SUSTAINABILITY REPORT

ROYAL DUTCH SHELL PLC SUSTAINABILITY REPORT 2010

CONTENTS

KEY TO SYMBOLS

related information online, such as on www.shell.com

telephone number

ABOUT SHELL

Shell is a global group of energy and petrochemical companies employing 93,000 people in more than 90 countries. Our aim is to help meet the energy needs of society in ways that are economically, environmentally and socially responsible.

UPSTREAM

Upstream consists of two organisations, Upstream International and Upstream Americas. Upstream searches for and recovers oil and natural gas, extracts heavy oil from oil sands for conversion into synthetic crudes, liquefies natural gas and is active in gas-to-liquids technology. It often works in joint ventures, including those with national oil companies. Upstream markets and trades natural gas and electricity in support of its business. Our wind power activities are part of Upstream. Upstream International co-ordinates sustainable development policies and social performance across the company.

DOWNSTREAM

Downstream manufactures, supplies and markets oil products and chemicals worldwide. Our Manufacturing and Supply businesses include refineries, chemical plants and the supply and distribution of feedstocks and products. Marketing sells a range of products including fuels, lubricants, bitumen and liquefied petroleum gas for home, transport and industrial use. Chemicals markets petrochemicals for industrial customers. Downstream trades crude oil, oil products and petrochemicals primarily to optimise feedstock for our manufacturing activities. The business also includes our activities in biofuels, and it co-ordinates CO_2 management activities across the company.

PROJECTS & TECHNOLOGY

Projects & Technology manages the delivery of Shell's major projects and drives its research and technology development programme. Projects & Technology provides technical services and technology capability to the Upstream and Downstream businesses. It oversees safety and environmental performance and manages contracting and procurement across the company.

www.shell.com/about

VIDEO INTRODUCTION FROM THE CEO

Watch the video introduction to this report online by typing the link into a web browser. Alternatively, use a smartphone with a QR reader app to scan this symbol.

www.shell.com/sustainabilityreport

INTRODUCTION FROM THE CEO

"AT SHELL WE BELIEVE THAT IN MAKING OUR CONTRIBUTION, THERE IS NO TIME TO WASTE. WE ARE WORKING ON WHAT WE CAN DO TODAY TO CONTRIBUTE TO A SUSTAINABLE ENERGY FUTURE."

Welcome to the Shell Sustainability Report for 2010. In this report we show how consideration for safety, the environment and communities lies at the core of our operations and the development of our future energy projects.

The event that dominated the year for our industry showed the critical importance of getting our approach to safety right. The *BP Deepwater Horizon* incident in the Gulf of Mexico and the oil spill that followed will have repercussions for many years to come.

The incident became an environmental disaster that affected communities, but it began as a tragic accident: 11 people died, and others were seriously injured. Safety has always been the first priority at Shell. A major incident like this serves as a warning to all to guard against complacency.

It will take time for our industry to recover credibility. But I believe Shell's technical expertise, safety culture and rigorous global standards demonstrate that we are capable of operating responsibly, however challenging the conditions.

SECURING CLEANER, DIVERSE ENERGY

With the world now out of recession, energy demand is again increasing. All energy sources will be needed to meet this demand, but in the decades ahead the bulk of the world's energy is expected to continue to come from fossil fuels. Producing oil and gas from deep waters will remain crucial. These resources are a vital part of the secure and diverse supplies of energy the world will need, as are energy resources from other technically challenging environments. Shell's responsible approach and continued investment in technology and innovation will help us to deliver this energy.

As an energy company we must meet our customers' needs, and our ability to work with joint-venture partners helps us to do this. In 2010 a number of our major projects came on-stream or continued to perform well. Others approached completion for start-up in 2011. We continued to raise our production of natural gas – by far the cleanest-burning fossil fuel – that will account for over half our energy output in 2012. We believe natural gas will play an essential role in managing the carbon dioxide (CO_2) emissions caused by the world's rising energy demand.

Tackling climate change remains urgent and requires action by governments, industry and consumers. The UN climate change conference in Cancun, Mexico, produced a more encouraging outcome than expected. But with so many countries involved, the process of addressing climate change through international agreements is inevitably slow.

At Shell we believe that in making our contribution, there is no time to waste. We are working on what we can do today to contribute to a sustainable energy future: producing more natural gas for power generation; focusing on sustainable biofuels; helping to develop carbon capture and storage technology; and making our own operations more energy efficient. Our advanced fuels and lubricants are helping our customers save energy.

SUSTAINABLE PRINCIPLES

Delivering energy involves meeting other complex sustainability challenges. Strong principles and building trust underpin our approach. Respect for human rights, for example, is embedded in the Shell General Business Principles. Shell contributed to the work of Professor John Ruggie, the UN special representative for business and human rights, whose guiding principles were published in early 2011. The grievance mechanism at the Sakhalin 2 liquefied natural gas project in Russia formed part of Professor Ruggie's pilot work on grievance procedures. We plan to introduce similar approaches for communities near other major projects and facilities in the coming years.

In Nigeria, Shell Petroleum Development Company (SPDC) took a significant step forward in transparency for our industry. SPDC has set up a publicly accessible website to report on oil spills from the facilities it operates. This allows the tracking of the response to every spill, whether it is operational or the result of sabotage or theft.

I am proud to have signed up to the UN Global Compact LEAD, an initiative which reinforces the commitment of business to the principles of the Global Compact. Shell was a founding member of the Global Compact in 2000 and we support its principles in human rights, labour, environment and anti-corruption. The Sustainability Report 2010 reports on our progress in these areas.

I would like to thank the members of the External Review Committee for their important contributions in producing the Sustainability Report 2010. Once more their valuable insights have helped shape this report.

Finally, I invite you to send your comments on the report to:
sustainabilityreport@shell.com

Peter Voser
Chief Executive Officer

OPERATING RESPONSIBLY

SHELL WORKS WITH PARTNERS, COMMUNITIES AND GOVERNMENTS TO HELP MEET RISING ENERGY DEMAND MORE SUSTAINABLY FOR OUR CUSTOMERS. THIS APPROACH HELPS US OPERATE IN ECONOMICALLY, ENVIRONMENTALLY AND SOCIALLY RESPONSIBLE WAYS AND EMBED THESE ASPECTS IN OUR BUSINESS DECISIONS. OUR PRINCIPLES AND STANDARDS GOVERN THE WAY WE WORK.

SUSTAINABLE DEVELOPMENT AND OUR BUSINESS STRATEGY

Sustainable development for Shell means considering both short- and long-term interests, and integrating economic, environmental and social considerations into our decision making. The company's reorganisation in 2009 helped to strengthen this approach. Sustainable development helps govern the way we develop new projects and run our facilities, how we manage our supply chains, and how we share benefits where we operate. It also helps us to make better products for our customers.

Sustainable development underpins our strategy. Our production of cleaner-burning natural gas is growing. We are also investing in biofuels that are more sustainable, in technology to capture and store CO_2, and in ways to improve the energy efficiency of our operations.

Building strong relationships with communities, customers, governments and non-governmental organisations (NGOs) – all of whom have a role to play in building a sustainable energy system – is fundamental to how we approach our business.

Our business strategy focuses on three ways to deliver more energy to meet the needs of our customers: performance in the near term; growth in the medium term; and further projects for the longer term.

Today, we are continuing to improve the performance of our operations, including our approach to safety, communities and the environment. Our net capital investment in 2011 to bolster energy production will be around $25–27 billion.

Between now and 2014, we will deliver growth from new projects as they come on-stream. In our Upstream business, production is expected to average 3.5 million barrels of oil equivalent (boe) a day in 2012, up 6% on 2010, and 3.7 million boe a day in 2014, up 12% from 2010. In Downstream, we will continue to pursue growth in emerging markets, in biofuels, and through major integrated facilities such as our new petrochemicals complex in Singapore.

We are also working on the next generation of projects for growth to the end of the decade. They include producing natural gas trapped in dense rock – known as tight gas – and liquefied natural gas, and developing oil and gas resources from challenging locations such as deep water and, potentially, the Arctic.

As our business grows and production becomes more energy intensive, we expect our direct greenhouse gas emissions in the coming years to follow an upward trend that began with increased production in 2010 (page 29). We continue to take action now to help build a sustainable energy system for the future (page 8).

Our research and development (R&D) programme helps us develop the advanced technologies to unlock energy resources more sustainably, improve efficiency and offer customers better products. In 2010 we spent $1.0 billion on R&D. Over the past five years we have spent $2.1 billion on developing alternative energies, carbon capture and storage, and on CO_2 R&D. We work increasingly in partnership with scientific institutes and other companies to develop sustainable energy technologies for the future. For example, in 2010 we pledged $25 million to support a five-year research partnership with Massachusetts Institute of Technology. Projects include biofuels, nanotechnology and CO_2 management.

www.shell.com/strategy

OUR GOVERNANCE AND STANDARDS

Overall accountability for sustainable development within Shell rests with our Chief Executive Officer and Executive Committee. They set priorities and standards in sustainable development that help shape our business activities. The CEO chairs our Health, Safety, Security, Environment and Social Performance (HSSE & SP) Executive, which reviews how we manage our sustainability performance.

Our business leaders – those who manage projects or facilities – are accountable for delivering their projects and running their operations responsibly. To do this they work with communities, partners, NGOs and others to address potential social and environmental impacts and share benefits.

All Shell companies and Shell-operated joint ventures are required to comply with the standards and requirements set out in the Shell HSSE & SP Control Framework. Our HSSE & SP specialists are responsible for implementing these standards to help improve our sustainability performance. These specialists are connected through global discipline teams that focus on specific areas such as process safety.

The Corporate and Social Responsibility Committee of the Board of Royal Dutch Shell plc assesses our policies and performance with respect to the Shell General Business Principles, Code of Conduct, HSSE & SP standards, as well as major issues of public concern on behalf of the Board. The committee was chaired from 2005 to 2011 by Wim Kok, former Prime Minister of the Netherlands. It is made up of four Non-executive Directors, meets four times a year, and in addition visits Shell facilities.

www.shell.com/standards

SUSTAINABLE DEVELOPMENT IN OUR PROJECTS AND OPERATIONS

Through experience we have learned that we must integrate early in our decision-making the interests and concerns of others, including our neighbours. This helps us deliver better projects, securing much needed energy for our customers and creating lasting benefits for communities.

Project delays in the energy industry can be due to factors such as lack of support from local communities and landowners, or the presence of a fragile ecosystem. Incorporating early the views of communities and recognised environmental and social experts can help us design and deliver projects with local support.

OUR APPROACH

Any major new business opportunity we work on follows a process that helps us plan and deliver the project. It includes five review points at which we decide whether to proceed with the project or not (see diagram below).

Before we begin substantial work on major projects or existing facilities we assess regulatory, environmental and social impacts alongside commercial and technical considerations. This includes conducting environmental, social and health impact assessments to help understand and manage risks and opportunities.

We also consider the potential cost of a project's CO_2 emissions in all major investment decisions, using a price of $40 per tonne of CO_2.

We consult communities, governments, NGOs and environmental experts to help develop our plans and inform our approach. Such early engagement has led, for example, to re-routing pipelines, adjusting the schedule of seismic activities, and increasing our local contracting.

