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# Health impact assessment in multinationals: A case study of the Royal Dutch/Shell Group

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## Abstract

Health impact assessment is part of the risk management process of multinational corporations/companies. Sexually transmitted infections, including HIV/AIDS, and the “paradox of plenty” are used as examples of the challenges they face. The “business case” for impact assessment is explained. The policies, procedures, standards, and activities used by Shell to manage such risks are described. An approach to capacity building and competency development is presented that applies to both company staff and external contractors.

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## 1. Introduction

Some multinational corporations and businesses (“multinationals”) carry out health impact assessment (HIA) because it makes good business sense. This conclusion arises from direct observation of the Royal Dutch/Shell Group of companies (Shell). Some of the components of this “business case” are explored in this paper, together with the following questions. Where does HIA fit within the corporate estate? How does it link with other corporate activities? How is HIA promoted? Is there competence and capacity? What challenges does an oil and gas major face in seeking to safeguard the community health?

Projects range in size from small to gigantic (\$10–30 billion). A UK audience can obtain a sense of size by imagining the following scenario. Suppose that North Sea gas is

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newly discovered and an HIA is commissioned of the first project. The investment will require shipyards, pipelines, platforms, and specialist operatives. There will be extensive migration to northeast Scotland, domestic fuel prices may change, the coal industry may be affected, and national inflation rates may soar. When that scenario is transferred to a developing country in which a multinational wishes to do business, the challenges are multiplied. That country may have poor governance, corruption, censorship, lack of statistics, inefficient bureaucracy, lack of democratic process, and extreme inequality.

There are, of course, many possible positive and negative health impacts of such projects. The health impacts can be categorised as communicable diseases, non-communicable diseases, injuries, malnutrition, and psychosocial disorders. The literature for the oil and gas sector is sparse when compared with other sectors (Birley, 1995; 2002). Recent examples include the Chad–Cameron pipeline (Jobin, 2003; Utzinger et al., 2004), the Peruvian Camisea project (Hastings, 2002), and the Sakhalin Island project (Sakhalin Energy, 2003).

### *1.1. An example*

Sexually transmitted infections (STIs), including HIV/AIDS, are one example of potential health impacts. These are a common concern in many large construction projects. The determinants of STIs include men, money, and mobility. Construction workers travel long distances, are paid relatively high wages, are separated from their families for long periods of time, and often have to live in an alien and institutionalised environment. In such circumstances, they may seek local intimate companionship. The local community is sometimes poor, marginalized, and lacking in economic opportunities. The women from the community may be dis-empowered carers, treated unequally within the family and within the local culture. Young women and men may drift to towns in search of a better life but may encounter hard drugs, exploitation, poverty, and inequality. They may seek commercial sex work or an expatriate partner, and find unsafe sexual practices and increased risk. Commercial sex work may be illegal, making it harder to manage.

Companies try to maintain high standards in construction camps. This includes the provision of recreational and medical facilities. Occupational health and safety considerations ensure good management of water supply, sanitation, waste disposal, food safety, and road transport. Where much of the work includes heavy labour, the workforce is largely male. Working hours are long, tiring, and stressful. Camaraderie develops amongst the men and during their leisure time they want to have fun. A community of camp followers may cater to their interests but live in squatter communities, on illegally occupied or rented land, with inadequate water supplies and sanitation. Alternatively, the camps may be closed to internal and external visits and an enforced male-to-male sexual activity may develop.

Company projects often involve large numbers of long distance truck drivers. In some countries, HIV transmission follows the main transportation routes and peripheral communities become heavily infected. Long distance truck drivers are frequently separated from their families and informal overnight stops develop near local villages.

Professional staff often have to travel widely throughout both the developed and developing world, spending many nights away from their families in relative isolation. They, too, are vulnerable to the enticements that proliferate in and around large hotels.

