge for community services such as electricity or potable water level II, where neighboring villages get such services free of charge).

The project management was simple and with limited red tape. The responsibilities were delegated as much as possible to local levels. Although the Government of the Philippines (DILG) accepted the mixed credit arrangement from AusAid/EFIC and bore responsibility to repay the "soft" loan in the MSIP project, the Local Government Units in municipalities and Barangays were held accountable for the successful implementation of the project. The DILG and LGU's have appointed Field Officers for day-to-day supervision. The project also established school and water committees. It is important that responsibilities are clear and
simple and that an effective accountability system is established to include regular measurement of progress and success.

Finally, a key element of the projects' success was its rapid development, the ability to get the project off the ground in a very short time, and to bring a visible pay off. Inability to produce results by development agencies, multinationals etc had promoted a lot of skepticism at the outset of the MSIP project. These projects are complex in nature, so flexibility is important. One size does not fit all, but at the same time, reaching a large number of people (over 400,000) requires streamlining and replication of successful elements.

Lessons learned

These projects by their very nature are complex to implement because of their integrated nature and remote locations. This requires:

- Professional and competent on-ground management.
- Correctly sized and packaged tools for sustainability.
- Solar system designed to a long-term performance specification.
- A well thought through "Train the Trainer" program that can lead quickly to the establishment of well-managed and competent local project management committees.
- Sufficient funds have to be made available in the project design and approval phases for such technical specifications, social preparation and community development, and,
- Adequate maintenance supervision.

5.11 Other examples (taken from the WBCSD website)

Multifunctional from photovoltaic building materials

BP Solar is a wholly owned subsidiary of BP that manufactures and supplies solar photovoltaic power systems. For 27 years, they have supplied products to 160 countries from their 20 factories and offices around the world. As part of their product portfolio, BP Solar has designed integrated solar installations, a multifunctional solar façade system that serves as a building component, and at the same time generates electricity used by the building. This
system can be used in new buildings as well as in existing structures, where they can extend an older building's life through replacement of existing panels. In both instances, the integrated façade system demonstrates that the value of solar technology is not only via the renewable energy it generates, but also via its dual function as a replacement building material. This ability to substitute conventional building materials also has a positive impact on the final customer price. Costs per square meter of solar vary from $200 to $650.

**Cleaner fuel**

BP is offering customers in Australia a new choice: a new, cleaner product and a supporting offset program to reward purchases. BP Ultimate is the new fuel available in service stations, and BP Global Choice™ has been designed to provide an offset scheme for emissions. BP Ultimate is a powerful, high-octane unleaded fuel that is environmentally cleaner than any other gas on the Australian market, according to BP. It can be used in all vehicles, from the family sedan to high-performance sports cars, as well as in older vehicles still using leaded fuel. It is a high-density fuel, therefore the user benefits from more energy per liter. BP Ultimate is highly refined and so produces low emissions. With low levels of sulfur, benzene and lower aromatics, BP Ultimate helps contribute to cleaner, healthier air. The fuel has been available in BP service stations throughout Perth, Australia, and at selected sites in other states, and was being distributed in more service stations across Australia. For those customers who choose this fuel, emissions produced are offset under the BP Global Choice program, designed to help reduce Australia's greenhouse emissions. When drivers fill up with BP Ultimate, BP Australia will offset the greenhouse gas emissions by investing in independently verified and government certified greenhouse gas reduction projects. These include renewable energy (clean energy from solar, wind, tidal, hydro); greenhouse gas capture (turning methane gas from landfills into electricity); planting new forests (to absorb CO2 from the atmosphere); and innovative
technology (providing cleaner technology solutions). With every purchase made, BP will invest a percentage of the purchase price in independently verified greenhouse gas reduction projects. If sales exceed expectations or projects fail to provide the expected reduction in greenhouse gases, BP will invest in additional projects. However, the pump price will not be increased to cover the costs of the program, as BP Ultimate is a premium quality fuel currently costing around six cents more than other unleaded gas due to increased refining costs.