We check that the recommendations of the impact assessment are being adopted throughout the project and the lifetime of the operation. We often publish impact assessments to share the information they provide more widely. For example, Shell Petroleum Development Company (SPDC) in Nigeria published the impact assessments of its major projects on its website in 2010.

BUILDING THE RIGHT MINDSET

Throughout a project and during its operations, we assess the lessons learned and share them systematically among HSSE & SP specialists and business leaders. We incorporate these experiences in other projects and in a comprehensive training programme in sustainable development for those who manage our projects and facilities. This training draws on best practice examples and lessons learned from outside Shell. In 2010, staff from 19 countries completed this programme. We also train technical and commercial staff in sustainable development through other learning programmes, such as our Project and Commercial Academies. All staff can take part in online training in how to approach sustainable development challenges and CO_2 management.

In particularly complex projects or operations, we have started to appoint specialists in social and environmental challenges known as sustainable development integrators. An integrator influences project planning and decisions, and helps gain local support and regulatory approvals. We have successfully piloted the use of such specialists in major projects in Canada and the USA, and are working to apply the approach globally.

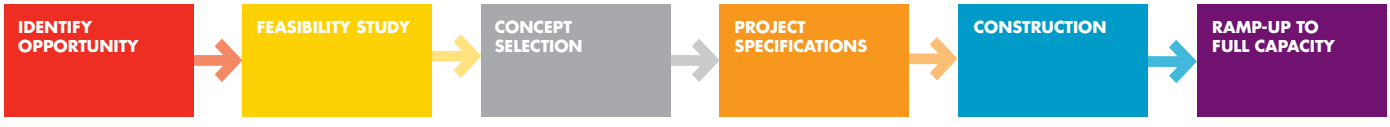
www.shell.com/sd

TESTIMONIAL

"I joined the Groundbirch project team as the sustainable development integrator when Shell decided to grow its gas operations in north-east British Columbia. The community near this project is primarily agricultural, and many of our neighbours were looking for employment and contracting opportunities with Shell. I helped the management team produce an economic development plan to encourage local hiring and buying. At workshops and public information sessions I shared with potential suppliers the safety standards we require and how our contracting process works. Some 150 suppliers were successful in bidding for contracts and getting jobs. We expect our local spend to continue to rise in 2011 with five First Nations businesses and other local enterprises replacing non-local suppliers. Our suppliers are expected to support Shell's local development objectives through their hiring practices. I have seen a lot of enthusiasm both inside and outside Shell for this approach, and it has been rewarding to see local spending and hiring grow each year."

Rebecca Nadel, Shell sustainable development integrator
Groundbirch project, Canada

PROJECT DELIVERY – REVIEW POINTS TAKE PLACE BETWEEN EACH STAGE OF THE PROJECT



SAFETY

Events in the Gulf of Mexico in 2010 served as a stark reminder of why we invest so much time and effort to plan and execute our operations responsibly. This means preventing incidents that harm people and the environment, and preparing to deal effectively with any that may occur.

In the *BP Deepwater Horizon* explosion in April 2010, 11 industry colleagues died and a number were seriously injured. The incident led to the largest offshore oil spill in US history. The environment was damaged and people's livelihoods suffered. Following the accident, Shell supported the response effort by providing equipment, technical expertise and facilities to BP. We also took immediate steps to confirm and reinforce the safety of our offshore operations around the world. Our review of deep-water drilling and safety procedures confirmed that Shell's approach is robust.

Our industry is determined to learn from what happened to prevent something similar occurring again. We are reviewing recommendations coming forward from investigations into the *Deepwater Horizon* incident and considering them against our standards and operating practices.

Safety continues to be our top priority. Our goal is to have zero fatalities and no incidents that harm our employees, contractors or neighbours, or put our facilities at risk. We continued to make progress towards that aim in 2010 with our best safety performance to date (page 30).

We manage safety across our business through a combination of rigorous systems and culture. This requires three behaviours from everyone working for us: complying with the rules; intervening in unsafe situations; and respecting people and the environment. Our global standards and operating procedures define the controls and physical barriers we require to prevent incidents. All Shell companies, Shell-operated joint ventures and our contractors must manage safety risks in line with the Shell Commitment and Policy on HSSE & SP, local laws and the terms of relevant permits and approvals.

We are reinforcing a culture where safety is a core value, and each person understands their role in making Shell a safer place to work. Everyone responsible for tasks that may carry safety risks is assessed for the necessary training and skills. On our annual global Safety Day for all employees and contractors around the world, we ask staff to make personal pledges to work in a safer way. We continue to enforce our mandatory 12 Life-Saving Rules with our employees and contractors to prevent serious injuries and fatalities. We have started to see improvement in areas such as road safety (page 24).

We continue to invest in maintaining process safety. For example, since 2006 we have been engaged in a $6 billion programme to improve the safety of our wells, pipelines and other Upstream facilities. In our Downstream business, we continue to improve the safety and reliability of our refineries, chemical plants and distribution facilities, investing some $1 billion alone in 2010.

www.shell.com/safety

DEEP-WATER SAFETY

Deep-water safety starts with ensuring people are trained and competent. Shell drilling engineers undergo a rigorous programme that includes field training, course work and mandatory examinations. We have continually updated this internationally recognised programme over the past three decades.

Preventing incidents is critical to deep-water safety. Before work begins on drilling a well, we undertake a detailed and lengthy planning process to be sure that the right equipment and the most robust procedures are in place. We use what is known as a "safety case" approach. It requires us and our drilling contractors to clarify accountabilities and to thoroughly assess, document and decide on ways to mitigate risks before drilling begins.

We have strict standards for designing and drilling deep-water wells. They require wells to have at least two independent physical barriers to minimise the risk of a "blowout", which could cause an explosion or spill. We have a series of safeguards in place to minimise the likelihood of a safety or environmental incident (see diagram). We also use sophisticated sensors so that our wells can be monitored in real time by specialists at our global operations centres 24 hours a day.

All our installations have detailed plans to respond to a spill in an effective and timely manner in the unlikely event that multiple barriers fail and a spill occurs. We are able to call upon significant resources such as containment booms, collection vessels and aircraft. We conduct emergency response exercises throughout the year to ensure these plans remain effective.

Shell is part of an industry consortium building new undersea containment equipment for use in the Gulf of Mexico. We are also involved in work with members of the International Association of Oil and Gas Producers (OGP) on improvements to the industry's global spill response capability.

SAFEGUARDS MINIMISE THE LIKELIHOOD OF A SAFETY OR ENVIRONMENTAL INCIDENT

[A] Independent physical barriers can include blowout preventer, cement, plugs, casing and drilling mud.

ENVIRONMENT

Environmental challenges are growing as the world's need for energy increases. We are sharpening our focus on environmental management in our projects and operations. Our work with leading environmental experts is helping to improve our approach.

Considering the impact on water, air and land early in projects will become even more important as the search for oil and gas takes us to more environmentally sensitive locations. So will improving the way we run our day-to-day operations to use less energy and fresh water, and prevent spills.

We are working to better manage our environmental impact, drawing on our experience of improving Shell's safety performance through safer behaviours and enforcing rules. We are focusing on key areas such as CO_2, flaring, spills, water, and environmentally sensitive areas. For CO_2, this includes investing in programmes to make our refineries and chemical plants more energy efficient (page 24), and developing carbon capture and storage technology (page 11).

We continue working to reduce continuous gas flaring in Nigeria (page 19). In new projects, we consider sensitive areas early, developing biodiversity action plans and collaborating with experts to protect rich ecosystems. We are also preparing for longer-term environmental challenges, such as potential local water shortages.

We work in partnership with leading environmental organisations to support conservation, and to help improve standards and practices in environmental management in the energy sector. In 2010, we worked on more than 30 projects with the International Union for Conservation of Nature (IUCN), Wetlands International, The Nature Conservancy and Earthwatch. These included working to improve the sustainability of biofuels, helping to conserve wetlands in the Gulf of Mexico, and a multi-industry initiative to produce a plan for responsible development of the Arctic (pages 22, 15 and 20 respectively).

www.shell.com/environment

↑ *Rainforest rich in biodiversity near the Rabi oilfield in Ogooué-Maritime province, Gabon.*

WORKING IN ENVIRONMENTALLY SENSITIVE AREAS

The UN declared 2010 the International Year of Biodiversity to increase awareness and encourage conservation. Considering potential effects on biodiversity has long been part of the environmental, social and health impact assessments we carry out for new major projects or expansions to existing operations. We were the first energy company to adopt standards for how we work in areas rich in biodiversity. We continue to embed requirements for how we manage risks to ecosystems and the livelihoods that may depend on them. In 2010, we took the further step of including the possible impact on benefits that ecosystems provide such as purifying water and air, and sustaining food and fuel supplies to communities. Shell has biodiversity action plans in place at nine major installations and pipelines in areas of particularly high biodiversity value, such as in Australia and Gabon. We are working on new plans for activities in Iraq, Nigeria and South Africa.

www.shell.com/biodiversity

MANAGING WATER USE

By 2025, two out of three people may live in areas that suffer shortages of water, according to the UN. The energy industry is becoming one of the larger industrial consumers of fresh water globally as it seeks to meet energy demand with resources that are more water intensive to develop, such as tight gas, oil sands and biofuels. The way Shell designs and operates facilities helps to reduce their use of fresh water. For operations in water-constrained areas, we prepare a water management plan that identifies ways to recycle water, use less fresh water and to closely monitor its use.

Advanced technologies help us better manage our use of fresh water. For example, our new petrochemicals complex in Singapore uses Shell's proprietary OMEGA technology to make mono-ethylene glycol, a chemical used in products such as polyester and anti-freeze. It uses 20% less steam compared to conventional processes. We are also using technology that increases the recycling of water at other facilities, including our oil sands operations in Canada (page 16).

Shell works with local water authorities to use recycled household waste water. At both the Schoonebeek oil field (Shell interest 30%) in the Netherlands and the SAPREF Refinery (Shell interest 37.5%) in South Africa there are agreements with local water authorities that allow the reuse of household waste water for industrial purposes. We are building water treatment plants with the regional water authority near our Geelong Refinery in Victoria, Australia, to recycle our process water; and with the city of Dawson Creek in British Columbia, Canada, to supply our tight gas operations at Groundbirch (page 11).

www.shell.com/water

COMMUNITIES

Wherever we operate we are part of a community. Our energy projects and facilities bring jobs and other benefits, but they can also raise concerns. We work with communities to help develop local economies and improve how we operate.

SHARING BENEFITS

Being part of a community means sharing a range of benefits with those around us. They include local jobs and training, contracts for goods and services, and the investments we make in community programmes.

We hire and buy locally to support development in countries where we work. In 2010, more than 90% of Shell staff worldwide were nationals. We recruit and train local staff in countries with lower incomes where we operate. In some cases, governments require us to do this. But in most cases it is our voluntary policy.

We spent over $13 billion on goods and services in 2010 from companies in countries with lower incomes. We also increased our sourcing of goods and services in China, India and Russia where we have teams in place to assess potential suppliers. Our major contracts include requirements to follow the Shell General Business Principles, Code of Conduct and HSSE standards.

