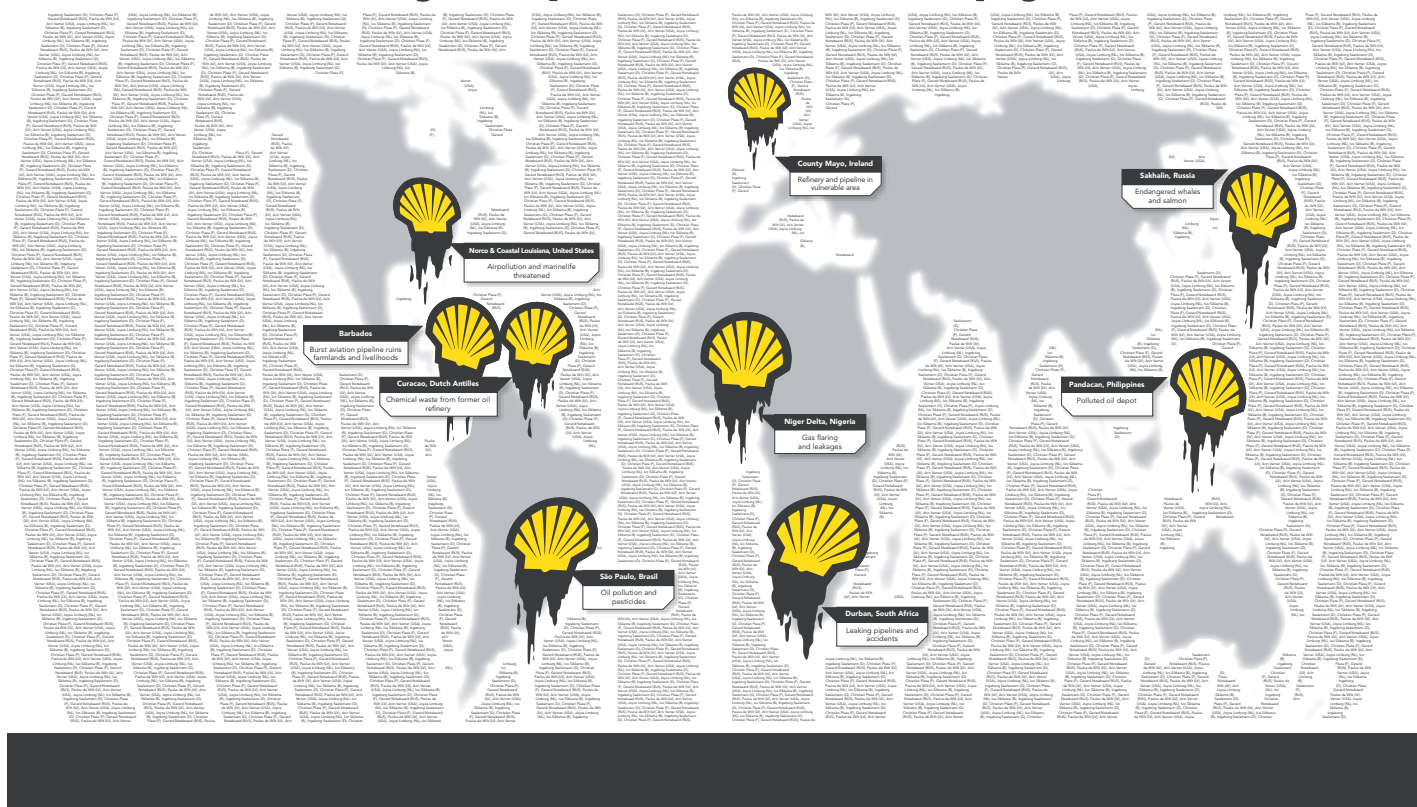


Use your profit to clean up your mess



Today Shell will announce sky-high profits. People from around the world tell Shell to stop destroying the environment and people's lives

Shell: Use your profits to clean up your mess



Report on how Shell should fund local solutions for environmental and social destruction caused by its projects

Use your profit to clean up your mess

**Report on how Shell should fund
local solutions for environmental
and social destruction caused by its projects**

1 February 2007

Shell Accountability Coalition

Credits

This report is based largely on evidence from people around the world who live in the shadows of some of Shell's operations. It has been written on behalf of Milieudefensie (Friends of the Earth Netherlands), Friends of the Earth International, Global Community Monitor, Friends of the Earth England, Wales and Northern Ireland, Environmental Rights Action (Friends of the Earth Nigeria), Sakhalin Environment Watch, Pacific Environment, South Durban Community Environmental Alliance, groundWork (Friends of the Earth, South Africa), Shell to Sea, United Front to Oust Depot, Fenceline Community for Human Safety and Environmental Protection, Colectivo Alternativa Verde, Human Care Foundation Curacao, Louisiana Bucket Brigade, Gulf Restoration Network, The Southern Farmers Association and Community In-power Development Association, Inc.

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Action Milieudefensie at AGM Shell, May 2006.

Foreword

Shell is one of the world's major producers of gas and oil. In 2005 the giant earned the highest annual profit in Dutch business history and expectations for 2006 are again high. While Shell laughed all the way to the bank, the environment, the people and the communities from whose territories Shell extracts her barrels of crude are groaning under the hammer of this giant.

Despite Shell's public commitment to Corporate Social Responsibility (CSR) and specific promises it has made to communities, life on the fenceline can be likened to hell. From Nigeria to Ireland, the Philippines to South Africa, Shell still too often fails to respect the environment or the needs of local communities. Now is the time for Shell to show readiness for Corporate Social Accountability.

With the money it has earned in 2006, the oil company could address some of the many environmental and health problems which accompany its projects. In this report local communities and environmental groups describe the problems that Shell causes in and around their communities and they offer a number of solutions to address these problems.

At the launch of this report, full-page advertisements will be published in the Dutch newspaper "De Volkskrant" and the British newspaper "The Guardian". This will take place on 1 February 2007, the day that Shell announces its profit for 2006. Thousands of people from around the world have joined together to tell Shell to "Stop destroying the planet and people's lives. Use your profits to clean up your mess!"

We urge Shell to heed this call and take concrete action. We have just one earth. Time is running out.



Nnimmo Bassey

Environmental Rights Action, Nigeria

Executive Summary

Shell: put your money where your mouth is

This report presents nine cases of problematic projects in which Shell is involved. Each case contains concrete proposals and demands for how social and environmental problems can be addressed. The proposals are partly focussed on restoration of the damage that has been done - for example, by cleaning up Lake Asphalt in Curacao, the environmental pollution in Nigeria or paying compensation to landowners in Sakhalin, Russia. Other solutions focus on preventing damage in projects that already exist - for example, by stopping the gas flaring in Nigeria or relocating a refinery in South Africa. In some cases the damage is not yet done and Shell can still plan the project differently to prevent future damage - for example, in Ireland where it can choose to refine the gas offshore.

We ask Shell to invest its profits in repairing damage and preventing some of the problems caused by its projects. We do so by giving concrete proposals for action in all nine cases. This report does not cover all the problems that exist around Shell's activities. Over the last ten years Shell has also been criticised for its contribution to climate change, its excessive power over national governments and new plans for oil development in vulnerable areas such as Alaska. These proposals, therefore, should be regarded as the first and necessary steps to address the local negative impacts of Shell's activities and not as a complete analysis of everything Shell needs to do.

Case	<i>Demands from community groups</i>
1. Niger Delta, Nigeria	<ul style="list-style-type: none"> - Clean up oil spills and compensation (at least 10 billion dollars) - Stop gas flaring (1.55 billion dollars) - Compensate Ijaw Community (1.5 billion dollars)
2. Sakhalin, Russia	<ul style="list-style-type: none"> - Restore environmental damage (at least 376.5 million dollars) - Compensate local landowners (costs unknown) - Carry out environmental/Social Impact Assessment (costs unknown) - Give access to environmental information (costs unknown) - Redesign for new pipeline (costs unknown) - Prepare Oil Spill Prevention and Response Plan (costs unknown) - Relocate the PA-B Platforms (costs unknown) - Repair roads (costs unknown)
3. Durban, South Africa	<ul style="list-style-type: none"> - Build new oil refinery (around 6 billion dollars) - Clean up pollution (costs unknown) - Open medical clinic (costs unknown) - Engage in transparent communication (costs unknown)
4. County Mayo, Ireland	<ul style="list-style-type: none"> - Build and operate refinery offshore (736 million dollars)
5. Manila, Philippines	<ul style="list-style-type: none"> - Relocate oil depot (costs unknown) - Comply with existing legislation (costs unknown)
6. Sao Paulo, Brazil	<ul style="list-style-type: none"> - Relocate residents (350 million dollars) - Close and clean up area (costs unknown)
7. Curacao, Dutch Antilles	<ul style="list-style-type: none"> - Dismantle refinery and clean up soil (part of 400 million dollars) - Clean up Lake Asphalt (40-60 million dollars)
8. Norco & Coastal Louisiana, United States	<ul style="list-style-type: none"> - Carry out environmental health assessment (300,000 dollars) (Norco) - Start health fund (250,000 dollars annual) (Norco) - Monitor emissions (500,000 dollars) (Norco) - Use closed-loop terminal design (20 to 40 million dollars annually) (Coastal)
9. Barbados	<ul style="list-style-type: none"> - Carry out an independent study environmental conditions (500,000 dollars) - Clean up and prevent contamination (costs unknown) - Compensate farmers (costs unknown)

Introduction

1. Growing profits

Over the last few years, Shell's profits have been sky high. In 2005 the third biggest oil company in the world had a profit of 22.9 billion dollars and an annual turnover of 379 billion dollars¹. This was the biggest profit ever made by Shell and the biggest profit ever for a Dutch company.

The 2005 profit was 5.3 billion dollars more than in 2004². For 2006, the prospects are even better for Shell: in the first nine months of 2006, Shell's profits were higher than in the first nine months of 2005: 19.4 billion dollars in 2006 compared to 17.3 billion dollars in 2005³.

Estimated GDP in 2006 of countries in this report in billion dollars

Barbados	3.0
Brazil	732.1
Dutch Antilles	3.1
Ireland	206.5
Nigeria	91.6
Philippines	92.6
Russia	755.4
South Africa	226.5
United States	12,438.9

Source: *World Economic and Financial Surveys, World Economic Outlook, Financial Systems and Economic Cycles, April 2006, IMF*⁴

Shell profits from high oil prices. The oil price has broken record after record in the last decade. In the late Nineties only ten dollars was paid for a barrel of crude oil. Today the price is 58.50 dollars (8 January 2007)⁵. With a turnover of hundreds of billions of dollars, Shell has more economic power than many of the countries where it operates (see Table).