### *1.2. The paradox of plenty*

At a more strategic level, nations that are rich in natural capital compared to other assets face a challenge that has been called “oil dependence”, the “paradox of plenty”, or “Dutch disease”. These terms were used first to describe the economic decline that occurred in the Netherlands during the early years of North Sea gas production, and then more widely. The evidence suggests that the consequences for a nation of exploiting abundant natural capital can include some, or all, of the following (Gylfason, 2001; Ross, 2003; Stevens, 2003; Cohen, 2003; Transparency International, 2004).

- Less trade and foreign investment,
- Less education,
- Less domestic investment,
- Lower life expectancy,
- More civil war,
- More corruption,
- Higher malnutrition rates.

There seem to be complex, dynamic, and unstable feedback processes operating in societies that seek to exploit their mineral wealth. These processes produce a series of unexpected and unwanted impacts. There is a need to document such health impacts and to understand how they can be mitigated.

## **2. Why should multinationals choose to do health impact assessment?**

Impact assessment, in general, offers multinationals clear advantages in the face of external pressures and competition. The advantages include: helping to reduce risk and uncertainty, reducing waste and improving efficiency, earning good will and support from local communities, helping to address society’s expectations, enhancing reputation, helping secure regulatory permits, and improving design and operation of projects.

### *2.1. Reputation*

A series of events over the past forty years have led to increasing protest, loss of public trust, and damage to the reputations of multinationals. For example, the media and campaigning organizations have rightly or wrongly accused multinationals of human rights abuses, breaking international economic sanctions, environmental damage, disregard of community health, and financial mismanagement. Damage to reputation is bad for business and multinationals would like to avoid it.

### *2.2. Sustainable development*

There is an increasing public expectation that all projects should be designed and operated to support sustainable development. This has many components including

biodiversity, global climate change, and human health. Decisions about sustainable development depend on good impact assessment.

### *2.3. Corporate social responsibility*

Corporate Social Responsibility (CSR) is about the social side of sustainable development (Holliday et al., 2002; Mahoney and Potter, 2004). It includes voluntary actions and reporting by business that address both their own competitive interests and the interests of a wider society. Multinationals are no longer judged by their financial performance alone. The financial analysts use a range of indicators, including CSR, to determine the risk associated with lending money to specific multinationals. That risk, in turn, affects the cost of borrowing. Therefore, there is pressure on multinationals to ensure that they can report good environmental and social performance.

### *2.4. Equator principles*

During 2003–4, a group of independent lending banks signed up to the safeguard policies that are advocated by the International Finance Corporation (IFC, 2004). These policies encourage institutions to take account of the environmental and social impacts of investment. There are a number of circumstances when a corporation, or its partners, may need to borrow money from these banks in order to finance investment in new projects.

The safeguard policies do not explicitly refer to health impacts, and this is one of their weaknesses (IFC, 2002). More recently, the World Bank commissioned a review of the extractive industries as a whole and this affirmed the need for HIA (World Bank, 2003).

### *2.5. Ethical investment*

More people now place their savings in investments that make use of ethical criteria, and this potentially affects the share price of multinationals. For example, during 2004 some financial institutions were reported to have sold shares in a multinational corporation because of concerns about the way it dealt with environmental issues (Observer Newspaper, June 27, 2004). Specific pension companies are lobbied to do likewise (Ethics for USS, 2004).

### *2.6. Recruitment and retention*

Large multinationals are increasingly knowledge driven and need to recruit and retain good staff. Staff have their own values and wish to work for multinationals that promote those values. Therefore, large multinationals need to ensure that their policies and procedures are acceptable to their staff. If they do not do so, they may lose one of their most valuable assets.

### *2.7. Improved design and operation*

Attention to the unintended impacts of a project at an early stage can yield cost savings. For example, expensive retrofits and compensation claims can be avoided, waste can be

re-used, disruption can be minimised, staff sickness can be prevented, and the license to operate can be maintained.