More than 400,000 contractor staff and a huge number of suppliers work with Shell. To help local suppliers compete for contracts, we provide training in our global tendering and contract management process and support in achieving the standards we require. In Nigeria, for example, Shell Petroleum Development Company has had a dedicated team since 2007 to help local businesses, entrepreneurs and young people win contracts. By the end of 2010, they had trained nearly 2,000 service providers in the contracting process, and more than 3,000 people in a range of skills including entrepreneurship, project management, catering, scaffolding and welding.

We have invested in community programmes for many years, and are working to put our funds and resources to more effective use. Our social investment projects aim to benefit society in tangible ways and be sustainable beyond Shell's support. In 2010, we updated our global social investment strategy, which supports initiatives that benefit society and relate to our business activities, such as road safety and local enterprise development. More than 1.3 million people are killed on the world's roads every year. We have put considerable effort into preventing road accidents in our operations and are working with industry, governments and non-governmental organisations to help address this challenge globally (page 24).

We also work in partnerships with local and national governments to help build skills that meet development needs. Through the Shell LiveWIRE programme – active in 21 countries – we support young entrepreneurs in setting up businesses (see opinion).

BUILDING TRUST

Our business success depends more than ever on our neighbours' trust. Listening to and engaging with our neighbours helps us identify and respond to concerns, and improve how we operate. For example, we hold open days and community engagement sessions when we plan and develop new projects. At most of our refineries and chemical plants, we work through local advisory panels to discuss our activities and any issues of concern (page 25). We also conduct community surveys to better understand our impacts and find out what matters most to local people. For example, in 2010 we interviewed 300 residents near our Scotford refinery, upgrader and chemical plant in Canada. The responses helped us better understand concerns so we could respond more effectively.

We continue to build the skills of staff who regularly interact with communities. In 2010 we launched mandatory global requirements for managing how we perform in our relationship with communities – our "social performance". We have clear rules and expectations for how we work and engage communities that may be affected by our operations. This can include, for example, minimising our impact on indigenous peoples' traditional lifestyles (page 20) and cultural heritage areas, and where possible avoiding involuntary resettlement. We also require all our major facilities and new projects to have in place a specialist on social issues responsible for assessing impacts and finding ways to mitigate them.

↑ *Shell-sponsored road safety training, Jakarta, Indonesia.*

In 2010, we trained around 250 specialists in our new social performance requirements and will expand our efforts in 2011. We also established exchange programmes for these specialists to share their experiences with others in Shell and with our joint-venture partners.

www.shell.com/society

OPINION

"Before I joined Shell LiveWIRE business coaching, I could only sell 50 litres a month of my cholesterol-free cooking oil 'Sahara', which is made from locally-sourced coconuts. From the coaching session I learned a lot about how to market my product, reach customers and manage cash flow. Media exposure through LiveWIRE means many people know my product, which has also helped me to grow my business. Now I can sell at least 1,000 litres a month across 12 big cities in Indonesia, and demand for my product is increasing remarkably."

Ridho Arindiko, winner of Shell Indonesia LiveWIRE Business Start-Up Award 2010
Yogyakarta, Indonesia

LIVING BY OUR PRINCIPLES

Our business principles govern how we operate. We expect everyone working for us to uphold our core values of honesty, integrity and respect for people. We continue to find practical ways to respect human rights related to our business activities.

We were one of the first global companies to state and share our beliefs when we published the Shell General Business Principles in 1976. Our principles require compliance with all applicable laws and support for human rights. They forbid bribery and anti-competitive behaviour and include our commitment to contribute to sustainable development. All Shell employees and contractors are expected to apply these principles. In joint ventures that we do not control, we use our influence to encourage our partners to adopt and apply principles consistent with our own.

Our Code of Conduct describes the behaviours expected of our employees and contractors and how they relate to our business principles and core values. It covers areas such as fighting corrupt practices, national and international trade, and safeguarding information and assets. All staff must complete training in our Code of Conduct.

www.shell.com/values

HUMAN RIGHTS

Governments have a duty to protect human rights. Companies have a responsibility to respect human rights when doing business. Our business principles require us to respect the human rights of our employees and to support fundamental human rights in line with the legitimate role of business. Our employees are expected to understand human rights issues that may exist where they work and to follow Shell's commitments, standards and policies in this area.

Environmental, social and health impact assessments are conducted with external experts before we start major new projects. We also consider specific human rights aspects.

We are active in efforts to improve understanding of the relationship between business and human rights. We took part in consultations with Professor John Ruggie, the UN special representative on business and human rights, as he developed the Protect, Respect and Remedy framework. We worked with Professor Ruggie's team in piloting community grievance mechanisms on Sakhalin Island (page 17).

The Voluntary Principles for Security and Human Rights (VPSHR) guide the human rights aspects of security arrangements for our operations. We provide training for relevant employees and contractors globally on how they should apply these principles. All new security contracts contain a clause to comply with the VPSHR. We aim to have this clause included in all security contracts by 2012.

www.shell.com/humanrights

↓ Shell employees and partner company staff at the Ormen Lange gas plant, Norway.

REVENUE TRANSPARENCY

In the interests of transparency and accountability, we believe in the disclosure of revenues that extractive industries pay to host governments. In 2010, Shell paid $15.4 billion in corporate taxes, and $2.2 billion in royalties globally. We collected $81 billion in excise duties and sales taxes on our fuel and other products on behalf of governments. We are a founder and board member of the Extractive Industries Transparency Initiative (EITI). Shell companies have been directly involved with governments, NGOs and industry peers in EITI implementation in Cameroon, Gabon, Iraq, Kazakhstan, Nigeria and Norway.

www.shell.com/payments

ANTI-BRIBERY AND CORRUPTION

Fighting bribery and corruption is an integral part of living by our core values. Any Shell employee or contractor who is found to be giving or taking bribes, participating in money-laundering activities or any other acts of corruption, will be subject to disciplinary action, up to and including dismissal.

We co-operated fully with the US government during investigations into improper payments to customs officials in Nigeria made by Panalpina, a sub-contractor for Shell and other companies. As part of a wider settlement relating to Panalpina's activities, seven companies were fined a total of $236 million, with Shell agreeing to pay $48 million. Separately, Shell also agreed to pay $10 million to the Nigerian authorities. We conducted an extensive internal investigation leading to disciplinary actions, including dismissal of staff.

We implemented improved requirements on anti-bribery and corruption across Shell in 2010. This included strengthening due diligence of suppliers, contractors and government intermediaries.

ANTITRUST

We expect all employees to compete fairly and ethically and in compliance with antitrust laws in all the markets where we do business. We have had a globally co-ordinated antitrust training programme since 2000. Failure to comply with antitrust law will result in disciplinary action, up to and including dismissal.

www.shell.com/integrity

SECURING DIVERSE ENERGY

SHELL TAKES A RESPONSIBLE APPROACH TO SECURING DIVERSE ENERGY FOR OUR CUSTOMERS. WE ARE PRODUCING MORE CLEANER-BURNING NATURAL GAS AND USING ADVANCED TECHNOLOGIES TO DEVELOP NEW RESOURCES. WE ALSO WORK TO MAKE TRANSPORT MORE SUSTAINABLE WITH LOW-CARBON BIOFUELS AND MORE EFFICIENT FUELS AND LUBRICANTS. WE WORK WITH PARTNERS, COMMUNITIES AND GOVERNMENTS TO DELIVER THIS ENERGY MORE SUSTAINABLY.

BUILDING A SUSTAINABLE ENERGY SYSTEM

Energy powers economic growth, raising living standards and lifting millions from poverty. Demand for energy is increasing, but so are the global environmental stresses linked to meeting this demand: rising CO_2 emissions and pressure on natural resources, such as water (page 5).

Increasing global population and rapid economic growth in the developing world are driving the surge in energy demand. China has now overtaken the USA as the world's largest consumer of energy. By 2050 there are expected to be around 9 billion people, over 2 billion more than today. Energy demand by then could have doubled, according to the International Energy Agency (IEA).

A transition to a sustainable energy system is beginning, but it will take decades. Fossil fuels provide around 80% of the world's energy today and they are expected to remain the cornerstone of the global energy system for many years to come. Even with continued long-term government support, renewables and nuclear power may account for around a third of the global energy mix by mid-century. New technologies can take 30 years to achieve just 1% of the global market – wind power, for instance, is expected to reach this point in the next few years.

LIMITING CO_2 EMISSIONS

The need to tackle climate change remains urgent. At the UN climate change conference in Cancun, Mexico, more than 190 nations agreed that to avoid the worst effects of climate change, the world must limit the rise in global temperature by mid-century to 2°C. Greater energy efficiency will help, but the challenge is to find ways to produce more energy with significantly lower CO_2 emissions. All forms of energy will be needed to meet demand, including cleaner fossil fuels and more renewables.

Shell believes the best way to secure a more sustainable energy future is to take action today. We are producing more cleaner-burning natural gas for use in power generation (pages 10–11); focusing on sustainable biofuels to cut CO_2 emissions from road transport fuels (pages 22–23); developing technology to capture and store CO_2 emissions (page 11); and working to improve the energy efficiency of our own operations (pages 24 and 29). The advanced fuels and lubricants we develop help our customers use less energy (page 24).

The use of more natural gas for power is a critical pillar of a new sustainable energy system. A third of the world's CO_2 emissions come from power generation. Given that the power sector is such a vital part of the energy system that helps economies grow, we believe it must be the top priority for cutting global CO_2 emissions. Generating power from natural gas produces 50–70% less CO_2 than a coal-fired plant. Combining natural gas with carbon capture and storage could reduce CO_2 emissions by 90% compared to coal. Replacing ageing coal-fired power stations with new gas-fired plants could therefore significantly reduce CO_2 emissions from the power sector. Natural gas is also abundant, with 250 years of supplies at current production rates. Natural gas will account for over half our total production in 2012.

Many governments are already developing national, regional and sector-based CO_2 regulations. These practical approaches could eventually link to form a global market that would provide the most effective way of tackling climate change. Such a market would encourage the adoption of lower-CO_2 approaches that are faster to implement and less costly – such as natural gas instead of coal for power generation. This would discourage governments from favouring technologies that need support from subsidies. It would also create an incentive to develop commercially viable technologies to reduce CO_2 emissions.

Shell's own scenarios, updated in early 2011, describe the profound developments expected in the world's energy system to 2050. They call for heightened collaboration between civil society, public and private sectors to address the economic, energy and environmental challenges the world is facing.

HELPING TO BUILD COMMUNITIES

Communities will also play a vital role. Creating a sustainable energy system means finding ways to share the benefits of energy to improve life for as many people as possible, especially those living close to our operations. A lack of access to energy, for example, traps hundreds of millions of people in poverty. Their communities struggle to create jobs, raise standards of education and improve health.

Shell is working on ways to help overcome these challenges. Wherever we operate we aim to train and employ local people and to buy goods and services from local suppliers. In many cases this helps communities develop successful businesses and creates job skills that will improve long-term employment prospects.