2. Excellent intentions

Shell promotes itself as a company committed to corporate responsibility, with concern for people and the environment. The company is involved in several voluntary initiatives, such as the Global Compact. This voluntary initiative of the United Nations is meant to stimulate corporate responsibility. Companies that participate in the Global Compact agree to take action on ten issues in the area of human rights, labour, environment and corruption⁶.

Shell has also made a list of internal voluntary codes: the Shell General Business Principles. According to Shell, these eight Principles apply to all its business affairs and describe the behaviour expected of every employee. The company claims that the Principles are based on the core values of honesty, integrity and respect for people and indicate how Shell promotes trust, openness, teamwork and professionalism, and take pride in what it does. All Shell companies are expected to comply with the Principles. In joint ventures, Shell uses its influence to persuade partners to adopt and apply principles consistent with its own. In 2006 it revised its Principles and added social performance, engagement with communities and the development of sustainable development principles⁷.

Every year Shell produces a sustainability report in which it sums up many targets it wants to meet; for example: the Health Safety and Environment Golden Rules, 2005. Shell claims to: 1) Comply with the law, standards and procedures. 2) Intervene in unsafe or non-compliant situations and 3) Respect its neighbours⁸.

In its sustainability report, Shell also claims to care about climate change, stating: "Stabilising greenhouse gas (GHG) levels in the atmosphere this century is one of the biggest challenges facing a rapidly-developing world." It intends to: 1) manage its GHG emissions (target: five per cent below 1990 levels by 2010), 2) help customers reduce their emissions by providing more natural gas and advanced transport fuels, 3) invest in technology to capture CO₂ from fossil fuels, 4) work to build at least one large-scale business in alternative energy and 5) support policies that use markets to encourage GHG reduction⁹.

3. The bitter truth

Reality shows a different picture. Although Shell proudly announces that it has "the broadest portfolio of hydrogen, biofuels, wind and solar power activities of any major energy company¹⁰", only 0.87 per cent of its profit in 2005 was spent on renewable energy. Its 2005 report indicates that Shell is investing an average of 200 million dollars a year in renewables, representing just 1.2 per cent of its 2005 total capital investment of 17.4 billion dollars. In contrast, 69 per cent (12 billion dollars) of Shell's new capital investment in 2005 was spent searching for yet more oil and gas¹.

Shell claims to be a corporation that is aware of the worldwide threats of climate change. However, this awareness has not yet been translated into widespread meaningful action. Shell needs to make a real shift from fossil to renewable energy. This should be much more than the 0.87 per cent they now invest.

Shell's projects cause problems all over the world, from Ireland to Nigeria, from Sakhalin to Brazil. Oil spills, air pollution, endangered whales, leukaemia, misuse of power are just a few of the problems encountered from Shell's activities. Residents in the countries where Shell is active often do not profit from the oil dollars. Worse still, some of them lose their subsist-

¹ Shell states in its 2005 sustainability report that they will invest one billion dollars in renewables over the next five years, representing an average of 200 million dollars every year. It is unclear from information available whether this is purely in non-carbon energy (such as solar and wind) or whether it also includes some gas-fired power.

ence because of pollution of their farm or fishing grounds or because their health is at risk.

Many of the problems have existed for decades, without Shell making much progress in solving them. Numerous cases have been documented where Shell does not comply with national laws, sometimes even when judges order them to do so. Shell also often does not listen to what communities want.

In this report communities speak for themselves. The following sections have been written with community groups and NGOs. Nine cases of problematic projects are presented. It is not a complete list of all the environmental and social problems Shell is involved in but presents the stories of groups involved in the Shell Accountability Campaign.

A long-running case that is not included in this report is the refinery in Port Arthur, Texas, United States. Community groups in Port Arthur recently reached an agreement with Shell. This case shows that effective local campaigning and pressure can lead to agreements with Shell. Not all of their demands have been complied with yet, however, so the struggle will continue².

In each of the cases in this report, the social and environmental problems are described and the communities' demands are outlined. The cases show that the problems are huge, but that many of them can and need to be addressed. Given the enormous profits Shell earns year after year, it is obvious that it has the resources to address the problems. Most of the solutions presented here would in fact only cost a fraction of last year's profit. In return, Shell could regain some confidence from its neighbours. A sensible move indeed, because the confidence of neighbours (or the lack thereof) will sooner or later have its effect on the confidence of investors and consumers. The most important question therefore is whether Shell has the will to use its giant profits to stop destroying the planet and people's lives.

2 More information on the Porth Arthur case is available on www.refineryreform.org/community_portarthur.asp



Children look at gas flaring in the Niger Delta, Nigeria.

1. Niger Delta, Nigeria: Gas flares and oil spills

Community group:

- Environmental Right Action (Friends of the Earth Nigeria)

1. The project in brief

Shell has been operating in the Niger Delta in Nigeria since the 1930s. Nigeria is now a democracy, but has a long and brutal history of military dictatorships¹¹. The Niger Delta was once considered the breadbasket of Nigeria because of its rich ecosystem, a place where people cultivated fertile farmlands and benefited from abundant fisheries¹². In the southern part of the Delta lies Ogoniland, where half a million Ogoni people live.

Nigeria is the largest oil producer in Africa and the 11th largest in the world. Crude oil production in 2004 was 2.5 million barrels per day, of which an average of one million barrels per day was produced by Shell¹³. This makes Shell by far the biggest oil company in Nigeria. The country has significant oil reserves and even greater gas reserves¹⁴. However, most Nigerians have not benefited from these resources. Despite its oil and gas, Nigeria is now one of the poorest countries in the world.

Shell operates under the Shell Petroleum Development Company (SPDC), a joint venture of Shell and the Nigerian government. SPDC has more than 90 oil and gas fields spread over some 30,000 square kilometres of oil mining leases in the Niger Delta. It is a massive operation involving a network of more than 6,000 kilometres of flow lines and pipelines, seven gas plants, 86 flow stations and other facilities¹⁵.

Shell and other oil companies have transformed the Niger Delta into a virtual wasteland bearing deep scars from gas flaring and oil spills¹⁶. The population in the Niger Delta suffers from multiple health problems and the land is heavily polluted. There have been major human rights abuses as well. According to the World Bank, smoke emitted during the flaring is the major source of greenhouse gases in Sub-Saharan Africa. In November 2005 the Federal High Court of Nigeria ordered Shell to stop flaring gas, effective immediately, in Iwherekhan community, Delta State. The court found gas flaring to be a 'gross violation' of the rights to life and dignity. Nevertheless, Shell continues the flaring. A recent report from the Nigerian Federal Ministry of Environment, Nigeria Conservation Foundation, WWF UK and IUCN concluded that the Niger Delta is one of the five most severely petroleum-damaged ecosystems in the world¹⁷.

2. History

Shell and BP started exploring for oil in the Niger Delta in the 1930s, when Nigeria was still a British colony. The first field was found in 1956 and the first export was made in 1958. Flaring of associated gas (which is mixed with the crude oil) began right at the start, as did the social and environmental problems.

The Nigerian state came into being on 1 October 1960, when Nigeria declared its independence from the British. Nigeria re-achieved democracy in 1999, after a sixteen-year interruption by a series of military dictators. Shell continued to operate in Nigeria during the whole period.

In 1984 the Nigerian government declared gas flaring illegal. Section 3 of the Associated Gas Reinjection Act only allows companies to flare if they have field(s)-specific, lawfully-issued, ministerial certificates. Neither Shell or any other oil company, nor the Nigerian government have ever provided any evidence that the oil companies that are currently flaring gas have obtained these certificates.

Ken Saro-Wiwa was a leader of an organisation of Ogoni people called the Movement for the Survival of the Ogoni People (MOSOP). MOSOP demanded that Shell take responsibility for its massive environmental devastation of their homeland and denounced the injustices that Shell has inflicted on the Ogoni and other peoples in the Niger Delta. In 1995, Ken Saro-Wiwa and 13 other MOSOP leaders were subjected to a secret tribunal that, based on unsubstantiated allegations, sentenced nine of the men to death by hanging. They were accused of incitement to murder, following the deaths of four Ogoni elders. All nine were summarily executed without any opportunity for appeal¹⁸.

At the time of the execution, Shell wielded significant influence over the Nigerian military dictatorship through the profitable SPDC joint venture between Shell and the Nigerian government. However, Shell denied that it had any role in the execution of the MOSOP leaders¹⁹. Shell even went so far as to claim that it had no moral obligation to intervene in the military tribunal on behalf of the MOSOP leaders²⁰, although it had done so on at least one occasion, on behalf of a Shell employee who faced murder charges in Nigeria²¹.

Ever since the killing of Ken Saro Wiwa, Shell has announced that it will stop gas flaring. But Shell also has a history of broken promises, and flaring is still going on. Due to great pressure from the Nigerian people and the international community, Shell stated in 2000 that it would stop gas flaring in 2008²². In 2005 Shell announced that they would not be able to meet that deadline and that all gas flaring will be stopped by the end of 2009²³. The question remains what that promise is worth, given that a good deal more gas was flared in 2005 than in 2002, according to the 2005 Shell Sustainability Report.

In November 2005, the Federal High Court of Nigeria stated that Shell and other oil companies should end gas flaring in the Niger Delta. In a case brought against Shell, Judge Nwokorie ruled in Benin City that the damaging and wasteful practice of flaring by all the major companies, including ExxonMobil, ChevronTexaco, TotalFinaElf and Agip, as well as Shell, in joint ventures with the Nigerian National Petroleum Corporation, cannot lawfully continue and must stop. Shell appealed the decision.

On 10 April 2006, the Nigerian High Court reconfirmed the earlier decision and said that Shell must stop gas flaring by April 2007. Shell's managing director in Nigeria and the Nigerian Minister for Petroleum had to appear in person before the judge in open court on 31 May 2006 in Benin City with detailed plans for putting gas flares out by April 2007. Nothing has happened so far. Meanwhile, the flaring continues.

In an unrelated development in February 2006, the Federal High Court of Nigeria in Port Harcourt ordered Shell and its partners to pay Southern Niger Delta Ijaw communities 1.5 billion dollars in compensation for environmental pollution and degradation in the Delta. The Nigerian parliament had already come to the same decision in August 2004. Again in this case Shell refused to follow the court order and to this day has not paid a penny.