5.12 Summary

As we can see, BP has not only been proactive in managing change but has created the language and process in the organization that supports innovation and brand value. They have taken a leadership position in SD. They are doing so pragmatically and only where they see either long-term value or immediate economic benefits. In doing so, BP has faced substantial media attention in places like Colombia, Alaska and in the North Sea when NGO organizations challenged BP's approach. From our research, we have found that although these were challenges at the time, BP has resolved them by engagement and transparency. According to a survey in Financial Times BP is currently considered by NGO and the media to be the best global company in terms of what they are doing for the environment. The list is as follows.
Table 3: Media/NGOs - companies that best manage and effect environmental resources
(Last Updated: December 14 2001)

<table>
<thead>
<tr>
<th></th>
<th>Company</th>
<th>Country</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BP</td>
<td>UK</td>
<td>Energy/Chemicals</td>
</tr>
<tr>
<td>2</td>
<td>Body Shop</td>
<td>UK</td>
<td>Retail</td>
</tr>
<tr>
<td>3</td>
<td>Honda</td>
<td>Japan</td>
<td>Engineering</td>
</tr>
<tr>
<td>4</td>
<td>Ford</td>
<td>US</td>
<td>Engineering</td>
</tr>
<tr>
<td>5</td>
<td>Royal Dutch/Shell</td>
<td>Netherlands/UK</td>
<td>Energy/Chemicals</td>
</tr>
<tr>
<td>6</td>
<td>Ben and Jerry's</td>
<td>Netherlands/UK</td>
<td>Food/Beverages</td>
</tr>
<tr>
<td></td>
<td>(Unilever)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Vivendi Universal</td>
<td>France</td>
<td>Utilities and Media/Leisure</td>
</tr>
<tr>
<td>8</td>
<td>Toyota</td>
<td>Japan</td>
<td>Engineering</td>
</tr>
<tr>
<td>9</td>
<td>Otto-Versand</td>
<td>Germany</td>
<td>Retail</td>
</tr>
<tr>
<td>9</td>
<td>Siemens</td>
<td>Germany</td>
<td>Electrical/Electronics</td>
</tr>
<tr>
<td>11</td>
<td>Patagonia</td>
<td>US</td>
<td>Retail</td>
</tr>
<tr>
<td>12</td>
<td>Procter and Gamble</td>
<td>US</td>
<td>Food/Beverages</td>
</tr>
<tr>
<td>13</td>
<td>Interface</td>
<td>US</td>
<td>Resources</td>
</tr>
<tr>
<td>14</td>
<td>McDonald's</td>
<td>US</td>
<td>Media/Leisure</td>
</tr>
<tr>
<td>15</td>
<td>General Motors</td>
<td>US</td>
<td>Engineering</td>
</tr>
<tr>
<td>16</td>
<td>Greenpeace</td>
<td>UK</td>
<td>Retail</td>
</tr>
<tr>
<td>17</td>
<td>Ikea</td>
<td>Sweden</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Co-operative Group</td>
<td>UK</td>
<td>Retail and Finance</td>
</tr>
<tr>
<td>19</td>
<td>GlaxoSmithKline</td>
<td>UK</td>
<td>Healthcare</td>
</tr>
<tr>
<td>20</td>
<td>Microsoft</td>
<td>US</td>
<td>IT</td>
</tr>
</tbody>
</table>
Chapter 6: Conclusions

Chapters 2 and 3 gave a panoramic view of the business of SD and its implications for strategy within the oil and gas industry. Chapters 4 and 5 showed us the approaches that BP and Shell have taken towards SD. Their project cases demonstrated their experiences so far. We will now analyze the results. By reviewing similarities and differences in their approaches, we will draw some insights for corporate SD in general terms.