We are looking at how, through our operations, we can support the provision of electricity to local communities. For example, in Nigeria we have made it possible for communities to be connected to power supplies near the Gbaran-Ubie project (page 18) and close to the Bonny Island LNG plant (page 12).

Our approach also includes helping to make cleaner-burning cookstoves available that will significantly reduce the indoor air pollution that kills nearly 2 million people a year in the developing world (page 21).

www.shell.com/newenergyfuture
www.shell.com/scenarios

KEY PROJECTS

KEY PROJECTS — POST FINAL INVESTMENT DECISION

Start-up	Project	Country	Shell interest (%)	Peak production 100% (kboe/d) [A]	LNG 100% capacity (mtpa) [B]	Category	Shell operated	On-stream as of March 31, 2011
2010–2011	AOSP expansion 1	Canada	60	100		Heavy oil/EOR [C]	●	◆
	Gbaran-Ubie phase 1	Nigeria	30	250		Integrated gas	●	◆
	Gjøa	Norway	12	105		Traditional		◆
	North America tight gas	USA/Canada	Various	~150 [D]		Tight gas	●	◆
	Pearl GTL	Qatar	100	320 [E]		Integrated gas	●	
	Perdido	USA	35	100		Deep water	●	◆
	Pluto LNG T1 (Woodside) [F]	Australia	22	140	4.3	Integrated gas		
	Qarn Alam	Oman	34	40		Heavy oil/EOR		
	Qatargas 4 LNG	Qatar	30	280	7.8	Integrated gas		◆
	Schoonebeek	Netherlands	30	20		Heavy oil/EOR	●	◆
	Shell Eastern Petrochemicals	Singapore	100	[G]		Refining/Chemicals	●	◆
2012–2013	Amal Steam	Oman	34	20		Heavy oil/EOR		
	1.8 Bab Thg & Hb2	UAE	9.5	80		Traditional		
	BC-10 phase 2	Brazil	50	30		Deep water	●	
	Corrib	Ireland	45	55		Traditional	●	
	Gumusut-Kakap	Malaysia	33	135		Deep water	●	
	Harweel	Oman	34	40		Heavy oil/EOR		
	Kashagan phase 1	Kazakhstan	16.8	300		Sour oil/gas		
	Majnoon FCP/West Qurna IPT	Iraq	45/15	>30 [D]		Traditional	●	
	North Rankin 2	Australia	21	268		Integrated gas		
	Port Arthur Refinery Expansion	USA	50	325		Refining/Chemicals		
	SAS	Abu Dhabi	9.5	115		Traditional		
2014+	Bonga North West	Nigeria	55	45		Deep water	●	
	Gorgon LNG T1-3	Australia	25	440	15	Integrated gas		
	Mars-B, W. Boreas & S. Deimos	USA	72	100		Deep water	●	

[A] Thousand barrels of oil equivalent a day.
[B] Million tonnes per annum.
[C] Enhanced oil recovery.
[D] Shell share.
[E] Pearl GTL is expected to produce 140 thousand barrels a day of GTL products and 120 thousand barrels of oil equivalent a day of natural gas liquids and ethane.
[F] Shell's indirect position via its 24% shareholding in Woodside.
[G] Shell Eastern Petrochemicals is expected to produce 800 thousand tonnes a year of ethylene.

PRODUCING CLEANER ENERGY

Cleaner-burning natural gas is essential in meeting demand as the world builds a sustainable energy system. Natural gas for power generation significantly reduces CO_2 emissions compared to coal and produces fewer pollutants. Most of Shell's natural gas production comes from conventional fields. But our production of gas trapped in dense rock – tight gas – is rising rapidly. Shell is a leading supplier of liquefied natural gas. We apply innovative technology to help us use energy and water more efficiently. We also work with partners to help build local skills and businesses.

NATURAL GAS

Shell has a number of major natural gas projects around the world. For example, the Shell-operated Ormen Lange development (Shell interest 17%) off the coast of Norway is one of the world's most complex gas projects. It sends gas by pipeline directly from the seabed 120 km to an onshore processing plant. The gas is then piped across the North Sea to the UK through the world's longest offshore gas pipeline. Ormen Lange supplies around 20% of the UK's gas needs.

The Shell-operated Corrib project (Shell interest 45%) in north-west Ireland will produce natural gas from wells over 80 km off the coast. Gas from Corrib is expected to replace about two-thirds of the gas Ireland currently imports. In 2010 consultations with the local community led to an agreed plan – awaiting approval in 2011 – to route the pipeline through a tunnel built beneath a bay, further away from homes and settled areas. The Corrib project has created jobs for local people. It has also provided around $5.4 million so far in funding for a range of community projects including health support groups and a scholarship programme.

Tight gas

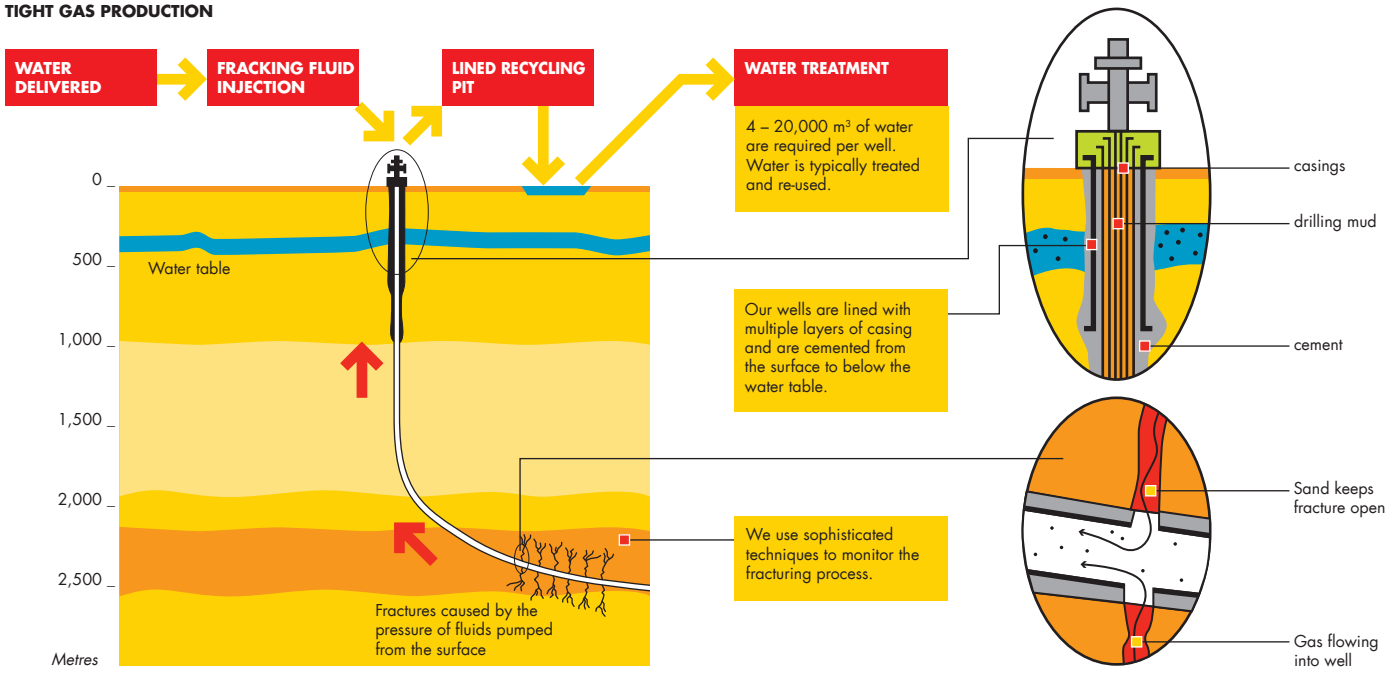
Just a few years ago, North America's gas production was expected to decline. Instead, production has increased significantly due to advanced technologies that are able to unlock gas trapped in densely packed rock deep underground. Improvements in drilling and production technologies over the past decade have made it more economical to produce these resources, known as tight gas (see diagram).

We are active in six major tight gas projects in the USA and Canada, and are currently producing enough tight gas to meet the needs of nearly 5 million US homes. In 2010, we made several acquisitions of tight gas resources in the USA that will contribute to our growing global production of natural gas. We also produce tight gas in China and are developing new projects there. We are in the early stages of assessing potential tight gas resources in Australia, Europe and southern Africa.

Developing tight gas poses technical and environmental challenges, but the method used has been refined over more than 60 years and applied safely around the world. A process known as hydraulic fracturing forces the gas out of the rock using a fluid consisting of more than 99% water and sand with a small amount of chemical additives. This mixture is pumped into deep formations under high pressure, fracturing the rock and freeing the gas. The additives used in the fluid are in low concentrations. Shell supports moves in the USA and elsewhere to require drilling contractors to disclose these additives to oil and gas regulatory authorities.

As production of tight gas increases, some local communities are becoming concerned over fracturing and the possibility of ground-water contamination. The tight gas we produce typically lies over a thousand metres below fresh-water aquifers. We prevent fracturing fluid from coming into contact with ground water by lining the wells with multiple steel and

TIGHT GAS PRODUCTION



concrete barriers. We also use advanced underground sensors to monitor the fracturing process.

Studies by the US Environmental Protection Agency (EPA) and the Ground Water Protection Council have shown that hydraulic fracturing is safe. We have decades of experience with this process and we continue to follow strict measures to protect drinking water supplies.

Fracturing uses more water than conventional production processes. But we recover some of this water for reuse – for example, typically 20–40% at Groundbirch, one of our tight gas projects in Canada. Increasingly it comes from sources other than local water supplies, such as treated waste water from nearby communities.

Developing tight gas resources can also involve drilling hundreds of wells compared to the few needed for conventional oil and gas fields. Where possible we cluster wells in a small area to limit our footprint.

Gas trapped in deep coal seams is also a form of tight gas. In eastern Australia, Arrow Energy (Shell interest 50%) plans to convert coalbed methane (CBM) into liquefied natural gas for export to Asia's fast growing gas markets. We are also involved in producing CBM from the North Shilou field in China.

www.shell.com/tightgas

WIND

Wind has a growing role to play in a diverse energy mix. Our wind energy business is mostly in North America, where we are involved in a number of onshore projects. Currently, Shell's share of the energy capacity from wind-power projects amounts to 550 megawatts. We are also considering some potential new developments.

www.shell.com/wind

↑ *Working at Groundbirch, Canada.*

MANAGING WATER USE AT GROUNDBIRCH

The hydraulic fracturing process used to produce tight gas needs water. Sometimes water supplies are scarce in areas where we are operating. Trucking water to remote sites can raise local concerns about safety, traffic and emissions. At our Groundbirch tight gas development in north-east British Columbia, Canada, we are finding ways to reduce the amount of fresh water we use from local sources.

We built and started operating a water storage and recycling facility in 2010 to store fracturing and gas processing water for reuse. Pipelines transport the water to where it is needed in the field, limiting truck movements. Shell is also studying the size and quality of deep saline aquifers in the area to possibly reduce the need for fresh-water resources in the future.

In 2010 we agreed to fund a water recycling plant for the nearby city of Dawson Creek. We will provide C$9.75 million towards the cost of the project and the city will provide C$1.75 million. The plant will treat water so that it can be reused in our operations and for other industrial and municipal uses, such as water for sports fields.