### *2.8. License to operate*

When a multinational corporation seeks to make a new investment in a country, it must obtain permission from the government. Before granting that permission, the government will consider its past operating performance. Therefore, it is in the interest of the corporation to behave in a manner that is acceptable to the government.

Risks to oil sector investment and reputation from local community activism are perceived to have increased over the past five years (CERA, 2004). Community activism reduces the ability of a company to operate. Therefore, a company must listen to and respect the views of its neighbours. Typical criticisms include statements that company operations are negatively affecting community health or that extraction of oil and gas is providing no lasting benefits to the local community. The companies that manage these risks most effectively have a competitive advantage.

### *2.9. Risk management*

Risk management is a fundamental aspect of managing large multinationals. The risks to be managed are diverse. They include financial, environmental, political, physical security, reputation, health, and safety risks. Consequently, there is a general risk management process. The principles of risk management are to choose between taking, treating, transferring, and terminating the risk. One such risk is that the health of local communities will be adversely affected by a new project. That risk has to be identified, assessed, and controlled, just like any other risk.

## **3. What is Shell?**

Shell is a global group of energy and petrochemicals companies, operating in more than 145 countries and employing approximately 119,000 people (Shell, 2004).

Most people know Shell for its retail stations and for exploring for and producing oil and natural gas. But its activities also include:

- Marketing, transporting and trading oil and gas;
- Providing oil products for industrial uses including fuel and lubricant for ships and planes;
- Generating electricity, including wind power, and producing solar panels;
- Producing petrochemicals that are used for plastics, coatings and detergents; and
- Developing technology for hydrogen vehicles.

Shell operates many joint ventures with national governments, other oil companies, or investment companies, and seeks to apply the same standards throughout the world.

Shell has required HIA since 2001 and has issued its own internal guidelines. Before then, health was added to environmental and social impact assessment to a greater or lesser extent, as elsewhere. Shell also recognised that policy and procedures alone are not sufficient: the capacity to undertake HIA had to be increased in order to assure the quality of assessments to international standards. In 2003, a time-limited HIA Improvement Project was initiated, on which this paper is based.

### *3.1. What policies and principles does Shell espouse?*

Health Impact Assessment can be viewed as the natural consequence of a set of interconnected policies, principles, standards and processes that have already been adopted by Shell. These are supported by a series of internal statements and documents that range from mandatory to advisory.

The policy framework is represented by the “Shell Business Principles” (Shell, 2004) and these include the following important concepts.

- Conduct business as responsible corporate members of society.
- Contribute to sustainable development.
- Pay proper regard to health, safety, and the environment.
- Express support for fundamental human rights in line with the legitimate role of business.
- Investment decisions are not exclusively economic.
- Take a constructive interest in societal matters that may not be directly related to the business.

Sustainable development is about balancing social, environmental, and economic objectives (Shell, 2004). The goods and services that society demands must be provided in ways that make a positive impact on communities and safeguard ecosystems. In Shell this includes pursuing the goal of no harm to people, and many issues ranging from waste management to meeting the global challenges posed by energy and carbon dioxide. The environmental component of sustainable development leads to processes such as Environmental Impact Assessment. It addresses determinants of health such as pollution and biodiversity.

Social performance is all the different ways that businesses contribute positively to or impact negatively on the people in the communities or societies where they operate. It is key part of meeting the commitment to sustainable development and encompasses health and safety issues. It involves finding ways to contribute positively to society by planning and managing social impacts. This may include employing local people, supporting local contractors and suppliers, and supporting local health initiatives.

The management of these issues requires sophisticated approaches to stakeholder engagement. A stakeholder may be defined as anyone who has an interest in or who is affected by a company’s activities. Engagement requires information dissemination, consultation, and participation. Impact assessment is part of good stakeholder engagement. For example, Shell tries to make assessment documentation publicly available and accessible whenever possible.