3. Problems caused by the project

Problems with oil spills

Shell's environmental legacy in the Niger Delta is strongly evident today. An infrastructure of aging pipelines that should have been replaced at least 25 years ago criss-crosses the Delta. Leaks and oil spills are commonplace. The recent report 'Niger Delta Natural Resource Damage Assessment and Restoration Project' concludes that 'an estimated 9 million – 13 million barrels (1.5 million tons) of oil has spilled in the Niger Delta ecosystem over the past 50 years, representing about 50 times the estimated volume spilled in the Exxon Valdez oil spill in Alaska in 1989. This amount is equivalent to about one "Exxon Valdez" spill in the Niger Delta each year'. The report further states: 'Many of the oil facilities and operations are located within sensitive habitats - including areas vital to fish breeding, sea turtle nesting, mangroves and rainforests - that have often been severely damaged, contributing to increased biodiversity loss and poverty'. The spills pollute the land and water of the communities. Drinking water is affected, people get sick, fish populations die and farmers lose their income because the soil of their land is destroyed.

Often cleaning up is very superficial and much oil remains in the area. During a visit in April 2005 to the Niger Delta, Friends of the Earth encountered a Shell contractor involved in a "clean-up" operation near Rukpopkwu, a community affected by a December 2004 spill. The clean-up involved little more than the turning of the land, placing the oil just below the surface²⁴.

Shell now routinely claims that almost all of these oil spills are the consequence of sabotage²⁵. Some of the spills are indeed a result of sabotage, but this does not remove Shell's responsibility for cleaning up the oil. More importantly, the vast majority of all spills during the last 40 years are a consequence of aging facilities and human error. A large proportion of the pipelines was built thirty or forty years ago. Shell fails to properly maintain and upgrade its oil pipelines and other infrastructure²⁶. The 'Niger Delta Natural Resource Damage Assessment and Restoration Project' points to the double standards of oil companies when it says that 'oil companies operating in the Delta have not employed best available technology and practices that they use elsewhere in the world'.

Problems with gas flaring

Nowhere in the world is more gas flared than in Nigeria. Associated gas is flared in Nigeria 24 hours a day, close to residential areas. It produces deafening noise and pollution.

Flaring of associated gas from oil production facilities is like setting a match to an enormous container of lighter fluid. Flares are so hot that nothing will grow next to them. Flaring emits a cocktail of toxic substances (including sulphur dioxide, nitrogen dioxides), carcinogenic substances (such as benz[a]pyrene and dioxin) and unburned fuel components (including benzene, toluene, xylene and hydrogen sulphide)²⁷.

Gas flaring has severe health consequences. Environmental and health agencies have published research on how exposure to these pollutants impact human health. Many scientific studies have linked breathing particulate matter to a series of significant health problems, including aggravated asthma, increases in respiratory symptoms like coughing and difficult or painful breathing, chronic bronchitis, decreased lung function, and premature death. Furthermore, it has been clearly established and accepted that exposure to benzene and its metabolites causes acute nonlymphocytic leukaemia and a variety of other blood-related disorders in humans²⁸.

Recent oil spills

October 2004.

In October 2004, during the rainy season, a Shell pipeline near Goi, which is an ancient Ogonicommunity, bursts and caused a spill, which polluted the local drinking resources. The oil caught fire which burned canos and fishing ponds. It took three days to stop the fire. The damage is huge: fishing ponds, mangroves, palmtrees that belonged to the local community were destroyed. Till today, nobody can use the drinkwater from the creek where the oil has leaked to.

June 2005

An oil spill in Ogbia in Bayelsa state covered the rivers with oil. An investigation team from Shell came by and left again without doing anything. Some people got ill from the water pollution and people did not have clean drinking water. A week later Shell contacted the community again.

August 2006

A big fire was reported at the Yorla Well 13 in Ogoniland on 14 August 2006. SPDC sent in a team to put out the fire but the fire raged for more than 80 days before they were successful. The fire, which sent soot into the atmosphere for almost 3 months, will cause serious health problems for the Ogoni people. Although the cause of the fire has yet to be determined, SPDC has already suggested that it was sabotage. It is now almost standard practice for Shell to suggest that a spill is caused by sabotage, denying the company's responsibility for most of the fires.

Gas flaring causes acid rain in the Niger Delta²⁹. Delta residents have long complained of how their roofs have been corroded by the composition of the rain that falls as a result of flaring. The primary causes of acid rain are emissions of sulphur dioxide (SO₂) and nitrogen oxides (NO_x), which combine with atmospheric moisture to form sulphuric acid and nitric acid, respectively. Acid rain acidifies lakes and streams and damages vegetation. In addition, acid rain accelerates the decay of building materials and paints.



Milieudefensie

Oilspills in the Niger Delta, Nigeria.

Flaring also contributes significantly to emissions of greenhouse gases. According to the World Bank, "The most striking example of environmental neglect has been in the oil sector, where natural gas flaring in Nigeria has contributed more emissions of greenhouse gases than all other sources in sub-Saharan Africa combined³⁰.

But according to Lord Ron Oxford, ex-chairman of Shell, locals should appreciate the flares as a heat source for drying fish³¹.

4. What community groups want from Shell

Clean up oil spills and compensate affected communities: at least 10 billion dollars

The 'Niger Delta Natural Resource Damage Assessment and Restoration Project' estimates that the financial value of the environmental damage caused by 50 years of oil and gas activities in the region - taking into account the unique and productive character of the ecosystem as well as comparable valuations on other such ecosystems - would be tens of billions of dollars. Shell, being the main oil company in Nigeria, is responsible for a substantial part of that. The company should start reserving at least 10 billion dollars for cleaning up the environmental damage and compensating affected communities.

Stop gas flaring: 1.55 billion dollars

Shell should stop all gas flaring in 2007. There are various ways to do so: they can re-inject the associated gas, they can shut down the facilities or they can process associated gas into liquefied natural gas that can be used commercially.

Shell itself has estimated³² that costs associated with ending gas flaring would be 1.55 billion dollars.

Compensate Ijaw Community: 1.5 billion dollars

The Nigerian High Court and the Nigerian Federal Parliament have decided that Shell should pay 1.5 billion dollars in compensation to the Ijaw Community.



Pacific Gray whale, Sakhalin.

2. Sakhalin Island, Russia: Endangered Grey Whales and Salmon

Community groups:

- Sakhalin Environment Watch
- Pacific Environment

1. The project in brief

Sakhalin Island is located in the Russian Far East, to the north of Hokkaido, Japan. It is home to rich fisheries consisting of crab, herring, cod, and hundreds of wild salmon runs. These fisheries have long been the economic mainstay of Sakhalin Island's indigenous people and local communities. Sakhalin's terrestrial environment is equally rich, including wetlands and waterfowl. Waters offshore from Sakhalin are home to 25 marine mammal species, eleven of which are threatened, including the critically endangered Western Pacific Gray whale³³³⁴.

Shell is engaged in the world's largest integrated oil and gas production project, Sakhalin II, off the coast of Sakhalin. Sakhalin II is being carried out by the Shell-managed Sakhalin Energy Investment Company, Ltd., (SEIC) in which Mitsui and Mitsubishi also participate. Until recently Shell owned 55 per cent of the shares. In December 2006, Shell announced that it would reduce its share to 27.5 per cent, while 50 per cent of the shares would be owned by Russian Gazprom³⁵. Mitsubishi and Mitsui own the remaining 22.5 per cent of the shares. Shell will continue to manage the project. But the contract has not yet been signed.

The Shell-designed project includes three offshore platforms, two of which are located close to the only feeding grounds of the critically endangered Western Pacific Gray whale population. Sub-sea oil and gas pipelines will run to Sakhalin island, and then extend 800 kilometres down the length of the island, crossing over 19 active seismic faults and more than a thousand watercourses. These include a hundred rivers with spawning beds for wild salmon. Gas and oil export terminals are located in Aniva Bay, which is very rich in fish resources.

Approximately 85 per cent of the pipeline has already been laid and has led to social and environmental problems over the last few years. Illegal pipeline construction caused damage to nearly 100 wild salmon rivers and spawning beds,³⁶ which are relied upon by indigenous people and local fishing communities. The project also places the last hundred West Pacific Gray whales in the world under great threat. In a recent report WWF stated that Shell's Sakhalin construction activities in 2006 clearly breached the recommendations formulated by the Western Gray Whale Advisory Panel in order to provide adequate protection for the whales³⁷. Additionally, there are significant risks of oil spills from the pipelines, platforms and tanker transportation.

2. History

Since 1994, Shell, Exxon-Mobil and other international energy giants have been developing massive oil and natural gas extraction projects on and offshore Sakhalin Island, Russia. Since January 2003, Sakhalin Environment Watch (SEW) and a wide coalition of Russian and international NGOs have been asking Shell for improvements in the scheme. They have asked Shell to prevent damage to salmon and other fish resources, which are critical for the local population. They have also asked Shell to develop adequate oil spill prevention and response measures. Furthermore, they have asked Shell to change the project design so that the last remaining population of Western Pacific Gray whales would not be harmed. Except for partial re-routing of undersea pipelines, Shell has not met most of the demands.

NGO proposals for main changes in the project design

- Build overland pipelines above ground on vertical support systems to guarantee adequate flexibility instead of building them underground.
- Relocate undersea pipelines, avoiding Gray whale feeding grounds.
- Move the location of the new proposed offshore platform further from the feeding grounds of the whales.
- Change the dumping place of dredged materials from the fish-rich Aniva Bay to beyond the bay.

Since 2003, the NGO coalition has been demanding that the European Bank for Reconstruction and Development (EBRD) and other potential lenders like ABN AMRO not support the Sakhalin II project because of fundamental violations of the banks' policies and procedures. Until now, the EBRD has not approved the loans, postponing the decision because of Shell's failure to meet the banks' standards. Since 85 per cent of the project has already been built, the main damage of the project's construction phase has already been done. It has therefore become highly improbable that Sakhalin II will meet the standards of the EBRD. On 11 January, the EBRD announced that following significant change in the ownership of the Sakhalin Energy Investment Company, it no longer considers the current financing package for Sakhalin.

In September 2006 the Russian government said that it intended to suspend environmental permits for the project, due to a large number of violations by Shell of Russian environmental law. On 5 December 2006, the Prosecutor General's Office said it would press criminal charges on the project. The multibillion-dollar project has been accused of inflicting large-scale ecological damage on Sakhalin Island, including deforestation, waste dumping, and soil erosion³⁸. It has also emerged that the Russian Far East branch of the Federal Water Agency has suspended the licences for two months, until 6 February 2007. They plan to revoke the licences if Sakhalin Energy does not fix the violations (twelve water use licences for the Sakhalin 2 pipeline river crossings will be revoked because of violations of Russian legislation)³⁹.



Shell pipeline in Sakhalin

On 5 December 2006, newspapers announced that Shell had sold a controlling share of Sakhalin II to the Russian gas company Gazprom. Shell will hold at least 27.5 per cent of the shares in the project, and will continue to manage and advise the project. With this it can still influence important decisions. Shareholders Mitsui and Mitsubishi will also reduce their interests in the project. These changes do not diminish Shell's responsibility for project design, which brings huge risks of oil spills in the operational phase, for damage already caused as well as for potential future damage.