6.1 Results

In chapter 3 we saw that, for an oil and gas company, the main project risks are delays and cost overruns – both have an impact on project NPV. Hence, from a project risk perspective, the cases studied herein have been very successful. In fact, three of the four projects studied in chapters 4 and 5 were completed under budget and within the targeted completion dates. The Magnus Project is yet to be completed, but is also estimated to be on schedule and under budget.

The stakeholder engagement process in the cases of Malampaya, Athabasca and MSIP was a source of ideas and innovations throughout the designs and execution of these projects. In the case of Magnus, the ideas mainly came from the employees, and their effects were two-fold: one, it reduced delays due to disruption, and, two, it optimized the long-term implications of the project. As an example, the snake shaped pipeline built in the case of Malampaya minimized the impact on the marine life which supports the long-term interest of local stakeholders such as the fisherfolk.

In all the cases studied, the companies reported their results and shared them with others within their organization. This process of executing projects with SD in mind and then reporting results to others within the organization is allowing the companies to better
understand the practical implications of the complex dynamics of SD within their businesses. This is what we call "learning by doing". The companies have different approaches toward SD, and even different approaches of "learning by doing", but regardless of their styles, they are gradually building awareness and competence by executing meaningful projects in a pragmatic way, and by learning from each experience. For instance, David Greer who led the Shell's Malampaya project has been moved to a corporate position to have more influence on other similar projects. Dave Cutteridge of the BP's Clair project shared his SAM tool in the Aberdeen office through the peer review process. Consequently, many project managers have adopted the tool in their own project evaluation processes. Much of this knowledge is tacit and can only be learnt through experience.

These successes are also being advertised via papers, presentations and articles. Although the impact of this type of reporting on the perception of all stakeholders is difficult to measure, the companies have had good (formal) feedback from some members of the public and some NGOs.

6.2 Similarities

BP and Shell are companies that have had extremely progressive policies relating to Health, Safety and the Environment (HSE) for a long time. Their leadership stance in HSE is known to most who have had any dealings with these companies. Events like the Piper Alpha disaster in the North Sea led to heavy trend-setting regulations within this industry in the area of "Safety in the Workplace". These changes have permeated to other parts of the world. All throughout this time, Shell and BP led from the front and were always ahead of any regulation.

Both BP and Shell are headquartered in Europe. Empirical evidence suggests that the movement towards SD seems to be gathering momentum faster in Europe than anywhere else
in the world. We have seen this via proxy measures of news articles in European journals, via interviews with employees in London and Aberdeen and via an interview with a London based consultant organization – SustainAbility.

In the nebulous field of climate change, these companies are taking a leadership position. The same can be said about their leadership position in SD. Although BP had been the first to make the debate on climate change more public, Shell seems to have immediately followed suit. In addition, Shell has taken bold steps by including SD in their corporate vocabulary, as is readily apparent when visiting their corporate website.

Both companies are pursuing projects with sound economic sense. These companies include the factors of SD (allowing for the fact that they are dealing with non-renewable energy) in project evaluation and in execution. As mentioned before, both companies are reporting their results on websites, to include many case studies. Some of these case studies are also posted on the website of the world business council for SD. BP and Shell were the earliest signatories to the UN’s Global Compact. Their intention is to lead the change and learn from others. Both additionally are aiming for a brand image that links with SD. Their leaders regularly make public statements on SD.

Not only have both companies made significant investments in the area of renewable energy, but they also have allocated “social funds” for use in communities where they operate.

BP and Shell have in their websites and through opinion polls asked for feedback from their stakeholders – including their employees. The candid feedback displayed on their websites is helping them better understand and measure the impact of their actions. It is also helping their image as a “transparent” company.