CARBON CAPTURE AND STORAGE (CCS)

A wide-scale capability to capture carbon dioxide from industrial plants and store it deep underground will be crucial to reducing CO_2 emissions. Rapid deployment of CCS by 2020 could account for 19% of the total CO_2 reductions needed by 2050, according to the International Energy Agency.

For CCS to be widely adopted, the support of communities will be essential. Government support is also vital as demonstration projects to develop CCS technologies are costly and generate no revenue for industry. One of the positive steps taken at the UN climate change conference in Cancun was to encourage technology growth by making CCS demonstration and development projects eligible for support under the UN Clean Development Mechanism.

Technologies needed for CCS are proven, but work is under way to advance them further. Shell is involved in a number of CCS research and demonstration projects. For example, with partners and government support we are helping to develop an advanced test centre at Mongstad, Norway.

We are also involved in plans for full-scale CCS projects. The Gorgon LNG project (Shell interest 25%) will include the world's largest CCS project. It will capture nearly 3.8 million tonnes a year of CO_2 produced with the natural gas, and store it more than 2 km underground. The CCS project has received A$60 million in financial support from the Australian government.

In Alberta, Canada, the federal and provincial governments have pledged C$865 million to the Quest project to capture and store over 1 million tonnes of CO_2 a year from our Scotford Upgrader, which processes heavy oil from our oil sands operations. In late 2010 we filed a regulatory application for Quest. Moving ahead will depend on factors including the outcome of this application, economic feasibility and community support.

www.shell.com/ccs

LIQUEFIED NATURAL GAS (LNG)

Some of the world's largest resources of natural gas lie far from customers who need cleaner energy to power their homes and businesses. Transporting it by pipeline would not be practical. But by cooling the gas to -162°C we turn it into liquid and shrink its volume by 600 times, enabling us to ship it around the world. At its destination, the LNG is turned back into gas for piping to customers. Shell helped pioneer the supply of LNG more than 40 years ago. Today we are one of the world's largest LNG suppliers with facilities in Australia, Brunei, India, Malaysia, Mexico, Nigeria, Oman, Qatar, Russia and the USA. Construction continues on other LNG projects in Australia.

The Gorgon LNG project (Shell interest 25%) at Barrow Island off Western Australia will produce 15 million tonnes a year of LNG for around 40 years – around 8% of current global LNG capacity and enough to power 38 million homes a year. Gorgon will include the world's largest carbon capture and storage (CCS) project, reducing the project's overall CO_2 emissions by around 40%. CO_2 will be separated from the natural gas and injected into a saline rock formation deep underground.

We aim to share benefits with the communities close to our LNG plants, and work to protect the local environment. In Nigeria, for example, regular power cuts disrupt businesses and restrict activities in schools and hospitals. Shell companies have helped set up a local utility company that supplies affordable and reliable electricity to the community near the Bonny Island LNG plant operated by Nigeria LNG (NLNG, Shell interest 26%). Power generated by gas turbines at the NLNG plant and an oil export terminal on the island operated by Shell Petroleum Development Company is sent to a grid that serves businesses and homes in the area, benefitting thousands of people.

In India we have helped replant mangroves near the Hazira regasification terminal to improve coastal ecosystems and counter soil erosion (page 13). We continue to work with experts to help protect endangered Western Gray Whales close to the Sakhalin 2 LNG plant (Shell interest 27.5%) in Russia's far east. Following advice from independent scientists on the Western Gray Whale Advisory Panel, we shut down seismic survey operations off Sakhalin Island several times in 2010 when whales were nearby.

LNG innovation

Cooling natural gas in a hot climate takes more energy than in colder areas. We have found innovative ways to reduce the energy needed for LNG operations in regions with high temperatures, and others with low temperatures. Our joint-venture LNG facilities in Oman, for example, use seawater for cooling, reducing the power needed to refrigerate the gas. These plants have lower CO_2 emissions than other LNG plants in hot climates.

At Sakhalin 2, the cooling processes take advantage of subarctic temperatures that can plunge to -35°C in winter. A two-stage liquefaction process cools the natural gas using a special refrigerant mix and an air-cooling process. Sakhalin 2 uses 6% less energy than a similar Shell facility in the Middle East and 9% less than a Shell LNG plant in the Asia-Pacific region.

We have also developed an advanced liquefaction technology, where heat can be recovered and used for process heating and power production. We plan to incorporate this technology in designs for future onshore LNG plants, where suitable.

Floating LNG

Many offshore gas fields are too small or too remote to be accessed economically. Shell is developing floating LNG (FLNG) capability to reach these resources. Gas is extracted to a floating facility above the field, then processed and liquefied on board. It can then be immediately transferred to a carrier and shipped to markets. This eliminates the need for pipelines and onshore processing plants, reducing the impact on the environment.

In 2010, we received environmental approval for our proposed Prelude FLNG project off the north-west coast of Australia. If we proceed with building this FLNG facility, it will be around 480 metres long and 75 metres wide, and would be moored in water around 250 metres deep. The Prelude development would be one of the first deployments of FLNG in the world.

www.shell.com/lng

WORKING WITH OUR PARTNERS

Building strong relationships with our partners, contractors and suppliers is essential to delivering new projects and running our operations. Our partnerships in Qatar and Oman are good examples of how we work in joint ventures to produce energy for our customers. Such partnerships help develop local skills.

Qatargas 4 (Shell interest 30%) shipped its first LNG cargo in early 2011. It has opened up a new market for Qatari LNG in Dubai, adding to existing markets that include China and the USA. In Dubai, LNG can be used to replace some of the oil normally burned to generate power for businesses, water desalination plants and air conditioning. Qatargas 4 – Shell's first involvement in Qatar's LNG sector – produces gas from the world's largest single gas field, the North Field, which holds more than 900 trillion cubic feet of gas. Shell helped develop the Qatargas 4 plant in Ras Laffan, an industrial zone on Qatar's coast. Our partner is Qatar Petroleum

↓ The Oman LNG facility.

with a 70% interest. Shell's development programmes are helping Qataris move into technical and commercial leadership positions within the venture.

Shell, with a 30% interest, has been involved with Oman LNG since the project started in 1994. The Oman Government has a 51% interest and other private industry partners have 19%. Shipments of LNG go mostly to Japan, South Korea and Europe. As with all joint ventures we do not operate, Oman LNG applies a set of business principles and HSE policy materially equivalent to our own. In 2010, Oman LNG implemented Shell's Life-Saving Rules, which contributed to 1.5 million hours worked without an injury that led to time off work.

Oman LNG also uses our guidelines for employing and developing local staff. Almost 90% of its workforce are Omani nationals and most of its top management positions are filled by Omanis. In 2010, the company spent more than $5 million on the training and development of staff. Over the last 10 years, Oman LNG's social investment programme has spent $90 million on more than 270 projects in education and health.

RESTORING MANGROVES IN INDIA

Hazira, in north-west India, is one of the country's major industrial hubs and biggest ports. Heavy industry such as manufacturing companies, steelmakers and power plants have set up business there. But rapid development in recent years has affected the environment. For example, the wide tidal mudflats along the coast are devoid of the plants and trees that once grew. An LNG regasification terminal (Shell interest 74%) at Hazira supplies natural gas to many of the industries in the area and to homes and businesses farther afield. As part of efforts to rejuvenate the local environment we have been working with village communities, the regional government, NGOs and academic institutes to revegetate the mudflats of Hazira's coast by planting mangroves. These play an instrumental role in sustaining healthy coastal ecosystems and countering soil erosion. In turn, this helps fish thrive and can help local fishermen earn a living.

Over the past seven years, we have organised – in partnership with local villages – the planting of around 1,100 hectares with more than 6 million mangrove trees. Active involvement by people living in the area has helped the mangroves to thrive. This programme helps build skills and create jobs by training workers in mangrove planting and maintenance. As a result of our work at Hazira, the Indian Ministry of Environment and Forests invited us to join an IUCN initiative to monitor the growing and maintenance of mangrove forests in India to protect coastal habitats.

www.shell.com/hazira

↑ *World Heritage Site staff assisting in field research at Danum Valley, Malaysia.*

WORKING WITH EARTHWATCH

For over 10 years, Shell has worked with international environmental charity Earthwatch to help our employees improve their understanding of major sustainability challenges. By the end of 2010, more than 450 Shell employees had participated in Earthwatch's global research and conservation projects for up to two weeks at a time. In 2010, 49 Shell volunteers worked on projects that ranged from ecosystems research in the mangrove forests of Kenya to monitoring how Arctic ecosystems in Canada are responding to climate change. These experiences help employees gain a greater awareness of the sustainability impacts of their work. The programme helps to reinforce Shell's sustainable development culture as employees actively share their experiences with colleagues and communities outside the company.

To extend this approach, we co-founded the Business Skills for World Heritage programme with Earthwatch and UNESCO in 2009. It pairs Shell employees with World Heritage Site managers for one year. Site managers learn business planning skills and ways to better manage natural areas, while Shell employees improve their understanding of sustainable development. To date, the programme has been held for managers from nine sites in South-East Asia. For example, at Puerto Princesa Subterranean River National Park in the Philippines, World Heritage Site managers worked with their Shell partner to develop a five-year management plan to help maximise tourism benefits while protecting the site's natural resources. In 2011, the programme will be run for managers from six sites in Africa. We are also funding a research project on biodiversity with Earthwatch scientists in Danum Valley, Malaysia, where training for the Business Skills for World Heritage programme has taken place.

www.earthwatch.org

DELIVERING ENERGY RESPONSIBLY

The world's easy-to-access oil is becoming more scarce. To help meet rising energy demand, we are exploring in and increasing production from locations that can pose complex technical, environmental and social challenges. We also use advanced technology to extract more from existing fields. We work with partners, communities and governments to access energy resources responsibly.

DEEP WATER

Shell has been in the forefront of deep-water exploration and production for more than 40 years. We have a strong record of operating safely (page 4). We use innovative technologies to unlock resources off the coasts of countries including Brazil, Malaysia and Nigeria, and in the Gulf of Mexico.

Our Gumusut-Kakap deep-water project (Shell interest 33%) off Malaysia is due to start production in 2012 using a large semi-submersible platform anchored in more than 1,200 metres of water in the South China Sea. We have helped to build job skills among local people and encourage growth in local businesses that will sustain long-term success for them and for us. A Shell-sponsored welder training programme, for example, seeks to address a regional industry shortage in this critical skill. Gumusut-Kakap was the first deep-water semi-submersible platform built in Malaysia.

As well as community development, we support environmental conservation programmes in Malaysia. These include research and conservation projects in Danum Valley, through our relationship with Earthwatch (page 13), and a dolphin conservation programme along the Sarawak coast.

More than 100 km off the coast of Brazil, our Parque das Conchas project (Shell interest 50%) was producing around 70,000 barrels of oil a day at a depth of 1,800 metres of water by the end of 2010, its first full year of production. The project achieved a number of technological firsts and provided many opportunities to build local expertise. We worked in partnership with Petrobras, Brazil's part-national oil company and another pioneer in deep-water technology. Most of the major undersea equipment and machinery used was built in Brazil. We are moving ahead with a second phase of Parque das Conchas to bring another field into production. We are also involved in industry organisations seeking to increase local hiring and buying of local services in future projects.