3. Problems caused by the project

Environmental problems

The construction of the 800-kilometre oil-and-gas pipeline through more than a thousand watercourses has had a negative impact on the spawning grounds of five species of wild salmon. Trenching the pipeline across rivers caused an increase of suspended solids in the water and silting of the riverbeds during the excavation work. The contamination by suspended solids will continue because of active erosion on the pipeline sections adjacent to rivers (river banks). In over 100 cases pipelines were or will be trenched directly through spawning beds.

Although Shell re-routed part of the undersea pipelines, the project is still a big threat to the Western Pacific Gray whale. The offshore platform and undersea pipeline in the immediate vicinity of the whales still threaten the population with potential oil spills, ship collisions and acoustic impacts.

The pipeline crosses dangerous mudslides, landslides, mountains and 19 active seismic faults. This could entail serious consequences for the pipeline safety in case of mudslides, landslides, active erosion processes or an earthquake, which happen often on the Island. The resulting oil spills could be catastrophic for any of these rivers, as well as for the water supply reservoirs and the local population. Erosion on the pipeline route is a significant threat for the pipeline because it can undermine the underground pipe. It is considered as a serious geological hazard by all stakeholders in this project. The pipe will be put under severe stress if it crosses the erosion canyon without special supports.

Oil spills could also be caused by tankers in the operational phase. Shell plans to transport oil by huge tankers through the Aniva Bay and La Peruse Straight throughout the year. There is a significant risk of incidents with tankers because of severe climate and hydrological conditions in the Aniva Bay and La Peruse Straight and because of busy ship traffic. At the same time, Shell refuses to undertake a number of special oil spill prevention measures which are usual in the other parts of the world – such as a radar control system of the tankers' movements and a tugboat escorting system.

In September 2004, a dredger ship contracted to the Sakhalin II project ran aground on the west coast of Sakhalin Island, dumping its load of fuel oil. It was heavy fuel, which washed up along six kilometres of shoreline, including a popular public beach. Dozens of local residents exposed to the spill's toxic fumes sought emergency medical treatment for respiratory problems and headaches. The impact of the spill was significantly worsened by SEIC's failure to respond in a timely manner, a harbinger for future spills. SEIC has still not disclosed comprehensive oil spill response plans for the project⁴⁰, and has refused to take adequate oil spill prevention measures.

In April 2005, contractors constructing the Sakhalin II liquefied natural gas (LNG) plant began dumping an estimated two million cubic metres of dredged materials into Aniva Bay, an important habitat for many of the commercial species of fish, crabs, and scallops, which provide one-third of the island's commercial fisheries resources. Shell has rejected demands from fishermen, environmentalists and community residents that dredged materials be dumped at a safer location in the open sea.

Although there are many environmental problems and threats, Shell refuses to allow access to crucial environmental information, which is required by Russian legislation^{41 42}.

Social and human rights problems

The threats posed to wild salmon are a huge problem for the indigenous people of Sakhalin, who are mostly fishermen and therefore dependent on the salmon and other fish resources. After protests by indigenous people⁴³, Shell has agreed to prepare a development plan and pay them modest compensation. This plan was purportedly developed in an attempt to adhere to World Bank standards for indigenous people. World Bank policy, however, calls for the development of such plans early on in the design of the project, in order to influence project design to prevent negative impacts. SEIC's indigenous peoples plan was not developed until deep into the construction phase, thus failing to influence project design. Because of very late preparation the plan wasn't able to properly assess impact and prevent it.

Shell has harmed the traditional way of life of 120 landowners living close to the gas-plant construction site. When the plant starts operation they will be living in an area of severe air pollution. Shell has paid a small compensation, just to cover the current inconveniences in the neighbourhood caused by LNG construction, but not compensation for resettlement. The main problem – the proper compensation for changing these people’s way of life (primary pensioners) – has not yet been resolved.

Many local people have suffered negative social impacts from the construction and accompanying problems:

- Heavy traffic of large vehicles through the centre of the city of Korsakov causes deterioration of the roads and heavy air pollution.
- An increase in communicable diseases, carried by workers from other countries. Caused by the migration of thousands of workers from many Asian countries without proper medical examination.
- A sharp increase (four to five times) in the prices on flats, making them too expensive for the local population.
- An increase in prices of food and consumer goods.

A Bankwatch report noted a harrowing rise in prostitution, trafficking, HIV/AIDS and violence against women in communities affected by the project⁴⁴.

4. What community groups want from Shell

NGOs and local community groups from Sakhalin Island want Shell to carry out the following:

Repair environmental damage: at least 376.5 million dollars

Shell should restore the environmental damage that it has caused during the construction phase. The costs must be properly calculated. The damage has been estimated by the Russian Environmental authorities at a minimum of 10 billion rubles, corresponding to 376.5 million dollars⁴⁵.

Compensation for local landowners: costs unknown

Shell should pay compensation to local landowners, in order to give them the opportunity to move to a new location and avoid being harmed by the gas-plant construction and exploitation.

Environmental and social impact assessment: costs unknown

Shell should conduct an environmental and social impact assessment (ESIA) in addition to the one that was already done. This time it should be done with the active participation of indigenous people. The indigenous people’s community distrusts the assessment already carried out by Shell, because it concluded that the project would have no impact on their people’s way of life or fishing resources. The new ESIA should include a new field expedition, to collect samples of fish, riverbeds and water.

Access to environmental information: costs unknown

Shell should provide all available environmental data and other relevant information to the local population and to NGOs, in accordance with Russian legislation.

Redesign for new pipelines: costs unknown

Shell should stop constructing underground pipeline crossings of spawning rivers and geologically hazardous areas. Instead it should replace these crossings by aerial crossings, in order to minimise the dangers and negative impacts. The geo-hazardous areas' crossings require specific project design decisions, which need to be developed.

Prepare Oil Spill Prevention Plan and Oil Spill Response Plan: costs unknown

Shell should disclose its draft Oil Spill Response Plan (OSRP) for public comment and otherwise ensure that it will be developed according to the best available standards. Measures should include an onshore-based Tanker Traffic Control System and a Tanker Escort System for tugboats steering through the most dangerous locations. Shell should include these and other oil spill prevention measures into the OSRP or prepare a separate Oil Spill Prevention Plan.

Relocate the PA-B platform: costs unknown

Shell should relocate the concrete base of the PA-B platform at least twelve nautical miles away from the feeding grounds of the Western Pacific Gray whale.

Repair roads: costs unknown

Shell should pay for the repair of all the roads destroyed on Sakhalin.



Fire at Sapref refinery in Durban, South Africa.

3. Durban, South Africa: Leaking pipelines and accidents

Community groups:

- groundWork (Friends of the Earth, South Africa)
- South Durban Community Environmental Alliance

1. The project in brief

Shell, in joint venture with BP, owns the SAPREF (South African Petroleum Refineries) oil refinery in Durban. It is located close to the local communities of Isipingo, Merebank and Austerville (within a radius of five kilometres). These communities are predominantly black.

The crude oil used by SAPREF is supplied by an offshore 'single buoy mooring' to the refinery via a pipeline. The refinery's finished products are delivered via six underground pipelines to the Island View Tank Terminal in Durban's harbour. Each of the pipelines is twelve kilometres long. SAPREF has a processing capacity of 180,000 barrels of crude oil per day, which is 35 per cent of the total refinery capacity of all of South Africa⁴⁶. The company produces, amongst other things, petrol, diesel, kerosene, lubricating oils, LPG, paraffin-based solvents, bitumen and various products for the chemical industry⁴⁷.

The 43-year-old refinery is the largest in southern Africa and causes many problems in the surrounding area. There have been multiple explosions and fires, due to aging infrastructure and lack of maintenance. These cause environmental damage and endanger public safety and health. Gas flaring causes air pollution close to Durban's residential neighbourhoods and schools. The poorly maintained pipelines have led to ruptures and spills of their products under people's homes. Although Shell announced in early 2006 that it would replace leaking pipelines, only 18 percent has yet been replaced. Labour conditions for the 480 people who work for SAPREF are unsafe. Furthermore, Shell lacks transparency in its information policy.

2. History

The SAPREF refinery was built in 1963, during the height of the apartheid era. Ignoring the widespread call for an oil embargo and divestment from South Africa, SAPREF continued to operate throughout the dark days of apartheid in an area densely populated by poor black, Indian and mixed-race communities. Unfortunately, the end of apartheid has not significantly changed the SAPREF refinery, which continues to wreak havoc on these communities of colour.



Bobby Peek

Child in front of Sapref refinery.

Lord Oxburgh, travelled to South Durban. In a meeting with 40 local residents, SDCEA and groundWork, Oxburgh admitted that the SAPREF refinery was “aging and needed attention”⁴⁸. He promised to bring the concerns to the Shell Board of Directors, but never delivered a written report to them.

In February 2006, Shell and BP announced they would replace the old pipelines under the residential quarters of Durban. SDCEA and groundWork were pleased with the good news as a first step, but Shell and BP have only just started replacing the pipelines. Still worrying is that Shell and BP will not reroute the pipelines so that they will continue to be under people’s residential areas.

3. Problems caused by the project

Environmental and health problems

Fenceline neighbours of SAPREF live in fear of the explosions and fires that occur regularly at the refinery. This is due to aging infrastructure and the lack of a stringent maintenance routine. For example, after a fire in the SAPREF refinery on 28 October 2006, residents living close to the refinery experienced respiratory difficulties and chest pain.

SAPREF’s pipelines in total extend for 84 kilometres through the residential areas of South Durban. The poorly maintained pipelines have led to several ruptures and spillages over the last few years, contaminating Durban Harbour and protected wetlands, and settlings under residents’ homes. Because SAPREF does not use effective rust detection equipment, as is commonly used at Shell facilities in Europe, leaks from rusting pipelines are not uncommon.

The litany of problems the refinery and pipelines cause has been well documented since 1998. Shell has refused to commit to permanent solutions to the problems. For example, instead of replacing the old and rusted pipelines, it fixes them to last until the next leakage appears.

For several years, South Durban Community Environmental Alliance (SDCEA), a non-governmental community organisation, and groundWork (Friends of the Earth, South Africa) have sought to engage the senior management of Shell in directly addressing the significant problems at SAPREF.