Finally, as one can see, these companies have achieved results they can proudly showcase.
6.3 Differences

BP's approach

BP's John Browne made public statements on GHG that surprised the oil industry to the point that API is quoted to have said, "Browne left the church".\textsuperscript{179} He set emissions targets for his company at a higher standard than needed by the Kyoto Protocol. We have found via proxy measures that John Browne prominently repeats high decibel messages about his company and its link to SD. Here are our findings from a Lexis Nexis search for words in quotes from all news articles: \textsuperscript{180}

- "John Browne" and "Sustainable development" 106 stories
- "John Browne" and "Corporate Social Responsibility" 20 stories
- "John Browne" and "Climate Change" 487 stories

However, BP does not seem to advertise much in the media - and when it does, the focus is most often to link the brand to the future.

BP has primarily focused on its brand as a means to guide the actions of the employees. Their clearly articulated brand principles are intuitively applied to projects and show in the actions of individual employees throughout the company. In this way, BP is taking a holistic approach to its businesses. SD happens to fit well into this holistic framework. BP does not have elaborate documentation, or even policies relating to SD. Although BP's leaders talk about SD in public, we found that the vocabulary within the company is focused more towards the brand – which happens to articulate SD very broadly. This is our observation from the interviews with employees. BP relies on a bottom-up process of innovation within these broad principles.

\textsuperscript{179} Charlie Rose Interview of Lord John Browne. WBGH, Boston. April 3\textsuperscript{rd}, 2002.
\textsuperscript{180} Lexis Nexis Database Search. "All News".
As discussed earlier, BP changed its organization and processes to make learning a part of daily business. Its flat organization, IT support tools, internal consultation using peer reviews, informal networks and operational value processes are the means to that end. This form of "learning organization" is meant to help them manage change. The process at the field level is clearly self-organizing. The nature, actions and extent of SD initiatives that the business units are taking can hardly be classified as "standard". What are standard though, are the brand principles and the processes that have been established for project evaluation.

BP has only one person in their corporate SD department whose main job is to think "out of the box" about what actions in SD would lead to biggest leverage, or as he called "traction" for the company. SD coordinators in the field are not common – Aberdeen was an exception. The corporate office has focused only on the high leverage GHG emissions target. They invested in professionally designed tools to manage emissions trading internally - thereby giving the BU's some flexibility in managing their business.

Awards and recognition are prominent in BP. The Helios awards and their profile is just one example. The list of projects receiving recognition is very diverse and demonstrates the innovation happening at the grassroots. Employees can build their own web pages to showcase their expertise and innovation. Through peer reviews and peer assist processes, others request help. This in addition to being a good learning process is a good means of recognizing and capitalizing on individual expertise.

BP is considered very transparent by NGO's and the media. We found that although BP focuses on local reporting, it does not seem to produce a company-wide report apart from its Annual Report to shareholders. Their local reports can be downloaded from their website. As could be seen in the case of MSIP project, transparency and stakeholder engagement was an important part of the project's success.
Shell’s approach

Unlike BP, Shell’s approach to SD has been significantly affected by history. In particular, the two events of the 1990s – Brent Spar de-commissioning and human rights issues in Nigeria, forced Shell into brand redemption mode. Advertisement, stakeholder engagement and corporate policies have all been heavily influenced by these events. Shell advertises its environmental and social leanings via professionally designed advertisement campaigns both on TV and in magazines. Transparency and SD commitment are the main messages coming through these advertisements.

Shell has been extremely successful in its business. According to the interviewees, Shell has always been very structured, scientific, and top-down in approaching new challenges. With the Brent Spar event, after unsuccessfully battling with public opinion in a rational manner, Shell took a hard and holistic look at their business and approached SD in a characteristically structured manner. Shell’s organization has changed over time but is still more hierarchical than BP. Their approach to SD involved establishing a central group that would articulate the policies and awareness campaigns – a kind of think tank. In the field offices, the HSE managers became SD managers.

Shell’s scenario planning expertise gives them the tools to look in a holistic way at how SD affects corporate strategy. In fact, recent presentations by Shell executives explain their systems approach.