Some of the deep-water service companies we work with have adopted Shell safety programmes across their operations. For example, in 2010 one of our contractors at Parque das Conchas, SBM Offshore, launched life-saving rules across the company based on ours (see opinion).

The Gulf of Mexico continues to be essential for energy supplies and we expect it to remain a significant part of our production. Our Perdido platform (Shell interest 35%) is moored in nearly 2,500 metres of water, making it the world's deepest production platform of its type. It was built and installed without a serious injury recorded. Perdido began producing oil and gas in 2010 and is ramping up to full production. Gumusut-Kakap, Perdido and Parque das Conchas will contribute more than 300,000 barrels of oil equivalent (boe) a day to the world's energy supplies.

We have a further 100,000 boe-a-day capacity deep-water platform development under construction in the Mars basin in the Gulf of Mexico.

www.shell.com/deepwater

OPINION

"We share the same objective as Shell, which is to ensure the safety of all people working on our projects. The Shell Life-Saving Rules are integral and visible in our management of safety, from onshore offices and construction sites to the fleet of marine units worldwide. We will continue to ensure that the safety message does not diminish, but is robustly driven and executed for the continuation of a safe working environment throughout all of our operations."

Tony Mace, CEO of SBM Offshore
Schiedam, the Netherlands

↓ *Perdido, the world's deepest offshore oil drilling and production platform of its type, Gulf of Mexico.*

ENHANCED OIL RECOVERY

It is estimated that on average only about a third of a reservoir's oil is normally recovered. But by using enhanced oil recovery (EOR) techniques, we can extract more from existing resources, extending the life of declining fields. The International Energy Agency estimates that 300 billion barrels of oil could be unlocked globally by using techniques such as injecting steam, gas or chemicals to recover more oil from the ground. Shell has been at the forefront of EOR development since the 1930s, when we first applied steam recovery in California. In Texas in the 1970s we were also one of the first companies to inject CO_2 to enhance oil recovery.

We conducted successful field trials in Syria with an EOR technique that involves injecting low-salt water to alter the rock's properties, including its permeability. Oil recovery has increased 14% since these trials began in 2008, and our joint venture in Syria is now using this technique to produce more oil from large projects.

In Oman, where some of the fields are 40 years old, Petroleum Development Oman (PDO, Shell interest 34%) will re-inject sulphur-rich gas produced with oil at its Harweel development to boost recovery of more oil. In its first phase this EOR project will add 18,000 boe a day to Harweel's output.

Our Smart Fields® technology can increase the amount of oil recovered from a field by 10%, and gas by 5%. It can also boost the rate of production. We use sensors and fibre-optic cables to relay digital information on temperature, pressure and other field conditions to our control centres. Engineers continuously monitor the flow of oil to maximise production.

We are applying this advanced technology in Oman. In the Natih field, Smart Fields® technology enables PDO to better control the ratio of oil and gas coming from the wells. As a result, over the past two years PDO has reduced the production of this gas – that was previously flared – by over 300,000 cubic metres a day. PDO has been able to stop flaring in the Natih field with no loss in oil production.

www.shell.com/eor

↑ *Restoring oyster beds in the Gulf of Mexico.*

CONSERVING WETLANDS IN THE GULF OF MEXICO

Around 90% of the erosion of all coastal wetlands in the USA is taking place in Louisiana. Overfishing, rapid development and pollution have added to the impact on the coastline of flood control projects for the Mississippi River. These projects have reduced the natural replenishment of marshes and estuaries that comes from silt in flood waters.

A healthy Gulf Coast ecosystem is critical to the communities who live and work there. South Louisiana is home to some of our refineries, offices, pipelines and more than 4,000 employees. We have long worked with universities, NGOs, governments and others to raise awareness of the loss of Louisiana's wetlands and support conservation efforts. We have supported The Nature Conservancy (TNC) since 1990, contributing over $2.5 million toward environmental restoration projects and other initiatives.

Restoring oyster reefs is such a project. With Shell's financial support, TNC is installing artificially engineered oyster reefs along nearly 8 km of Louisiana coast. These reefs will not only protect the shoreline from wave erosion and storm damage, but also many square kilometres of adjacent marshland that is home to fish, shrimp and crabs. The oysters filter water when feeding, with a single oyster filtering up to 190 litres of water each day, improving its quality and clarity.

Scientific monitoring will assess the project's short- and long-term success by measuring reef establishment and shoreline changes. The goal is to encourage the use of oyster reefs as a sustainable way of protecting the shoreline.

www.nature.org

OIL SANDS

Canada's oil sands are one of the world's largest potential sources of crude oil. If developed responsibly they can make an increasing contribution to meeting the world's energy needs. But developing and processing oil sands is energy and water intensive.

At our oil sands operations we are tackling these challenges by finding ways to improve our energy efficiency and limit fresh-water use through recycling. We are also working to develop a large-scale carbon capture and storage (CCS) project. We work with neighbouring communities, supporting local and aboriginal businesses. By the end of 2010, we had contracted nearly $1 billion of business to aboriginal companies since 2005. We also work with aboriginal groups to gather and incorporate traditional ecological knowledge into our operations.

Oil sands contain bitumen, a heavy oil mixed with sand, clay and water. At the Athabasca Oil Sands Project (AOSP, Shell interest 60%) we use giant shovels and trucks to extract oil sands at our Muskeg River and Jackpine mines. We separate out the heavy oil with warm water, then dilute it with a solvent for piping to the Scotford Upgrader and conversion into synthetic crude oil. AOSP's production capacity was 155,000 barrels of oil equivalent (boe) a day in 2010. This will rise by 100,000 boe a day following an expansion project, Jackpine Mine, that started operations in 2010 and an expansion of the Scotford Upgrader due to come on-stream in 2011. In 2010, we produced around 21,000 boe a day from in situ operations where the bitumen is too deep to be mined. At some sites steam is injected into the reservoir to heat the bitumen, allowing it to be pumped to the surface.

Our share of production from oil sands was 2.7% of Shell's global oil and gas production in 2010.

Greenhouse gas emissions

Processing oil sands takes more energy than for some lighter crude oils found around the world. Taken as a whole – from mining to processing to use in transport fuels – CO_2 emissions from oil sands are 5–15% higher than from conventional crude oil, according to Cambridge Energy Research Associates (CERA). Heavy oil from our mining operations is at the lower end of this range as a result of energy-efficiency measures integrated into our design. In 2010, direct emissions from our mining, upgrading process and in situ operations were 3.7 million tonnes of CO_2 equivalent. This was around 4.9% of Shell's global direct greenhouse gas emissions from the facilities we operate.

↑ *Giant trucks used to mine oil sands, Canada.*

We are taking a number of steps to manage CO_2 emissions from our operations. We are using technology that saves energy in processing bitumen. We are piloting a new blend of diesel in some of our large trucks to improve their fuel efficiency. We are also investigating the potential for large-scale carbon capture and storage through our proposed Quest project (page 11).

Water

Separating bitumen from oil sands uses water. While Shell has permits to withdraw about 0.6% of the Athabasca River's average annual flow, we used less than 0.1% in 2010. During the year, 74% of the water used in the bitumen extraction process at the Muskeg River and Jackpine mines was recycled. No process water is discharged into the external environment. We are involved in work with aboriginal groups, NGOs, government and other oil sands operators to reduce the combined impact of the industry on the Athabasca River. This approach encourages new ways to manage water use, particularly during winter low-flow periods.

Tailings and land reclamation

Processing oil sands generates tailings, a mixture of water, sand, clay and residual hydrocarbons that remain once the bitumen has been removed. They are stored in tailings ponds until we can dry them out for use in land reclamation. In late 2010, Shell and a number of other companies agreed to work together to improve tailings management. We have shared our tailings research and technology with these companies and will collaborate on future research to make earlier reclamation possible.

The tailings ponds at the Muskeg River and Jackpine mines cover an area of 24 km^2. Tailings contain concentrated naturally occurring chemicals that are toxic so we continually monitor, assess and manage them to protect the surrounding ground and surface water. We also operate a radar-based system, similar to that used at commercial airports, to detect flocks of migratory birds and deter them from landing on the tailings ponds.

When dried, tailings are used in the process of reclaiming the mined area. Normally this process takes several years. But we have invested more than C$100 million in research that has led to a new technology to speed up the drying of tailings from years to weeks. This involves adding chemical additives to tailings on a sloped surface to improve water extraction, with the water then being recycled. In 2011, we expect this pilot project to produce 250,000 tonnes of sand and clay suitable for use in reclamation.

www.shell.com/oilsands

IRAQ

After years of conflict, many people in Iraq have to manage with just a few hours of electricity a day. They are in need of more jobs, clean drinking water, working sewage systems, better health facilities and functioning schools.

With the development of the Majnoon field in southern Iraq, one of the world's biggest oil fields, Shell is contributing to the country's recovery. Greater revenues for the government from oil production are expected to help regenerate the country's infrastructure, including power grids. More gas supplies will also help produce more electricity. Access to reliable power will help the people of Iraq rebuild their communities.

Shell is the operator at Majnoon with a 45% interest. Our partners are Petronas (30%) and Iraq's state-owned Missan Oil Company (25%). We are working to raise production from 45,000 barrels of oil equivalent (boe) a day in mid-2010 to 175,000 boe a day by 2012. The aim is to raise production in the coming years to 1.8 million boe a day. By the end of 2010, Majnoon was producing 66,000 boe a day.

Unemployment, especially among the young, is high, and security remains a challenge. We are working with our partners to create opportunities for local and national contractors and to build job skills. In 2010, we trained 15 environmental specialists working for Iraq's South Oil Company in how to conduct environmental, social and health impact assessments. We also hired local specialist companies working under strict safety procedures to clear unexploded ordnance from the surface of the Majnoon oil field before work started.

Shell is helping to restore local amenities. We worked with local contractors and the NGO Mercy Corps to install solar lighting and refurbish a park in Al Nashwa, the nearest community to Majnoon. The lighting will help make the town's streets safer at night. We also provided funds to help buy equipment and train medical staff in the Al Nashwa health clinic.

The development of Majnoon poses social and environmental challenges. For example, road traffic through local towns and villages will continue to increase. We are working with a local women's group to develop a road safety awareness campaign aimed at students, teachers and parents. The drivers who work for us are trained in line with our global approach to road safety (page 24).

Production from Majnoon involves the continuous flaring of natural gas produced with the oil. In 2010, flaring from Majnoon accounted for around 1% of the global direct greenhouse gas emissions from the facilities we operate. We expect this flaring will rise as production increases in line with our contract with the Iraqi government. With our partners, we are assessing the most effective ways of capturing this gas for use, possibly in power generation.

We have also been working with the oil ministry to establish a joint venture between Shell and the South Gas Company. The joint venture would gather, treat and process gas produced with oil in several fields, which is currently flared. It would be available for the export and domestic markets, and could help boost power supplies to communities.