Shell's commitments to Health, Safety, and the Environment, HSE, gave rise to a set of Minimum Health Management Standards including Health Risk Assessment and Health Impact Assessment (Shell, 2004). A distinction is made between health issues within the fence that affect employees and contractors and health issues outside the fence that affect everyone else. Health Risk Assessments are made in order to manage inside the fence issues. There has been an evolution in accepted responsibility from inside to outside the fence. Shell requires an HIA whenever there is an Environmental Impact Assessment or Social Impact Assessment, or when screening indicates a health concern for local communities, workers, or their families. Shell seeks to integrate the Environmental, Social, and Health Impact Assessments.

HSE management comprises a system as well as standards. The system is usually summarised as a diagram, see Fig. 1. This diagram is similar in many ways to the method/procedure diagram used in HIA (Scott-Samuel et al., 2001). The Shell system was created before HIA was introduced and is used to manage many different issues. HIA is an example of hazards and effects management. This is a general concept that has four components in common with HIA: identify, assess, control, and recover. The system emphasises the multiple feedback loops required to assure proper management and quality.

In addition to the general requirement for HIA, Shell has issued internal Group Guidelines on HIV/AIDS. These guide business managers in protecting Shell's staff and business interests, and contributing to preventing the further spread of the infection through appropriate business practices. These include the education of staff and

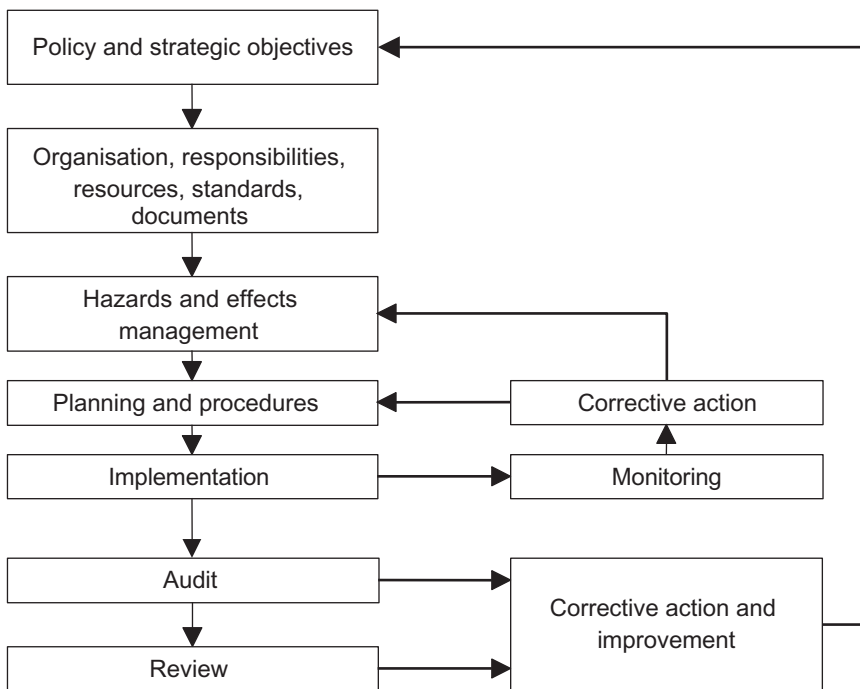


Fig. 1. The shell health, safety, and environment management system.

participation in wider support programmes at local, national or international level. Shell espouses principles of non-discrimination, proactive prevention, provision of medical care, inclusion of HIV in impact assessments, creation of sustainable partnerships, and participation in regional programmes. The following two projects illustrate where STIs may be encountered in large projects.