Shell uses its existing systems for HSE, with all their guidelines and policies, and harmonizes them with the SD philosophy. The primarily change is in the area of stakeholder engagement and transparency. The current focus is in integrating this philosophy into the

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business as was done with HSE over the past few decades. This also explains the extensive use of SD in corporate vocabulary.

Shell has raised the bar on transparency via their “People, Planet, Profits” report. This annual Shell report is a pioneering effort toward social reporting. This is in addition to their local reporting. Here again, one can see from its circulation and their website design, that this group-wide Shell report gets more importance than the local reports.

Shell does not tend to make bold target-setting statements to the public, but all the same, it delivers sterling results. Their low-key approach can be summarized by a recent Financial Times interview with their CMD, Mr. Phil Watts, where he said, "For years I have been convinced that what business doesn't need is a kind of hero-leader, or personality cult." Our Lexis Nexis search showed however that Shell’s leaders, like BP’s, are repeating high decibel messages. Here are some proxy measures that indicate this trend:

`"Mark Moody-Stuart" and "Sustainable development" 116
"Mark Moody-Stuart" and "Corporate Social 10 stories
" Mark Moody-Stuart" and "Climate Change" 127
"Phil Watts" and "Sustainable development" 21 stories
"Phil Watts" and "Corporate Social Responsibility" 2 stories
"Phil Watts" and "Climate Change" 10 stories
`

Shell has relied on change “agents”, corporate policies, key performance indicators, group scorecards and learning databases to manage the integration of SD into its various business operations. In addition, they are developing training modules and award systems to generate awareness and learning within their organization.

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The following table summarizes the areas where the companies have relative strengths:

<table>
<thead>
<tr>
<th>Area</th>
<th>BP</th>
<th>Shell</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perception of Leader's stance on SD and CSR</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Transparency and Local Reporting</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Stakeholder engagement</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Innovation at field level</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Planning and detailed analysis</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Organizational Learning</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Focus on Brand image</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Focus on Brand Protection</td>
<td>N/A</td>
<td>+</td>
</tr>
<tr>
<td>Policies and standardization across the company</td>
<td></td>
<td>+</td>
</tr>
</tbody>
</table>

6.4 The implications

The success of all projects, in spite of the difference in company styles, shows that there is no “cookie cutter” approach to SD. The execution of individual project depends heavily on the historical perception of stakeholders. These two companies were starting from a different datum. It required Shell to focus more on brand redemption than BP.

As can be seen in the cases, both companies in their own ways focused on local needs of the projects. Yet, they actively involved both local and international NGOs. While as in the case of Malampaya biodiversity was important, in the case of MSIP training the Barangays was the key issue. While as Magnus needed a relatively lower level of stakeholder engagement, Athabasca needed a more substantial level of stakeholder engagement. These comparisons point to the project specific nature of SD. Even within the same country or within the same company, the relative resource allocation from an SD perspective depends on the circumstances of the individual project.

It is therefore important to note the impracticality for setting SD standards across an industry unless done at a very high level of abstraction.
In contrast to the local nature of stakeholder engagement, the LTO, which affects the existence and future business of global companies, is influenced by the media, the NGOs and the their global reach. Transparency is therefore essential at the global level. That explains the extensive use of the corporate websites, advertisements and the increasing messages by the corporate leaders in the media.

According to the leaders of BP and Shell, SD is expected to benefit their companies mainly through their LTOs and risk reduction. They have already seen the benefits of reduced risk in the form of reduced project delays through improved community relations. However, the immediate benefits from linking the brand image to SD are unclear.

The underlying implication for business strategy is that SD makes one look at the entire system and hence forces one to take a holistic approach that includes externalities. While as BP uses the holistic "brand" framework to integrate SD, Shell uses the business principles and standard corporate policies to do the same. Either way, these companies both use a "systems thinking" approach. It is our opinion therefore that a formal model that incorporates these concepts could be useful to these companies as they learn and measure their SD progress.