Finally, on 5 March 2005, the Chair of the Shell Transport and Trading Company’s Board of Directors,

For example, on 21 July 2001 a major fuel leak was caused by a rust defect in a SAPREF pipeline.⁴⁹ Over 1.3 million litres of petrol have been recovered to date, and it is estimated that remediation efforts for this massive leak will continue until 2015.⁵⁰

The aging infrastructure cannot support the products that are being produced. This leads to toxic gases that build up in the units of the different plants. These gasses are flared, producing toxic clouds of black smoke into the air. For example, on 21 April 2004 (Black Wednesday), massive black clouds of SAPREF's poorly combusted chemicals extended for more than 20 kilometres from South Durban into the affluent areas north of Durban⁵¹.

Such toxic emissions from poorly combusted chemicals cause severe health problems. In the South Durban community the incidence of leukaemia is 24 times higher than the national average. Leukaemia is linked to benzene, which is one of the major pollutants from the oil refinery industry.

South Africa has long lacked legally binding air pollution regulations on a national level. In February 2005 this changed with the introduction of the *Air Quality Act*, which adopts the air quality guidelines established by the World Health Organisation (WHO). The air quality monitoring programme established by the municipal government⁵² shows that, in 2004, there were 117 instances when SAPREF's air pollution was at levels that would violate this new environmental law⁵³.

Unsafe labour conditions

Injuries at the SAPREF refinery have come about partly due to the casualisation of labour, where labour is outsourced to labour brokers who bring on unskilled labour at times, or where the labour force lacks proper safety equipment and there is poor safety instruction. For example, on 27 November 2004, three workers were injured in a fire while working on a section of SAPREF's hydrocarbon flare line⁵⁴.

Lack of transparency

Shell lacks transparency in information sharing. The oil company refuses to share information about SAPREF's air quality permit. On numerous occasions, local communities via the South Durban Community Environmental Alliance (SDCEA) have requested data for various incidents, but the relevant data has not been forthcoming. Although real-time fenceline monitoring of air toxins to determine Shell's contribution to air pollution through the use of open path Ultra Violet Cerex monitors is being carried out, Shell has not made this information available to the SDCEA.

Furthermore, the data SAPREF does release is not always reliable. In February 2000, SAPREF management admitted that it had been underreporting sulphur dioxide emissions to the local government for the last five years by as much as twelve tons a day – or ten million pounds a year – a total of 4,380 tons⁵⁵. It never presented the final figure on how much fuel had leaked from its fuel transport pipelines and settled under people's homes.

4. What community groups want from Shell

Build a new oil refinery: around 6 billion dollars

It is our belief that during the apartheid era, Shell maintenance of the refinery was poor and not up to standard. Shell has already admitted that it was using inferior rust detection systems in this plant to that used at a similar plant in Denmark. As a result of these many years of neglect, no amount of 'patchwork' will make the refinery safe. Considering this history it is critical that Shell constructs an entirely new plant. This would include shifting all hazardous operations, such as tanker traffic as well as fuel pipelines, away from the residential areas. The 6 billion dollar figure is based on a comparable oil refinery in Richard Bays that is to be built by 2010 by Drako Oil ^{56,57}.

Clean up pollution: costs unknown

Shell must clean up all the canals and the soil surrounding its facilities.

Medical clinic: costs unknown

Shell must open a full-time medical clinic and provide free medical treatment to those local communities which are affected. It must compensate all those who have spent vast amounts of money on medical bills.

Transparent communication: costs unknown

- Shell must engage in an open and transparent manner with the organisations that are challenging them on their pollution. It must provide access to all relevant information.
- It must be committed and honest in their dealings with local communities.
- It must commit to not undermining the new licensing system that the government will be installing shortly.
- It must follow the new law as it is developed.



Farmland in Rosport, Ireland.

4. County Mayo - Ireland

Refinery and pipeline in vulnerable area

Community group:

- Shell to Sea

1. The project in brief

Shell owns a large part of the Corrib gas field in the Atlantic Ocean, approximately 83 kilometres off the west coast of County Mayo, Ireland. Together with Statoil and Marathon, the oil company has conceived a plan to construct an enormous high-pressure pipeline and gas refinery nine kilometres inland in this extremely beautiful and vulnerable coastal protected area⁵⁸. The pipeline will cut through protected dune areas, run along farms and villages and finally emerge on a hill where the gas will be refined⁵⁹. Shell will act as the operator of the project.

Inhabitants are afraid of explosions of the high-pressure pipeline. Local fishermen, worried about the impact on marine life and hence their livelihoods, are opposing the pipeline. The toxic waste will be dumped in Broadhaven Bay, a Special Area of Conservation (SAC), designated for its important bird population. Two other SACs, Glenamy bog and Carrowmore Lake, are also potentially at risk from the pipeline.

Local protest is substantial: demonstrations have been organised and court cases filed. Residents are campaigning for the gas to be refined at sea and brought ashore at a lower, safer pressure. They are angry about the lack of serious consultation of local communities by Shell. In 2005, when Shell tried to enter the land of the farmers and residents, Shell was denied access. As a result, five of the residents and farmers were sent to jail for 90 days.

2. History

In October 1996, the Corrib gas field was discovered by Enterprise Oil, 83 kilometres off Mayo, 3.5 kilometres below sea level. In November 2000, Enterprise Energy Ireland (EEI) applied for planning permission for an onshore terminal for Corrib at Bellanaboy, North Mayo. Local concerns were raised.

In August 2001 the Mayo community council granted planning permission for the offshore terminal, specifying conditions to be met. In November 2001, EEI applied for approval of its development plan, a foreshore licence, and consent to construct a pipeline from sub-sea facilities to the terminal. Under pressure from EEI, approval was granted by the minister

in May 2002. In June 2002 EEI was sold to Shell and is now called Shell E&P Ireland. Final permission for the pipeline has not yet been given.

In May 2006 a report of the independent safety review on the onshore section of the Corrib pipeline was published, which stated that the risk was acceptable. Local community groups criticised the report. According to them, the terms of reference of the research were too narrowly defined. The research did not comment on offshore options. Furthermore, the research did not allow for consideration of the siting of the proposed refinery, which gave rise to the associated pipeline problems.

Local community and environmental groups object to the plans and are calling on the oil company to refine the gas offshore. But Shell does not plan to process the gas offshore. Locals suspect that this is because in the future Shell intends to use the approximately 500 acres of land it has acquired from the state to process oil and gas from other fields. They are concerned that processing the Corrib gas onshore will open the door for a much larger scale processing plant.

In December 2004, Shell sent letters to all landowners in the path of the proposed pipeline, warning them that the company would be entering properties to begin their work – despite the fact that the government’s decision to approve the pipeline was being appealed in court⁶⁰. Some of the property owners posted “no trespassing” signs and made preparations to peacefully turn Shell away until the legal issues were resolved⁶¹. In late June 2005, five landowners were detained for 90 days for refusing to grant access to their property. At Shell’s AGM in May 2006 Jeroen van der Veer, CEO of Shell, admitted that the way Shell handled the issue of the ‘Rosspport Five’ could have been better.

There is still a great deal of protest against the refinery and the pipeline. In mid -June 2005, the Rosspport Solidarity Camp was established, at the request of Rosspport residents. Their aim is to lend practical support to the local community’s struggle against Shell and the local government. They provide solidarity and support, organise demonstrations and raise awareness in the rest of Ireland and abroad.

In the autumn of 2006 there was much peaceful protest from the local residents. However, more and they are increasingly being confronted with the use of strong police force against them.

3. Problems caused by the project

Environmental problems

The proposed high pressure pipeline (at nine kilometres, it is the longest of its type in the world⁶²) will cross protected dunes, traverse a fragile estuary teeming with wildlife and cut through treacherous blanket bog at many different points. These include EU Special Areas of Conservation (SACs)⁶³.

The proposed refinery is also a cause of concern. The refinery will remove impurities from the incoming gas, including heavy metals and toxins like lead, nickel, magnesium, phosphorous, arsenic and mercury. This toxic waste will be pumped into Broadhaven Bay⁶⁴ which has

been designated a SAC⁶⁵ because of its important bird populations. Due to the bay's circular tidal pattern and semi-enclosed nature, much of this toxic waste is likely to stay within the bay, rather than be washed out to sea⁶⁶. This toxic discharge poses significant concerns for the stocks of fisheries such as salmon and crab, upon which much of the local economy depends, other aquatic life, including some rare species⁶⁷, and numerous species of birds supported by the bay, which are of international and regional importance⁶⁸. Furthermore, the refinery will be built in a bog, a dangerously unstable landscape, as evidenced by a dramatic bog slide in 2003 at Pullatomish/Dooncarton⁶⁹.

Safety and social problems

The high-pressure pipeline will run through small rural communities who greatly fear the consequences of a partial or full bore rupture of the pipeline⁷⁰. It will slice up the small farms in the tiny village of Rosspport. This will have a big impact on this beautiful, quiet and peaceful place. Local fishermen are worried about the impact the refinery will have on marine life and hence their livelihoods.

Frustration of protest

Local government uses harsh methods to frustrate the protest against Shell. In June 2005 residents and farmers denied Shell entrance to their property. Although there was an appeal, Shell was granted an interlocutory/temporary injunction restraining the people's right to defend their property. By refusing entrance to their property, five of them, the Rosspport Five, were imprisoned.

Families and supporters of the Rosspport Five commenced round-the-clock picketing at Rosspport, Bellinaboy and Glengad: Shell pipeline sites in Mayo. In August 2005, a national rally in support of the Rosspport Five was held in Galway. On 30 September 2005, the Rosspport Five were released by the High Court.

Since October 2006, the Irish police force has been used against peaceful protests, in order to facilitate the building of the proposed refinery in absence of any agreed connecting production pipeline. On 10 November 2006, a peaceful day of action expressing solidarity and marking the anniversary of the execution of Ken Saro-Wiwa and his Ogoni companions, Irish police baton-charged local people, injuring men and women, including adolescents.

4. What community groups want from Shell

Refinery offshore: 736 million dollars

Shell should abandon plans for the high-pressure pipeline and onshore refinery. The processing of the gas should take place offshore and the gas should be pumped onshore at a much safer, lower pressure.

In 2002, just before Shell bought EEI, EEI stated in the Planning Appeal that in order to process the gas offshore, initial additional costs of approximately 360 million euros, an additional ten million euros per annum in operating costs and an extra 55 million euros in decommissioning costs⁷¹ would be needed. This is the most recent publicly available figure. This is 565 million euros in total, which equals approximately 736 million dollars.



Child with medication, Philippines.

5. Pandacan district, Manila, Philippines: Polluted oil depot

Community groups:

- Fenceline Community for Human Safety and Environmental Protection
- United Front to Oust Oil Depot

1. The project in brief

Pandacan is a heavily populated district in Manila. It has a population of about 84,000 people, with diverse economic backgrounds. About 45,000 students are enrolled in various schools and universities. Day-care centres, churches and street vendors proliferate in the area as well.