### *3.2. A liquid natural gas project in Nigeria*

One location where social health impacts can be observed is the Niger Delta. Gas is collected from wells over a wide area and transported by pipelines to the refrigeration plant on Bonny Island. Revenues flow to the national government and most of the staff are Nigerian. Construction on this site, and the surrounding industrial sites, seems to be continuous. Specialist sub-contractors come and go, working on projects that last weeks, or months. For example, a thousand Koreans may be there for one year. Nearby Bonny Town has grown in size many times, and so have the camp followers and the associated sex industry. The local villagers derive continuous financial benefits from the project through unskilled labour, trade, and the rent collected from camp followers.

### *3.3. An oil and gas project on Sakhalin Island*

There are huge oil and gas projects on Sakhalin Island, off the frozen Pacific coast of Russian Siberia. This remote and inhospitable island has a total population of 600,000 and a minimum government wage of about \$10 US per month. Economic activities include fishing, and employment in prisons and military camps. Shell is a partner in a joint venture called Sakhalin Energy. It requires a construction labour force of some 13,000 people and will last several years ([Sakhalin Energy, 2003](#)).

HIV rates in Russia grew exponentially from 1996 through 2002, after which the growth rate seemed to slow ([Grisin and Wallander, 2002](#)). About half of the cases were associated with injectable drug abuse. Higher HIV positivity rates are reported from prison and military populations where there is either drug-taking or male-to-male sex.

At the time of writing, only about 120 cases of HIV/AIDS had been reported from the island. The presence of mobile men with money may change that and could mean that the epidemic arrives sooner, rather than later. In recognition of this risk, Sakhalin Energy conceived a strategic approach to HIV on Sakhalin based on a Public Private Partnership ([Warner, 2003](#)). The partnership was started during 2004 with a workshop for the principal national and international stakeholders. The stakeholders included government, UNAIDS, other business leaders, NGOs, and bilateral development agencies. The objectives of the workshop were to raise awareness, build long-term commitment, and create a platform for further action.

## **4. Competency in HIA**

Multinationals employ staff who have training and experience in medicine, occupational health, occupational hygiene, or nursing. There is, perhaps, an assumption



that such staff are automatically qualified to initiate and appraise, or even undertake, HIAs. In part, this arises out of confusion between the biomedical and socio-environmental model of health. The staff have biomedical skills but require specific training in HIA.

Integrated impact assessments are often commissioned from external consultants, as companies do not maintain the staff necessary to do all of this work in all countries of the world where they operate. The lead contractors are usually environmental consultants with long-term experience of EIA in the sector. They rarely have health impact specialists on their staff because the demand is very new. They usually sub-contract the HIA component to local health specialists. Companies have a general policy of requiring their contractors to provide high-quality goods and services. However, the lead contractors who supply HIA services may not have that expertise and may not know what expertise to hire from subcontractors. Furthermore, there is a global shortage of skilled and experienced HIA consultants who are familiar with multinationals. There is a general need for a competency framework and standards.

Shell has adopted a competency framework that applies to all the main activities within HSE, including HIA. They apply to both staff and contractors. There are four levels of competency and these are referred to as “Awareness”, “Knowledge”, “Skilled”, and “Mastery”. [Table 1](#) illustrates how these competencies can be obtained and used. The external consultants who undertake the impact assessment as contractors or subcontractors require “Skilled” level competence.