Measurement of success is a very important issue requiring further attention. As we saw earlier, neither do the capital markets know how to value SD strategy, nor do the companies know the precise financial benefits of SD on a company level. The opinion polls and web surveys certainly help, but further work in valuation of SD will be crucial. Large scale acceptance of SD will need measurement and for this reason we believe that building a systems model will be very useful.

We studied mainly "Green field" projects, or those where the SD initiatives could be implemented at the planning stage – in other words, when the companies had a "clean slate" to work from. This in our opinion could be one main reason for the stellar success of the projects.
Impact of actions in “Brown field” projects or projects with legacy issues would also be an important area for similar study.
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Exhibits

Exhibit 1: The UN’s Global Compact

Secretary-General of the United Nations (UN), Kofi Annan, acknowledges that globalization demands corporate efforts toward social and environmental sustainability. In July 2000 he initiated a program coined the “Global Compact” (GC) to inspire these shared values and principles in the global market. The GC seeks to facilitate corporate strategy for global growth in a way that strikes a fair and equitable balance across all nations. This is accomplished through a cooperative partnership between private industry of all varieties, non-governmental organizations (NGOs), and other UN agencies such as the International Labour Organization. It is strictly a voluntary initiative, with the expectation that corporate leaders from all industries will set the new trends for responsible corporate citizenship – i.e., socially and environmentally sustainable business practices. According to John Gerard Ruggie, former Assistant Secretary-General and chief advisor for strategic planning to UN’s Secretary-General Annan, “[t]he hope and expectation is that good practices will help drive out bad ones through the power of dialogue, transparency, advocacy and competition”.  

The GC asks its participating companies to “embrace, support and enact, within their sphere of influence, a set of core values in the areas of human rights, labour standards and the environment”. These values become nine key principles of the GC as follows:

**Human Rights**

*Principle 1*: Businesses should support and respect the protection of internationally proclaimed human rights; and

*Principle 2*: make sure they are not complicit in human rights abuses.

**Labour Standards**

*Principle 3*: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

*Principle 4*: the elimination of all forms of forced and compulsory labour;

*Principle 5*: the effective abolition of child labour, and

*Principle 6*: eliminate discrimination in respect of employment and occupation.

**Environment**

*Principle 7*: Businesses should support a precautionary approach to environmental challenges;

*Principle 8*: undertake initiatives to promote greater environmental responsibility; and

*Principle 9*: encourage the development and diffusion of environmentally friendly technologies.

It is the UN’s ambition that the nine principles of the GC present an opportunity for multi-national firms to exhibit responsible citizenship through creative corporate leadership, particularly in developing nations. At the same time, it is believed members can benefit through an exchange of experiences and lessons learned with other companies striving toward common goals. Participating in the GC should hopefully also help build positive relationships with customers, employees, shareholders, other companies, governmental and international organizations, the media, the public and NGOs, thereby positioning a company to maximize its business opportunities. (These themes will be built upon in subsequent sections to this chapter.) At this point in time, more than 400 firms have signed up to the GC in the three years since its inception.

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2 “The Global Compact, Corporate Leadership in the World Economy” (pamphlet), Published by the Global Compact Office, United Nations, January 2001 – 5M.
3 Ibid.
Exhibit 2: Shell group statement of general business principles

Introduction

This document reaffirms the general business principles that govern how each of the Shell companies which make up the Royal Dutch/Shell Group of Companies conducts its affairs.

The Group is a decentralised, diversified group of companies with widespread activities, and each Shell company has wide freedom of action. However what we have in common is the Shell reputation. Upholding the Shell reputation is paramount. We are judged by how we act. Our reputation will be upheld if we act with honesty and integrity in all our dealings and we do what we think is right at all times within the legitimate role of business.

Shell companies have as their core values honesty, integrity and respect for people. Shell companies also firmly believe in the fundamental importance of the promotion of trust, openness, teamwork and professionalism, and in pride in what they do.

Our underlying corporate values determine our principles. These principles apply to all transactions, large or small, and describe the behaviour expected of every employee in every Shell company in the conduct of its business.