Shell owns a huge oil depot in the heart of this community. Since 2004 the petrochemical and oil terminals in Pandacan have been operated by a joint venture of three oil companies - Shell, Caltex and Petron - called Pandacan Depot Services Inc. (PDSI)⁷². The depot contains about 315 million litres of bunker oil, liquefied petroleum gas, aviation fuel and other potentially toxic substances.

This dangerous depot is nearby children's playgrounds and water supplies. Residents complain of the stench of the oil depot and feel anxious about living in such close proximity⁷³. There are strong indications that residents are being exposed to carcinogens. Scientific investigation has also shown a direct relationship between the proximity of housing to the depot and the amount of lead found in the blood and damage to the nervous system of residents. But, according to the environmental certificate it has been issued, Shell is not required to monitor air quality⁷⁴. Neither are there plans to reduce hazards concerning the oil tanks⁷⁵. Furthermore, Shell has been accused of corruption - it is alleged of having promised city officials gifts in exchange for signing a statement of support.

2. History

The oil depots were constructed 90 years ago, at a time when Pandacan was largely uninhabited. Nowadays it is a very densely populated area. For many years a large number of citizens have demanded that Shell remove its hazardous oil depot from the neighbourhood of Pandacan.

In 2001 the City Council of Manila passed Ordinance No. 8027, ordering Shell, Petron and

Caltex to leave Pandacan within six months⁷⁶. Two days prior to the ordinance taking effect, Shell and the oil companies entered into a Memorandum of Understanding with the City of Manila in order to circumvent the spirit and letter of the ordinance. In the agreement, which would extend the oil companies' operations in Pandacan by another six months, Shell undertook to scale down its operation, instead of completely removing its facility and to create a green zone to surround the oil terminal⁷⁷. The purpose of the 'green zone' intended as a buffer zone between the depot and the community, has been undermined since it has become as a linear park where the elderly take walks and children play everyday.

In 2003, Shell submitted to the City Council of Manila a position paper from 41 of the 43 village chiefs of Pandacan where the latter expressed their acquiescence to the retention of the oil facility⁷⁸. There have been allegations of corruption surrounding the deal, with one of the local officials claiming that the leader who signed the document did so in exchange for material benefits like gifts, livelihood projects, and gainful employment.

Shell negotiated further with local officials to continue hazardous operations. The negotiations between Shell and these government officials were concealed from the public. The outcome was that Shell and the other depot owners in Pandacan, Caltex and Petron agreed to scale down the number of oil tanks and apply for an environmental compliance certificate. This certificate explains how Shell and its partners plan to operate in a way that they believe is protective of the environment, health, and safety. On 12 January 2004, the government issued an Environmental Compliance Certificate, allowing the operation of the oil depot in accordance with the terms put forward by Shell and its partners in their application.

3. Problems caused by the project

Environmental and health problems

There are huge risks associated with having an oil depot in such a densely populated area. Instances of oil and chemical leakage over the past several years have resulted in the hospitalisation of hundreds of residents and students. In the beginning of 2006, 40,000 litres of oil leaked from PDSI. Residents living in the area suffer from respiratory infections, skin diseases and other ailments⁷⁹.

The facility is categorised as an environmentally critical project (Type A Project per EIA Systems), requiring an impact zone of 50-100 metres. The so-called buffer zone is only 8-50 metres. International oil depot facilities have kilometre-wide buffer zones that separate the residential areas from the oil depot facility. What is worse is that Shell has constructed a so-called green zone around the Pandacan Terminal, which it has turned into a linear park where people are allowed to promenade and play, thus still putting their safety at risk.

Several studies have shown health problems among Pandacan's inhabitants. An initial medical study conducted by the University of the Philippines College of Medicine in February 2005 revealed that Pandacan residents have been exposed to neurophysiologic toxins which are present in petroleum products stored at the oil depot.⁸⁰ Medical students examined residents for their deep tendon reflexes, dynamometry (muscle strength), lead levels in urine

samples, and nerve conduction velocity.⁸¹ This study concluded that, for the selected population, as the distance of their homes from the Pandacan oil depot increases, the exposure to lead and incidents of polyneuropathy (nerve damage) decreases⁸².

The United Front to Oust Oil Depots (UFO-OD), a Pandacan community advocacy organisation, installed an air-monitoring device that detects toxic gases on a real-time basis at extremely low levels in the parts per billion range⁸³. This hand-held device showed high levels of benzene.

In April 2005, UFO-OD conducted a community health survey among 600 people living in four *barangays* (council districts) in Pandacan. According to the survey, 60 per cent of the people surveyed said that they smell foul odours emanating from the oil depot complex, and 5 per cent of the survey respondents also stated that they feel anxious or nervous about living near the oil depots⁸⁴.

The safety measures around the oil depot do not comply with existing safety regulations. A public hearing in October 2001 of the committee of Councillor Asuncion revealed that Shell had violated Presidential Decree 1185 and Metro Manila Ordinance No. 82-03 from 1985. This violation includes, among other things, the absence of an automatic fire suppression system, smoke/heat detectors at the LPG filling plant, failure to secure a storage permit for inflammable/combustible materials, absence of a storage permit for the LPG system stored in a pressure vessel and failure to secure a permit for above-ground tanks of flammable combustible and non-combustible materials⁸⁵.

However, the Environmental Compliance Certificate of 2004 does not require any air monitoring which could detect the presence of harmful substances and warrant the reduction or elimination of these toxins⁸⁶. Nor does the Environmental Compliance Certificate require any specific plans to mitigate hazards occurring at the oil depot⁸⁷.

Influencing local government and non-transparency

On several occasions Shell and the other oil companies have been accused of improperly influencing local government officials and even of corruption. The Office of the Ombudsman found Shell and the local government “administratively and criminally liable for violating the Anti-Graft and Corrupt Practices Act (Republic Act No. 3019)” for the Memorandum of Understanding⁸⁸. This Report was reversed and set aside by the Office of the Ombudsman later.

Shell has been accused of intervening in the signing of a position paper by the *barangay* captains – local village chiefs - to support the retention of its Pandacan oil terminal, offering the following incentives: educational scholarship, gainful employment, regular conduct of medical and dental outreach, support to sports development activities, donation of fire trucks and fire-fighting equipment and gifts at Christmas, Holy Week and similar occasions. If proven this would be illegal under the Republic Act No. 3019, also known as the Anti-Graft law.

In May 2006 two local NGOs and Milieudefensie submitted a complaint to the Organisation for Economic Cooperation and Development (OECD) alleging that Shell has violated the

OECD guidelines for multinational enterprises. This complaint is now being dealt with by the Dutch National Contact Point of the OECD.

4. What community groups want from Shell

In order to guarantee the safety of the inhabitants of Pandacan, Shell will need to relocate the oil depot. Preceding that, they need to immediately stop all activities which are not in compliance with local or national legislation and rectify all policies that violate compliance of existing laws.

Relocate the oil depot: costs unknown

Shell and other oil companies must relocate the depot to the safest place possible and must include a two- kilometre buffer zone.

Comply with existing legislation: costs unknown

Shell should comply with Presidential Decree 1185 and Metro Manila Ordinance No. 82-03 by ensuring:

- an automatic fire suppression system
- smoke/heat detectors at the LPG filling plant
- the securing of a storage permit for inflammable/combustible materials
- the securing of a storage permit for the LPG system stored in a pressure vessels
- the securing of a permit for above-ground tanks of flammable combustible and non-combustible materials.

6. Sao Paulo, Brazil: Oil pollution and pesticides

Community group:

- Coletivo Alternativa Verde

1. The project in brief

Shell has been active in the state of Sao Paulo since the early 1940s. It built an oil storage tank depot with a shipping terminal and a pesticide production facility in Vila Carioca, located in southern Sao Paulo. Shell also built a pesticides production facility near the city of Paulinia, located northwest of Sao Paulo.

The production of the pesticides and the storage of oil products have led to major problems. They have polluted the land and groundwater and employees and those living nearby were found to have high concentrations of heavy metals and pesticides in their blood. In January 2005, Shell was ordered by a judge at the federal court to stop dumping chemical waste and to decontaminate drinking water sources. But the oil company has so far refused to take action and to take responsibility for the health problems of its employees and ex-employees.

Shell originally owned all the facilities named above. In 2000 the pesticides production facility in Paulinia was sold to BASF, with the condition that Shell assume legal responsibility for the pesticide contamination on the facility property. Since 2001, Exxon has been Shell's commercial partner in the Carioca Vila terminal, also in de pesticides production. Both pesticides production facilities have now been shut down, but the damage remains.

2. History

Shell's activities in Sao Paulo started in 1942, with the building of an oil storage tank depot and shipping terminal in Vila Carioca. In 1950 Shell added pesticide production to its facility in Vila Carioca. In 1975, Shell built a pesticides production facility near the city of Paulinia.

In 1978 the Brazilian government banned the sale of the pesticides aldrin, dieldrin, and endrin. Shell shut down its pesticide production at the facility in Vila Carioca, but was allowed to continue pesticide production at its facility in Paulinia for export to other countries.

In 1993 the labour and environmental organisations, SIPETEROL (Sindicato do Trabalhadores no Comercio de Minerios e Derivados de Petroleo de Sao Paulo), CAVE (Coletivo Alternativa

Verde), and Greenpeace filed a joint complaint in court citing contamination at Vila Carioca. There has been no conclusion to date.

Shell sold its pesticide production facility in Paulinia to American Cyanamid and BASF in 1995, on the condition that Shell assume legal responsibility for the pesticide contamination on the facility property. In 2000 BASF took full ownership of the facility in Paulinia. This means that BASF has full legal responsibility for the contamination. In 2002 BASF shut the facility down. In 2001 Shell admitted that it had contaminated the groundwater with pesticides and was ordered by the government to begin a clean-up of the pollution.

In 2002, Sao Paulo officials ordered the shutdown of Shell's fuel storage and distribution terminal in Vila Carioca because Shell was operating the facility under a licence that had expired in 1985. Shell, however, won a court ruling to overturn the governmental shutdown.

In January 2005, Shell was compelled by the public ministry to submit to governmental orders requiring it to abstain from its practice of dumping and burying toxic wastes; clean up contaminated areas; monitor the water in artesian wells for toxic chemicals and heavy metals; and implement effective measures to remove high concentrations of harmful substances detected in the wells.⁸⁹ In addition, Shell was required to take steps to protect workers' health, including providing medical examinations for hundreds of former and current workers⁹⁰. Shell has not take any action.

In May 2006, local organisations and Milieudefensie submitted a complaint to the Organisation for Economic Cooperation and Development (OECD) alleging that Shell has violated OECD guidelines for multinational enterprises. This complaint is now being dealt with by the Dutch National Contact Point of the OECD.