LISTENING TO OUR SAKHALIN NEIGHBOURS

Sakhalin 2 in eastern Russia is one of the world's largest oil and gas operations. On Sakhalin Island, the development and operation of this project was estimated to impact directly or indirectly nearly a quarter of a million people – almost half of the population – including some 3,800 indigenous people.

To help identify and address concerns among neighbours and community members on the island, the operating company Sakhalin Energy (Shell interest 27.5%) adopted an innovative community grievance mechanism. Sakhalin Energy publicised – through leaflets, advertising, company community liaison officers and public libraries – the opportunity to file a complaint or a concern. The company committed to addressing all the grievances in a fair, transparent manner, and within a set time frame.

In the last five years, more than 330 individual complaints have been received and investigated. Many complaints centred on the impact of construction which ended in 2008, such as traffic noise and restricted access to farm land. Sakhalin Energy acted on the concerns raised.

The Sakhalin grievance mechanism contributed to Professor John Ruggie's UN framework for the role of businesses in human rights (page 7). In the coming years, we plan to pilot similar community grievance mechanisms at other locations, using our experience from Sakhalin.

www.sakhalinenergy.com

↓ *Engaging with Nivkh community members at the traditional Fishermen Day festival on Sakhalin Island.*

NIGERIA

↑ *Mutiu Sunmonu*

An open letter from Mutiu Sunmonu, Chairman of Shell Companies in Nigeria and Managing Director of Shell Petroleum Development Company of Nigeria Ltd (SPDC).

"The Niger Delta experienced relative stability in 2010. A continued government amnesty for militants who had been attacking oil facilities in recent years helped improve security. This allowed important projects to move forward. We were able to renew infrastructure, such as pipelines, and build facilities to collect gas produced with oil that is normally burned, or flared.

SPDC supplies around 70% of Nigeria's domestic gas, which is mostly used to produce power. Our major new energy project at Gbaran-Ubie in Bayelsa State began to help meet this need by providing gas to generate electricity, and for export. This project has created 300 permanent jobs and helped many to develop skills such as welding and scaffolding. A related social investment scheme is under way to connect 200,000 local people to the electricity grid for the first time. SPDC's Afam VI power plant in Rivers State continued to contribute almost 20% to the country's total electricity generating capacity.

Such progress is welcome. Yet serious problems remain. Although the number of violent attacks on our employees and contractors fell in 2010, they still occur. Gangs kidnapped 26 SPDC employees and contractors in 2010, and one contractor was killed in a related assault. People remain trapped in poverty in the delta. Criminal gangs continue to steal oil from pipelines at an estimated rate of 100,000 barrels a day. Theft and illegal refining cause extensive environmental damage. Sabotage and theft together accounted for more than 80% of the spill volume from SPDC facilities in 2010.

In the face of such difficulties people ask me many questions. What has SPDC learned over the years? What are we doing differently to bring improvements? Can the problems in the delta ever be solved?

I tell them that SPDC creates a great deal of value for Nigeria, but it operates in an extremely challenging environment. We have made mistakes, but we listen and try to learn from the past to improve our performance today and in the future.

Take our actions in just three areas. In recent years most spills from SPDC facilities have been caused by sabotage and theft. But some are operational spills due to equipment failure or human error. No operational spill is acceptable and we recognise that we have to improve our performance in this area. We are investing in an ongoing maintenance programme. For example, in 2010, SPDC completed construction of a $1.1 billion replacement pipeline, the 97-kilometre Nembe Creek Trunkline. We are also determined to be more transparent in our response to oil spills. In January 2011, we launched a public website which tracks our response to, and investigation and clean-up of, every spill from SPDC facilities, whether operational or the result of sabotage.

Another example is gas flaring. We regret that SPDC has been unable to meet targets to end continuous flaring. Militant violence had prevented safe access, and a lack of funding from our government partner delayed progress. Once conditions improved, however, we began work in early 2010 to install more equipment that will reduce gas flaring from SPDC facilities. This drive to replace sabotaged facilities to gather gas, or to install new equipment, will help us reach our goal of ending continuous flaring. It will cost over $2 billion, in addition to $3 billion previously spent to reduce flaring. Progress will depend on continued government partner funding and a stable security situation.

SPDC's better approach to funding community projects is a third example. Community involvement in the way these projects were developed used to be limited. Some projects failed partly because of this. In 2006 SPDC began to let communities decide on and develop these projects for themselves. The results are encouraging.

Only concerted action by all parties will overcome the deep-rooted challenges in the Niger Delta. Government must lead the way. The best contribution SPDC can make is to grow and sustain our business in a responsible way: this will maximise revenues to the government, protect tens of thousands of jobs, provide valuable contracts to Nigerian companies, and develop industry skills. We must remain responsible in dealing with the challenges our business faces, making sure we learn from them to improve our performance. I am hopeful that if improvements in security and funding can be maintained, we will continue to make progress in 2011."

SHELL'S ECONOMIC CONTRIBUTION

Shell Petroleum Development Company of Nigeria Ltd (SPDC) is the operator of a joint venture between the government-owned Nigerian National Petroleum Corporation (NNPC, 55%), Shell (30%), Total (10%), and Agip (5%). Partners fund the joint venture based on their ownership share. Since the government-owned NNPC owns 55%, the joint venture's activities depend on the government providing this share.

Shell Nigeria Exploration & Production Company (SNEPCo) operates and has a 55% interest in the offshore Bonga field, Nigeria's first deep-water project. Shell also has a 26% interest in Nigeria Liquefied Natural Gas (NLNG), which exports LNG around the world.

- $31 billion: revenues from SPDC to Nigerian government from 2006 to 2010.
- $3.5 billion: Shell share of royalties and taxes paid to the Nigerian government in 2010.
- 95%: share of revenue after costs that goes to the Nigerian Government from each barrel of oil SPDC produces.
- $947 million: value of SPDC and SNEPCo contracts awarded to Nigerian companies in 2010.
- 6,000/35,000: estimated direct/indirect jobs created by SPDC and SNEPCo in Nigeria.
- 90%: proportion of employees that are Nigerian.
- $161.1 million: SPDC and SNEPCo funds to the Niger Delta Development Commission in 2010 (Shell share $59.8 million).
- $71.4 million: 2010 contribution from SPDC and SNEPCo to community development projects (Shell share $22.9 million).

↑ *Monitoring blood pressure under the new health insurance scheme in Nigeria.*

IMPROVING COMMUNITY INVESTMENT

Each year SPDC and its partners contribute hundreds of millions of dollars to development in Nigeria. Some of this is required by law, for example our contribution to the Niger Delta Development Commission. SPDC also invests directly in health care, roads, water projects, small businesses, training, education, and other social initiatives.

In the past, communities did not always have the opportunity to plan and execute such projects. As a result some were abandoned and others failed to provide the intended benefits. In 2006, SPDC introduced a different approach, known as a global memorandum of understanding (GMOU), to put communities at the centre of planning and implementation. Communities identify their own needs, decide how to spend the funding provided by SPDC and its joint-venture partners, and directly implement projects. By the end of 2010, SPDC had GMOUs in 244 communities.

In Port Harcourt the GMOU model was used to launch the Niger Delta's first community health insurance scheme. More than 8,000 people had signed up by the end of 2010. Many have now received previously unaffordable medical treatment including vaccinations, maternal care and operations. Annual premiums are around $50, with GMOU funding subsidising half that amount. This compares, for example, to the $300-350 women in the Niger Delta typically pay for care during pregnancy. Other communities are expected to establish similar schemes.

Continuous gas flaring

Since 2002, flaring from SPDC facilities has fallen by over 50%. This decline has been due to our work to collect the gas produced with oil, as well as lower production as a result of militant violence. As security in the Niger Delta improved and production rose in 2010, the volume of gas produced and flared rose accordingly from SPDC facilities. In early 2010, SPDC began work on new projects to install gas-gathering equipment at 27 gas separation facilities. This will extend the proportion of potential SPDC production where we can gather gas to over 90%, increasing the gas available for the domestic market and for export. Progress on these projects depends on continued stability in the delta and funding from partners. SPDC is looking at possible solutions for the remaining gas, including supplying communities and businesses that need gas for local power generation or industrial uses.

Theft and illegal refining

Crude oil theft and illegal refining are widespread in the mangrove swamps of the Niger Delta. At hundreds of sites, stolen crude is heated in barrels to produce raw fuels that are sold locally. The land and waterways around these sites are polluted by oil, and fires are common. In an area with few jobs, this dangerous activity is seen as a way to earn money. It devastates the environment because the thieves spill oil and discard residues from illegal refineries. But it is only part of a wider problem of highly organised crime worth hundreds of millions of US dollars a year. SPDC believes that until organised large-scale oil theft and illegal refining are stopped, there can be no lasting solution to the pollution of some areas of the Niger Delta.

OPINION

"It is not the first time Shell has experimented with investment in communities, but this approach, the global memorandum of understanding (GMOU), is working. The communities are now driving their own progress and development. In my cluster, the Degama One cluster, we have executed a large number of projects. We have touched the lives of our people. The GMOU scheme provides funds which the communities themselves use to drive the development of projects, and no projects are embarked upon unless there are funds to execute them. Therefore the incidence of abandoned projects is no longer there. The communities handle their own development so that no accusing finger will be pointed at anyone else, for example SPDC. I say that the GMOU scheme is the best thing that has happened to communities in the Niger Delta."

Iyalla Gabriel Igani, barrister from Opu Okira community
Bille Kingdom, Rivers State, Nigeria

www.shell.com/nigeria

↓ *Illegal refining contributes to pollution in the Niger Delta.*

THE ARCTIC

The Arctic could be essential to meeting growing demand for energy in the future. It holds as much as 30% of the world's undiscovered natural gas and around 13% of its yet-to-find oil, according to the U.S. Geological Survey. Of these resources, about 84% lie offshore. We have plans to explore in the Beaufort and Chukchi seas off north Alaska in the near future.

The Arctic's environment is already undergoing change due to global warming. It is home to indigenous peoples who depend on the land and sea for their livelihoods. Developing the region's rich resources will mean meeting and balancing economic, environmental and social challenges. More than 50 years of safely delivering projects in Alaska, Canada, Norway and Russia has given us valuable experience in how to work responsibly in Arctic and subarctic conditions.

We work with indigenous peoples, governments, NGOs, industry bodies, universities and environmental organisations to share knowledge and improve our approach to working in the Arctic. For example, the relationships we have built with Inupiat, Inuit, Dene, Komi and other native peoples through regular meetings have enabled us to gather traditional ecological knowledge. We can use this to operate responsibly and invest more effectively in community projects.

Many Alaskan native populations depend on hunting caribou, seal, whales and other species for subsistence, as their ancestors have for generations. Shell ecologists consulted native subsistence advisers and local hunters in choosing the location of our exploration and production support facilities. We planned our activities so as not to interfere with the villagers' caribou and other hunts.

Since returning to Alaska in 2005, Shell has worked with industry partners and regulators to conduct many new scientific studies into the unique ecosystem of the Arctic. The understanding we have gained will help us to work in a limited open water season without affecting the activities of local people. It will also help us to protect the environment.