Table 1  
HIA competences and their uses

	How obtained	Uses
Awareness	<ul style="list-style-type: none"> <li>■ Reading a short introductory document, or attending a reputable one-day HIA course</li> </ul>	<ul style="list-style-type: none"> <li>■ Knows what needs to be managed</li> </ul>
Knowledge	<ul style="list-style-type: none"> <li>■ Meeting the awareness level criteria</li> <li>■ Attending a Knowledge level learning course, or equivalent</li> </ul>	<ul style="list-style-type: none"> <li>■ Can screen projects</li> <li>■ Can manage the process</li> <li>■ Can choose consultants</li> <li>■ Can contribute to an HIA as a team member</li> <li>■ Can interact with members of the social and environmental teams</li> <li>■ Can advocate and explain HIA to management</li> </ul>
Skilled	<ul style="list-style-type: none"> <li>■ Meeting the Knowledge level criteria, or equivalent</li> <li>■ Participating in at least 3 HIAs under supervision of a Skilled leader</li> <li>■ Having a degree or research experience in a health related field</li> </ul>	<ul style="list-style-type: none"> <li>■ Can lead an HIA</li> <li>■ Can teach HIA</li> </ul>
Mastery	<ul style="list-style-type: none"> <li>■ Meeting Skilled level criteria</li> <li>■ Familiarity with the state-of-the-art</li> <li>■ Extensive experience of preventative medicine/public or environmental health</li> </ul>	<ul style="list-style-type: none"> <li>■ Can review and audit HIA</li> <li>■ Able to adapt HIA to new situations</li> <li>■ Can improve group HIA process and training</li> <li>■ Can provide back-up expertise</li> <li>■ Can represent group in external fora</li> </ul>

#### 4.1. The “Knowledge” level training course

Shell has developed a training course to meet the “Knowledge” level of competency. The potential audience, and market, for this course, is global. In principle, it is a requirement for the staff who manage HIAs and for the contractors and subcontractors who wish to bid for health impact assessment work. The course has been implemented on the Internet using Teletop, a commercial web-based course management system ([www.teletop.nl](http://www.teletop.nl)). This should produce significant cost savings compared to residential courses. The course is based on the educational theory that adults learn best by working on problems in small multi-disciplinary groups (Bos et al., 2003). It extends that theory to the virtual environment of the Internet. The first Shell courses were held during 2004. Participants were from Nigeria, Brazil, Venezuela, USA, and the Netherlands. Their functions included health advisers, HSE advisers, sustainable development advisers, occupational health advisers, and social performance advisers. The course is open to both internal and external participants, takes about 30 h spread over 6 weeks at 1 h per day, and costs about \$2500 US.

### 5. Conclusion

This case study has illustrated the compelling business case for prospective health impact assessments in multinationals and some of the challenges to assuring quality. In order to demonstrate value, a high level of quality has to be maintained and this requires competency and capacity. Managers must be equipped with the basic knowledge to know what competences are required and must demand these of their contractors. The contractors must be aware of this demand and must take positive action to meet it. This, in turn, requires new ways of establishing competence. The competency requirements of multinationals are similar and may benefit from a shared approach.

Part of the challenge of recognising competence could be overcome by establishing an international professional body to regulate and certify it, as happens in other professions. In the case of HIA, institutions that might consider this role include: World Health Organization (WHO), International Association for Impact Assessment (IAIA), UK HIA Conference, International Association of Oil and Gas Producers (OGP), International Petroleum Industry Environmental Conservation Association (IPIECA), and Faculty of Public Health Medicine, United Kingdom, (FPHM). No doubt there are many others. The Conference is the largest gathering of HIA professionals but has no formal status. The OGP does not have a remit to certify contractor competence. There is a joint OGP–IPIECA health committee and an issue group is developing HIA guidance. IAIA members have concluded that insurance and legal pitfalls are significant barriers to certification; but the IAIA may be able to set the standards by which others certify competence (R. Morgan, *pers. comm.*; Woodley and Morgan, 2004). WHO does not certify individual competencies for much the same reason, but can lobby for national regulatory frameworks (R. Bos, *pers. comm.*). An easier objective is to certify the quality of HIA training courses, and WHO are listing and classifying such courses (C. Dora, *pers. comm.*). The FPHM has included HIA in new competency requirements (FPHM, 2001).

The impacts of very large projects in the extractive sector appear to have a destabilising effect on whole societies. Such impacts cannot be mitigated at the level of the project alone. They require foresight by government. However, there is no statutory requirement for health impact assessment in many of the countries where multinationals operate. Until that regulatory environment develops, they may find themselves implementing health safeguards for their projects without the active support of national governments.

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