In turn, the application of these principles is underpinned by procedures within each Shell company which are designed to make sure that its employees understand the principles and that they act in accordance with them. We recognise that it is vital that our behaviour matches our intentions.

All the elements of this structure – values, principles and the accompanying procedures – are necessary.

Shell companies recognise that maintaining the trust and confidence of shareholders, employees, customers and other people with whom they do business, as well as the communities in which they work, is crucial to the Group’s continued growth and success.

We intend to merit this trust by conducting ourselves according to the standards set out in our principles. These principles have served Shell companies well for many years. It is the responsibility of management to ensure that all employees are aware of these principles, and behave in accordance with the spirit as well as the letter of this statement.

C A J Herkstöter
Chairman of the Committee of Managing Directors
March 1997

1. Objectives

The objectives of Shell companies are to engage efficiently, responsibly and profitably in the oil, gas, chemicals and other selected businesses and to participate in the search for and development of other sources of energy. Shell companies seek a high standard of performance and aim to maintain a long-term position in their respective competitive environments.

2. Responsibilities

Shell companies recognise five areas of responsibility:
a. To shareholders To protect shareholders’ investment, and provide an acceptable return.

b. To customers To win and maintain customers by developing and providing products and services which offer value in terms of price, quality, safety and environmental impact, which are supported by the requisite technological, environmental and commercial expertise.

c. To employees To respect the human rights of their employees, to provide their employees with good and safe conditions of work, and good and competitive terms and conditions of service, to promote the development and best use of human talent and equal opportunity employment, and to encourage the involvement of employees in the planning and direction of their work, and in the application of these principles within their company. It is recognised that commercial success depends on the full commitment of all employees.

d. To those with whom they do business To seek mutually beneficial relationships with contractors, suppliers and in joint ventures and to promote the application of these principles in so doing. The ability to promote these principles effectively will be an important factor in the decision to enter into or remain in such relationships.

e. To society To conduct business as responsible corporate members of society, to observe the laws of the countries in which they operate, to express support for fundamental human rights in line with the legitimate role of business and to give proper regard to health, safety and the environment consistent with their commitment to contribute to sustainable development.

These five areas of responsibility are seen as inseparable. Therefore it is the duty of management continuously to assess the priorities and discharge its responsibilities as best it can on the basis of that assessment.

3. Economic Principles

Profitability is essential to discharging these responsibilities and staying in business. It is a measure both of efficiency and of the value that customers place on Shell products and services. It is essential to the allocation of the necessary corporate resources and to support the continuing investment required to develop and produce future energy supplies to meet consumer needs. Without profits and a strong financial foundation it would not be possible to fulfill the responsibilities outlined above.

Shell companies work in a wide variety of changing social, political and economic environments, but in general they believe that the interests of the community can be served most efficiently by a market economy.

Criteria for investment decisions are not exclusively economic in nature but also take into account social and environmental considerations and an appraisal of the security of the investment.

4. Business Integrity

Shell companies insist on honesty, integrity and fairness in all aspects of their business and expect the same in their relationships with all those with whom they do business. The direct or indirect offer, payment, soliciting and acceptance of bribes in any form are unacceptable practices. Employees must avoid conflicts of interest between their private financial activities and their part in the conduct of company business. All business transactions on behalf of a Shell company must be reflected accurately and fairly in the accounts of the company in accordance with established procedures and be subject to audit.
5. Political Activities

a. Of companies Shell companies act in a socially responsible manner within the laws of the countries in which they operate in pursuit of their legitimate commercial objectives. Shell companies do not make payments to political parties, organisations or their representatives or take any part in party politics. However, when dealing with governments, Shell companies have the right and the responsibility to make their position known on any matter which affects themselves, their employees, their customers, or their shareholders. They also have the right to make their position known on matters affecting the community, where they have a contribution to make.

b. Of employees Where individuals wish to engage in activities in the community, including standing for election to public office, they will be given the opportunity to do so where this is appropriate in the light of local circumstances.