3. Problems caused by the project

People living near the Shell facilities in Vila Carioca and Paulinia in Sao Paulo can recount numerous incidents when Shell dumped and buried toxic pesticides and oil waste.

In 2001 Shell admitted to contaminating groundwater in the area following environmental reports of harmful levels of pesticides. Shell was ordered by the government to begin a clean-up. It has not yet done so.

Investigations led by the Sao Paulo government in 2002 revealed that the land and water in the region, including drinking water wells, were contaminated with lead, cadmium and other heavy metals, as well as several toxic chemicals, including benzene, toluene and the pesticides DDT and aldrin.⁹¹ In 2002 Brazil's environmental agency found high levels of pesticides in artesian water wells near Vila Carioca and fined Shell 38,963 dollars.

The environmental problems caused by Shell have a strong social and health impact on the surrounding population, who come from the poor working class. The mortality level in the area of Carioca Vila is fifty percent higher than any other area of Sao Paulo metropolitan area.

Medical tests proved that workers at the facility in Pauliana were contaminated with the types of toxins associated with Shell's operations.⁹² Residents also suffer from the pollu-

tion. A report produced by the Paulinia City Hall found contaminants in the bodies of 156 residents that are linked to cancers, liver disorders and neurological damage. The Sao Paulo Public Ministry has reported that Shell has exposed Paulinia residents to pesticides. Shell dismissed the report.

Instead of cleaning up this contamination and taking measures to protect human health, Shell has evaded responsibility for several years, attempting to walk away from the contamination of these facilities.⁹³ A growing number of complaints and lawsuits have been filed by residents and local governments against Shell for its extensive environmental damage.⁹⁴ However, the Brazilian Government shows apathy in sorting out the problems or in taking legal action against Shell.

4. What community groups want from Shell

Instead of Shell spending millions of dollars on lawyers, the company needs to take public responsibility for the damage that they have caused. It should:

Relocate families: 350 million dollars

The levels of environmental contamination around the former and current Shell facilities are very high. Therefore residents in the surrounding areas need to be relocated.

The estimated costs are 350 million dollars, based on a survey by the Health Department of Sao Paulo council and municipal area, regarding the relocation of all residents from the surroundings of the Shell Depot.

Close the oil depot and clean up the area: costs unknown

Shell should close the oil storage tank depot and shipping terminal. It will take years to clean up the area completely.



Polluted "lake Asphalt" on Curacao.

7. Curaçao, Dutch Antilles: Chemical waste from former oil refinery

Community group:

- Humane Care Foundation Curacao

1. The project in brief

Curacao is home to the largest number of people in the Netherlands Antilles, totalling approximately 150,000 people⁹⁵. This island in the Caribbean Sea is also home to the oldest oil refinery in the western hemisphere, constructed and operated by Shell for 70 years, from 1915 to 1985⁹⁶. The Isla refinery is situated in the Schottegatbay area, considered one of world's top natural harbours⁹⁷. Jeroen van der Veer, now Chief Executive Officer of Royal Dutch/Shell, toiled as a mechanical engineer and honed his skills in refinery design at this refinery⁹⁸. In 1985 the refinery was sold to the Netherlands Antilles government, leaving behind a big mess.

The island of Curacao is saddled with an environmental time bomb: massive pollution and health problems of people living next to the refinery. The government is unable to address the environmental damage caused by Shell, mainly due to the fact that the environmental damage is too vast and costly to resolve for a small-scale island community such as Curacao.

2. History

Shell Curacao's operations started in 1918. By the 1960s Shell employed approximately 12,000 people directly and 10,000 indirectly. Local residents were rarely hired for these jobs as Shell preferred to hire immigrants from abroad. At that time Shell started downsizing to 4,000 workers by the end of the 1970s, and to 2,800 workers by the 1980s, laying off thousands of people. This caused a chronic social economic crisis in development within the Curacao community that has lasted ever since. Nowadays, 994 people work for the refinery ISLA (with an additional 450 people working through contractors).

The Isla refinery was declared "obsolete" in 1982 by Shell because of huge investments that were needed to update the old refinery⁹⁹. Later, in 1985, Shell sold the refinery for only one dollar to the Netherlands Antilles government¹⁰⁰. As part of this sale, Shell secured terms that would absolve it from any responsibility for the extensive environmental and health damage created by its refinery operations¹⁰¹. The Antillean government leased the refinery to Petroleos de Venezuela Sociedad Anonimo (PdVSA).

Shell claims that it has no involvement in the Isla refinery, but the reality is that the company has maintained close ties. A Shell drilling structure was installed off the coast of Curacao during the late 1990s¹⁰². In 2001, Petroleos de Venezuela Sociedad Anonimo (PdVSA), the company that leased Shell's former oil refinery from the Netherlands Antilles government, developed a joint project with Shell to optimize operations at the Isla refinery in Curaçao¹⁰³. Currently, Shell is partnering with PdVSA in a long-term joint venture to operate a liquefied natural gas terminal in the Caribbean¹⁰⁴.

Residents of Curacao, who are outraged by the environmental mess that Shell has left behind, organised the Humane Care Foundation Curacao in 2003. This foundation works with more than twelve residential quarters that are exposed daily to chemicals from the refinery¹⁰⁵.

3. Problems caused by the project

Environmental problems

The 20-kilometre reef that surrounds this small island is contaminated with oil waste. For years, Shell dumped asphalt and chemical waste, which have polluted the Caribbean Sea¹⁰⁶.

The Buscabay, one of the bays in the Schottegatbay area, has been cut off from the rest of the Schottegatbay waters by a dam and is filled with 800,000 cubic meters of asphalt and tar. This 82-hectare lake is now called Lake Asphalt. Other "lakes" are filled with chemical waste.

The former sea grass and coral reefs of the Schottegat harbour have been almost totally degraded by industrial contamination, mainly due to oil leaks and leaks from Lake Asphalt. Contaminated water which flows out of the Schottegat harbour significantly stresses and degrades coastal reefs in the vicinity of Willemstad¹⁰⁷¹⁰⁸. The harbour remains a critical feeding ground for hundreds of shore- and seabirds and contains high densities of baitfish year-round.¹⁰⁹

Health problems

Islanders have suffered decades of respiratory problems and other serious health ailments associated with refinery pollution¹¹⁰. In 1985, research showed that more than 12.5 per cent of the total population of Curacao suffered health damage from the refinery¹¹¹. Since then, the situation under PDVSA has worsened. At present more than eighteen people die prematurely every year and more than 12,000 people suffer from chronic pulmonary diseases, including thousands of children. The latest estimation of health damage due to norm-exceeding air pollution related to sulphur dioxide only, amounts to 28 million Antillean guilders a year (that is approximately 15.6 million dollars).

A vast number of children who live or are obligated to go to school in the area downwind of the refinery suffer from asthma and other pulmonary diseases related to the existing air pollution. Thousands of adults also have various diseases as a direct result of the air pollution, ranging from heart and lung diseases to cancer, asthma and bronchitis¹¹². Obviously, current problems are the responsibility of PDVSA and the Antillean government.

4. What community groups want from Shell

Shell is not solely responsible for the problems caused by the refinery. PdVSA, which has run the refinery for the last 22 years, also has to bear responsibility. The Antillean government and the Dutch Government are also partly responsible for the damage being done.

Shell claims to be a responsible company. Therefore, it should be responsible for the environmental damage it has caused. It is not acceptable that Shell avoids its responsibility by dumping this problem on a poor community.

Dismantling the refinery and cleaning up its pollution: part of 400 million dollars

Dismantling the refinery is the only solution. The root structure of the refinery dates from 1914; modern-day requirements are not compatible with such antique structures. More importantly, the damage that the refinery has been and still is inflicting supersedes all benefits for the community. The Antillean government is not able to finance the dismantling of the refinery and clean up of the polluted plant area by itself.

The costs of dismantling the refinery and cleaning up the polluted plant area are estimated by the Ministry of Kingdom Affairs of the Dutch government at 400 million dollars¹¹³. Shell operated the refinery for 70 years. PdVSA has been operating the refinery for 22 years now. Shell should therefore pay a large share of the 400 million dollar that are needed. An independent investigation has to determine the exact figures.

Clean up Lake Asphalt: between 40 and 60 million dollars

Research in 1993 by Envi Tech consult from the Netherlands estimated that to clean up the asphalt lake would cost between 70-110 million Netherlands Antilles guilders¹¹⁴. The US dollar equivalent would be between 40-60 million US dollar. It is expected that real costs anno 2007 would be much higher.



Gas flaring in Norco,
Louisiana, USA

8. Norco and Coastal Louisiana, USA: Health problems and marine life threatened

Community groups:

- Louisiana Bucket Brigade
- Gulf Restoration Network

DIAMOND COMMUNITY OF NORCO: HEALTH PROBLEMS

1. History and problems with the project

The Diamond community of Norco, Louisiana, was an African-American neighbourhood of four streets. Residents of Diamond are descendents of the slaves and sharecroppers who worked the land decades before Shell began its operations. Diamond is the site of the 1811 slave revolt, the largest slave revolt in American history.

In 1929, Shell acquired full ownership of land and constructed the first refining units¹¹⁵. Norco's Shell Chemical Facility was opened in 1955. Shell's neighbours have seen a steady decline over the years in property value, quality of health and quality of life as odours, noise and lights permeated the neighbourhood nearly 24 hours a day.

Diamond was directly adjacent to Norco's Shell Chemical facility, 25 feet away from the plant's fence line. The Motiva refinery - in which Shell is a partner with Saudi Aramco - sandwiched the neighbourhood on the east side. The community was literally surrounded by Shell operations.

After the death of two community members in a Shell explosion in 1973, the Diamond residents advocated for a fair buyout of their contaminated and dangerous properties. They demanded relocation from Shell, as Shell had moved on top of them in the 1950s. In 2002, Shell agreed to a relocation plan.

Although former residents no longer have to deal with Shell's accidents, constant noise and pollution, they are still fighting to get an environmental health impact and for Shell to cover the costs of their medical bills for treatment of diseases such as rare cancers and asthma linked to toxic emissions.

Health problems and accidents

During an 18-month period in 1998 and 1999, Shell reported 66 accidents, an average of over three accidents a month, each of which exposed the residents of Diamond to cancer-causing and asthma-triggering chemicals¹¹⁶. Even during Shell's regular operations the facilities emitted odours that the Diamond community members noted regularly caused headaches, nausea, dizziness, congestion, sore throats and difficulty breathing. A survey done by Xavier University's Deep South Centre for Environmental Justice in 1997 found that 34 per cent of children surveyed had asthma and a quarter of the women and children surveyed had had to visit a hospital emergency room because of respiratory problems¹¹⁷.