6. Health, Safety and the Environment

Consistent with their commitment to contribute to sustainable development, Shell companies have a systematic approach to health, safety and environmental management in order to achieve continuous performance improvement. To this end, Shell companies manage these matters as any other critical business activity, set targets for improvement, and measure, appraise and report performance.

7. The Community

The most important contribution that companies can make to the social and material progress of the countries in which they operate is in performing their basic activities as effectively as possible. In addition Shell companies take a constructive interest in societal matters which may not be directly related to the business. Opportunities for involvement – for example through community, educational or donations programmes – will vary depending upon the size of the company concerned, the nature of the local society, and the scope for useful private initiatives.

8. Competition

Shell companies support free enterprise. They seek to compete fairly and ethically and within the framework of applicable competition laws; they will not prevent others from competing freely with them.

9. Communication

Shell companies recognise that in view of the importance of the activities in which they are engaged and their impact on national economies and individuals, open communication is essential. To this end, Shell companies have comprehensive corporate information programmes and provide full relevant information about their activities to legitimately interested parties, subject to any overriding considerations of business confidentiality and cost.

Source: Company document
### Exhibit 3: Shell sustainability principles

1. **Respect and safeguard people**
   - Pursuing a goal of no harm to people, whether employees, contractors, or others affected by our activities
   - Valuing and promoting diversity and equal opportunities
   - Promoting and respecting human rights
   - Promoting high standards of health and safety in our industry
   - Providing good and competitive terms and conditions of service
   - Conducting social assessments prior to modifications or new activities
   - Publicly reporting our performance

2. **Engage and work with stakeholders**
   - Actively seeking out, listening and responding to those with an interest in our activities
   - Building trusting and mutually beneficial partnerships and relationships
   - Proactively providing information about our activities
   - Creating awareness and promoting sustainable development

3. **Minimise impact on the environment**
   - Setting targets to progressively reduce emissions and discharges
   - Working in partnerships with environmental experts to conserve biodiversity
   - Gaining external certification against internationally recognized environmental systems standards
   - Adopting a set of global environmental standards applicable to all of our operations
   - Conducting environmental assessments prior to modifications or new activities

4. **Use resources efficiently**
   - Using all resources – land, energy, materials – efficiently to provide products and services
   - Researching and developing technologies which use less resources and generate less waste
   - Maximizing the use, where possible, of renewable energy sources
   - Promoting tele and video conferencing, web based technologies and e-business

5. **Maximise profitability**
   - Effectively managing costs to deliver superior and sustained financial performance
   - Co-operating and using leverage in the market place for contracting and procurement
   - Working in beneficial partnerships, alliances and joint industry projects to share services and costs
   - Maximizing recovery of oil and gas reserves through use of state-of-the-art technologies and techniques

6. **Maximise benefits to the community**
   - Recruiting and developing local staff and supporting local education and training programmes
   - Working in partnerships on social investment programmes to build skills and capabilities, transfer technologies and support infrastructure and service improvements
   - Procuring local products and services where possible and developing partnerships and alliances with local suppliers and contractors
   - Providing company foundations, scholarships and charitable donations


7. **Deliver value to customers**
   - Meet and exceed customer expectations by designing and delivering highly attractive and innovative products and services

Exhibit 4: Contents of “People, Planet and Profits: The Shell Report”

This report documents the actions we have taken in 2000 to meet our economic, environmental and social responsibilities and describes how we are striving to create value for the future.

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**“Tell Shell”**

We really do want to hear your views on Shell or the Shell Report, about the issues we covered and anything we didn’t. Contact us via the internet at [www.shell.com/tellshell](http://www.shell.com/tellshell), by email or tell-shell@shell.com or write to us using the pre-paid reply card at the back.

### Key

- Information verified see page 5
- Find out more on the web

3.6 Graph references
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