Further evidence of Shell's disregard for its neighbours was found when the Concerned Citizens of Norco's (CCN) Bucket Brigade took air samples revealing cancer-causing chemicals in the air, including methyl ethyl ketone (MEK) and benzene, at levels that violate even the moderate Louisiana state standards.

On 11 June 2002 the CCN won their hard-fought battle with Shell Oil and after 30 years of skirting its responsibilities, the company offered the neighbourhood a fair relocation plan.

This once-historic area is now empty, home only to Shell. The legacy, however, is approximately two thousand people from the families that once called Diamond home who continue to suffer from strange cancers as well as respiratory and neurological problems.

Lasting Problems after Relocation

Although the community's demands were met, this was a very bittersweet victory for residents who had to leave their historic community to find a healthy place to live. Although residents made it abundantly clear that the issue of health was their motivating factor in demanding relocation and pollution reduction, Shell has not acknowledged any of the potential health impacts of its operation.

Since 2002, Diamond community members have been asking for help with the myriad of health problems they attribute to their exposure to Shell's emissions. Strange cancers and an alarmingly high rate of chronic asthma, in addition to other respiratory and neurological problems, plague the former residents of Diamond. Many community members also continue to suffer emotional scars – similar to post-traumatic stress disorder – from living near the plant. Shell's explosions caused some people to go on medication for anxiety. Many people remain on that medication today.

2. What communities want from Shell

Environmental Health Assessment: 300,000 dollars¹¹⁸

Shell should pay for a proper environmental health assessment of neighbours and former residents who suffer from illnesses related to toxic exposure.

Creation of health fund: 250,000 dollars annually

Shell should pay for the creation of a health fund to cover the cost of medical treatment for those made ill by its operations¹¹⁹.

Monitoring emissions: 500,000 dollars

Shell needs to monitor its emissions so that it does not endanger its current neighbours. Implementing a state-of-the-art upwind/downwind fence-line air monitoring system at the cost of approximately \$500,000¹²⁰.

COASTAL LOUISIANA: MARINE LIFE THREATENED**3. History and problems with the project**

The impacts of Shell's activities reach far beyond the fence-line of its plants. Currently, Shell has the permits and intent to build and operate an offshore liquefied natural gas (LNG) vaporisation and receiving terminal known as "Gulf Landing", in the Gulf of Mexico, approximately 38 miles south of Cameron Parish, Louisiana - an area known as the "fertile fisheries crescent."

Shell's Gulf Landing LNG receiving terminal has brought concerns over potential impacts to Louisiana's coastal fisheries due to the specific technology proposed for use at Gulf Landing. Called an open-rack vaporiser, or an open-loop system, Shell's terminal would run 136 million gallons of gulf seawater daily through a radiator-like heat exchange system. The physical damage from that process, the exposure to pipes holding the -260° F LNG, as well as the injection of chlorine into the water as an anti-biofouling agent means that all life in the water will be destroyed. Billions of fish eggs, larvae and zooplankton will be destroyed annually. Shell's terminal could destroy the equivalent of 3.8 per cent of the entire Gulf of Mexico's annual redfish harvest while having significant and unknown impacts on other fisheries such as shrimp and crabs¹²¹. A closed-loop system was found to be the least damaging to the environment and to best protect natural resources¹²².

As one of four open-loop, offshore LNG terminals permitted, operating or proposed for the northern central Gulf of Mexico, the cumulative impacts of these terminals has alarmed fisheries scientists and managers throughout the region. Federal, regional and state agencies, from the National Marine Fisheries Service to the Louisiana Department of Wildlife and Fisheries, oppose the use of the open-loop process¹²³.

The Governor of Louisiana backed up her stated opposition to open-loop LNG by vetoing a proposal by Freeport McMoRan¹²⁴. Within 24 business hours Freeport had announced it would proceed with its terminal and utilise the fish-friendly, closed-loop alternative¹²⁵. While that process will necessitate the use of just over one per cent of the imported LNG to reheat Gulf water, clearly it is a profitable alternative. ExxonMobil and Conoco Phillips have cancelled plans for offshore open-loop terminals in the face of ongoing political opposition.

The Louisiana coastal area of the Gulf of Mexico is home to the most productive fisheries in the lower 48 United States, and the basis of Louisiana's Cajun culture. In 2002 Louisiana commercial fishing landings exceeded one billion pounds with a dockside value of 343 million dollars, which accounts for approximately 30 per cent of the total catch by weight in the lower 48 states. The state's annual recreational fishing expenditures range between 703 mil-

lion dollars and 1.2 billion dollars¹²⁶. Any activity that threatens these activities would have far-ranging social impacts as well. As Louisiana's commercial and recreational fishing communities work to recover from the twin catastrophes of hurricanes Katrina and Rita, Shell's plans for Gulf Landing represent an unnecessary and avoidable additional challenge.

4. What community groups want from Shell

Utilising closed-loop terminal design: 20 to 40 million dollars annually

By utilising a closed-loop terminal design, such as that recently permitted by competitor Freeport McMoRan, Shell's terminal would not present a risk to fish populations. A closed-loop system would utilise approximately one to two per cent of the imported natural gas onsite to vaporise the LNG. Shell has put this figure at 20 to 40 million dollars annual cost¹²⁷.



Sugarcane on Barbados.

9. Barbados: Burst aviation pipeline ruins farmlands and livelihoods

Community group:

- The Southern Farmers Association

1. The project in brief

Barbados is an independent island nation located in the western Atlantic Ocean, just to the east of the Caribbean Sea, about 434 kilometres northeast of Venezuela. Barbados possesses a land area of around 430 square kilometres, containing tropical rainforests, marshes and mangrove swamps as well as a thriving agricultural sector.

Barbados has one of the highest standards of living and literacy rates in the developing world and, according to the United Nations Development Programme (UNDP), Barbados is currently the fourth most developed of all developing countries in the world. The island is also a major tourist destination.

Shell Oil operated a seven-mile long aviation fuel pipeline running from the Oistins depot across the fertile farmlands of Barbados to the Grantley Adams Airport for more than 25 years. When Shell's aviation fuel pipeline was built, it cut through some of Barbados' most pristine and productive farmland. With its rich, black soil, the area produced thousands of pounds of watermelons, sweet and hot peppers, cucumbers, spinach, beets, carrots, pumpkins, sweet potatoes, onions and other vegetables, which were both consumed on the island and exported for profit.

The pipeline first burst in 1995 and then again in 2003 with several smaller leaks in between. It is estimated that 300,000 gallons of jet fuel has leaked from the pipeline into the land and groundwater. According to a survey of the Southern Farmers Association, farmers have been losing crops and revenue for numerous years due to the presence of hydrocarbons in the irrigated water.¹²⁸

2. History

Farmers first noticed a problem in the spring of 1995 when oil was seen floating on the surface of water in two irrigation wells that supplied water to several nearby farms. It was quickly determined that the pipeline had burst and had already leaked thousands of gallons

of jet fuel into the groundwater. At this time, both irrigation wells were closed by the governing agency, resulting in a water shortage and low crop yield for several years.¹²⁹

The pipeline burst again in 2003. Currently the cumulative contamination has resulted in the closure of five water wells. To date, the pipeline has had seventeen fractures, experienced two major bursts and several smaller bursts between 1995 and 2003, leaking as much as 300,000 gallons of aviation fuel into the farmlands, the water table and ultimately into farmers' water wells.

Recently the pipeline has been decommissioned and a government agency now operates the movement of oil to the airport depot. However, the farmers have been seeking compensation from Shell for the past twelve years to make up for the years of lost crops and revenue. To date Shell has offered the farmers only two million dollars to be divided among thirty farmers, who suffered twelve years of contamination on 186 acres of land.¹³⁰ There were no direct negotiations between the farmers and Shell. The little negotiations which have taken place so far been done via the attorneys for both sides. The farmers find this to be an unacceptable and inadequate sum and negotiations continue today.

A group of Christ Church farmers chose an historic Shell-sponsored motor event which took place in Barbados on Sunday, 26 November 2006, to put their case about environmental pollution on their lands to top officials of the international oil giant. These farmers from Christ Church blame the company for creating an environmental problem in their area and allowing it to worsen.

The group also held a protest march in Bridgetown on 2 November 2006. It has been seeking compensation for the contamination of 186 acres of farmlands by jet fuel pipeline leaks over a decade ago.

3. Problems caused by the project

Problems for farmers

Due to the contamination from the multiple leaks and bursts in the pipeline many farmers have been deprived of the opportunity to make a living from their farming activities. For years farmers have observed and documented the contaminated water in wells, characterised by the strong smell of jet fuel. When this contaminated water is brought up from wells to irrigate crops it kills the plants and turns them brown. Sadly, no formal studies have been done by the government and Shell has not shared the full test results it has on the extent of the contamination.

Some farmers have had to seek employment in other areas outside of farming and it is estimated that the crisis has forced at least seventeen farmers out of business, leading to the abandonment of what was once some of the most fertile and productive farmland in Barbados. The inability to make a consistent income has given the remaining farmers a bad credit rating with lending agencies and the farmers have found it difficult to make a living and provide for their families. Today many farmlands adjacent to the pipeline have been abandoned.

Future contamination of beaches and reefs

A recent site map has shown that the contamination has spread to an area with a radius of about one square mile. The contamination is still not contained and appears to be spreading towards the coastline. If the contamination continues to spread, it could show up on Barbados' beaches and coral reefs, which could have a catastrophic impact on Barbados' primary industry, tourism. The untold economic ramifications of such an occurrence would be felt by virtually every person living on the small island nation.

4. What community groups want from Shell

Independent study to test environmental conditions: 500,000 dollars

An independent study to test environmental conditions at Gibbons Boggs, Christ Church, where the Shell spill has contaminated lands and water, as suggested by chief executive officer of the Barbados Agricultural Society James Paul.¹³¹

Clean-up and prevention of contamination: unknown

Shell needs to use any and all scientific methods available to contain the spill to keep from further contaminating the islands' land, beaches and invaluable coral reefs, as well as to remove the oil from the water table. Because Shell has not studied the extent of the spill and made such information available to the public, it is difficult to estimate the cost of a full clean-up. A 400,000-gallon spill in Avila Beach, California, cost the oil giant Unocal 100 million dollars to clean up.

Reasonable compensation for the farmers: unknown

Shell needs to offer the farmers a reasonable level of compensation for the years of lost crops and revenue. Thirty farmers need to be compensated for the past twelve years. The Southern Farmers Association currently has an agronomist working on exact figures to use in future negotiations.

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