In 2010, Shell and Alaska's North Slope Borough entered into a long-term agreement to collaborate on further research into significant environmental challenges connected with developing energy resources in the region. This programme aims to balance traditional ecological knowledge with science to answer key questions and concerns of local residents, which are centred mainly on subsistence.

Shell uses advanced technologies to reduce our impact on the environment, such as air emission control systems on our drilling rigs. We also use advanced satellite imaging to track ice movements, reducing the need to monitor the ice from aircraft. Our marine fleet uses ultra-low sulphur diesel fuel. Alaska's relatively low-pressure and shallow-water oil fields differ from those in the deep-water Gulf of Mexico.

Since we returned to Alaska we have been investing in an oil spill response programme that will be in place before we start exploratory drilling. It will include an oil spill containment system designed for Arctic waters.

www.shell.com/alaska

↑ *Pipeline inspection in the Russian Arctic.*

PROTECTING THE ARCTIC ENVIRONMENT

Some climate experts predict that as sea ice shrinks and permafrost melts as a result of climate change, access to Arctic resources will increase. Commercial activity is expected to grow in many sectors, including mineral extraction, shipping, fishing and tourism. This should result in social and economic benefits for people living in the Arctic region, but it must be balanced by work with local communities to protect indigenous culture and the environment.

We work with environmental organisations in the Arctic. With the International Union for Conservation of Nature (IUCN), we started a project in 2010 to understand the potential cumulative effects that development may have on the Arctic. We are working with NGOs, local communities and representatives from the oil and gas, mining, shipping, fishing and tourism industries. The goal is to produce a plan for responsible development in the Arctic to help shape regulations for all industries with the region's people and its environment in mind.

With Wetlands International we are working on ways to protect Arctic wetlands and local livelihoods that may be affected by oil and gas activities. In 2010, the project started assessing the impact of infrastructure, such as pipelines, on these wetlands and ways to protect and restore such areas. Our aim is to use the project's findings as the basis for operational guidelines for oil and gas development in the Arctic.

www.iucn.org
www.wetlands.org

RAISING LIVING STANDARDS THROUGH ENTERPRISE

Around 1.5 billion people, mostly in Africa and Asia, have limited access to reliable energy that could help improve the quality of their lives. In millions of homes in the developing world, families also rely on smoky traditional cookstoves that produce indoor pollution that can be deadly. Recognition is growing that entrepreneurial thinking applied widely could help solve problems of this magnitude.

SHELL FOUNDATION

Shell Foundation is an independent charity that seeks to tackle poverty and environmental challenges through an enterprise-based approach. In India, for example, 500 million people live without electricity. Shell Foundation is working with a small company in Bihar, one of India's poorest states, to provide homes and businesses with affordable electricity from processing rice husks. Husk Power Systems was set up in 2008 in partnership with Shell Foundation and is now providing renewable energy to more than 100,000 people in over 270 rural villages. The company is working to build on these achievements over the next five years.

The partnership with Husk Power Systems is the latest example of Shell Foundation's approach. For 10 years the charity – funded over this time with $410 million from Shell – has been applying business thinking, models and disciplines to tackle key development challenges. It has created several successful partnerships and programmes in sustainable transport, building small enterprises in Africa, reducing indoor air pollution and promoting ethical trade.

All of Shell Foundation's partners strive for financial self sufficiency, aiming to generate enough income to break the reliance on grant funding. They all plan to expand their operations and extend their benefits to the maximum number of people. They also work very closely with Shell Foundation staff to develop their business knowledge and strategies.

Another good example of the way Shell Foundation operates is in the area of sustainable transport. In the last 20 years the urban population of the developing world has grown by an average of 3 million people each week. Today, 40% of the world's population live in cities with over 10 million inhabitants, with the poor particularly vulnerable to traffic congestion and pollution.

In 2002, Shell Foundation and the World Resources Institute created EMBARQ, a global network of transport experts that creates sustainable ways to overcome local transport problems. These include Bus Rapid Transit (BRT) systems, retrofitting existing buses with environmental improvements, and developing cycling and pedestrian routes as well as transport safety measures. In Mexico City, for example, a 20 km BRT corridor – the network's first initiative – now serves 500,000 passengers a day, halving previous travel times for its passengers. EMBARQ has expanded its operations to run projects in 22 cities around the world and has attracted $880 million in investment. More than one billion passengers have benefitted and it is estimated that the scheme has saved 720,000 tonnes of CO_2.

In 2010 Shell Foundation released a new report, Enterprise Solutions to Scale, to highlight lessons learned from successes and failures. The report aims to encourage transparency among organisations engaged in similar work so that lessons may be shared more effectively.

download Enterprise Solutions to Scale at www.shellfoundation.org/reports

CLEAN COOKSTOVES

Each year, nearly 2 million people worldwide die as a result of prolonged exposure to smoke from traditional cookstoves. The smoke leads to chronic and acute diseases, especially among children and women who are most exposed. Shell Foundation launched its Breathing Space programme in 2002 to develop and market affordable clean cookstoves in countries such as Brazil, China, Guatemala, India, Kenya and Uganda. Breathing Space's partner, Envirofit International, has sold more than 200,000 stoves.

In 2010, Shell helped launch the Global Alliance for Clean Cookstoves with Shell Foundation, the UN, NGOs and other public and private partners. Our involvement builds on Shell Foundation's work to improve cookstove standards and support local businesses in building and selling such stoves. Through the Alliance, we contribute our business experience and $6 million in funding to help build a cleaner-burning cookstoves industry. The initiative aims to place these cookstoves in 100 million homes by 2020.

Cookstoves that burn fuel more efficiently significantly reduce fuel use and harmful emissions. With our Alliance partners, we are working to develop global production standards for cleaner-burning stoves. We are also focusing on raising awareness of the health and environmental benefits of improved stoves with government policymakers and the public.

↓ *Using cleaner-burning cookstoves in India.*

MAKING TRANSPORT MORE SUSTAINABLE

Over the next few decades the number of vehicles on the road will rise significantly, increasing CO_2 emissions. Powering so many cars and trucks will need a range of energy sources including petrol and diesel, electricity, and potentially hydrogen fuel cells. We believe the most practical, commercially viable way to reduce CO_2 from transport fuels over the next 20 years will be lower-carbon biofuels.

BIOFUELS

The number of cars on the road is expected to triple to 2 billion by 2050. There are likely to be twice as many trucks then as now. Sustainable biofuels are expected to play an increasingly important role in helping to meet customers' fuel needs and reduce CO_2 emissions.

The international market for biofuels is growing, due largely to the introduction of new energy policies in Europe and the USA that call for more renewable, lower-carbon fuels for transport. Today, biofuels make up around 3% of the global road transport fuel mix. This is expected to rise to 9% by 2030.

In 2010, Shell sold 9.6 billion litres of biofuels in petrol or diesel blends. We are one of the world's largest distributors. We are now investing in the production of the lowest CO_2, most sustainable and cost-competitive of today's biofuels – Brazilian sugar-cane ethanol. This can reduce CO_2 emissions by around 70% compared to petrol. In 2010, we agreed to form the $12 billion Raízen joint venture with Cosan, Brazil's largest producer of ethanol.

We also continue to invest in developing advanced biofuels for the future.

Sustainability challenges

Today's biofuels pose some sustainability challenges. From cultivation to production to use, some biofuels can emit significantly less CO_2 than conventional fuels. But the CO_2 benefits of biofuels vary depending on factors including the raw materials used, and how they are processed and distributed.

If land used for biofuels crops is not carefully managed, concerns can arise over competing directly with food crops or displacing these crops into sensitive areas, such as forests rich in biodiversity. Other challenges include contested land ownership, labour rights, and the water used in producing biomass and processing some biofuels.

Our approach

We support international certification schemes that require biofuels to come from sustainable sources. We have also been introducing our own sustainability clauses into new and renewed supplier contracts since 2007. These clauses require suppliers to respect human rights in the production of their biomass and biofuels. They also require suppliers not to cultivate, produce or manufacture biofuels in areas rich in biodiversity. Suppliers must be able to trace supply chains, and they must belong to relevant international bodies promoting sustainable biomass production. In 2010, 83% of the volume of biofuels we purchased was from suppliers signed up to these clauses.

We are working with the International Union for Conservation of Nature (IUCN) to learn more about helping to protect areas rich in animal and plant life. We have been working to influence the industry to adopt more sustainable biofuel production processes. In 2010, we developed a joint approach to encourage governments to recognise and offer financial incentives for better management of land use. We have been engaging with other energy companies and environmental non-governmental organisations – such as WWF and Conservation International – to investigate ways to promote sustainable production of biofuel crops on underused land, without displacing existing farming activities to other areas.

We also work with industry, governments and voluntary organisations towards the development of global sustainability standards for biofuels. We are active in a number of roundtable organisations that have developed sustainability certification

↓ *Trucks transporting sugar cane to a Cosan mill, Brazil.*

schemes. For example, we belong to Bonsucro, formerly the Better Sugar Cane Initiative, which works to reduce environmental and social impacts of sugar-cane production. Bonsucro has developed industry standards for the certification of biofuels from sugar cane.

Soy and palm oil accounted for less than 5% of the biofuels we bought in 2010. We take part in the Roundtable on Sustainable Palm Oil (RSPO), which checks and approves claims for sustainable palm oil production and assures the transparency and traceability of supply chains. We are also a member of the Roundtable on Responsible Soy, which promotes responsible soy production and has been developing a certification system for use from 2011.

Producing low-carbon biofuels

Brazilian sugar-cane ethanol is the most sustainable biofuel available today. From cultivation through to use, it produces less CO_2 than any other commercially available biofuel. Our partnership with Brazilian company Cosan is our first involvement in producing biofuels on a large scale. The Raízen joint venture, to be finalised in 2011, will have the capacity to produce over 2 billion litres of sugar-cane ethanol a year, with significant potential to grow.

Sugar cane used in the process is grown on land hundreds of kilometres from the Amazon rainforest. Shell supports the work of the Brazilian government to implement effective land use policies and address concerns over sugar-cane production displacing other crops to areas rich in biodiversity. We also support government efforts to protect the land rights of indigenous peoples.

Cosan's approach uses waste material from sugar cane to power its own plants, delivering electricity it does not need to the national grid. This further reduces overall CO_2 emissions from the process.

Brazilian sugar cane needs virtually no irrigation to grow because of high seasonal rainfall. With recycling, the production process uses around 10 litres of water to produce each litre of ethanol. In 2010, Cosan recycled about 90% of the water used in 19 of its 23 mills, and there are plans to install the same technology in the remaining mills by 2013. New technology that air dries sugar cane is also reducing the need for water.

FUELS FOR THE FUTURE

Shell was one of the first energy companies to invest in developing advanced biofuels from non-edible plants and crop waste. We continue to invest in a range of projects, but scaling up the technology from the laboratory to commercial viability can take many years. Not all projects will succeed in becoming technically and commercially viable.

In our work to develop advanced biofuels we have partnerships with leading biotechnology companies and academic institutions. With Iogen Energy, a Canadian company, we are developing technology that uses enzymes to break down the cellulose in plant walls and turn it into sugars. These are then fermented and distilled into ethanol. Iogen Energy opened a demonstration plant in Ottawa in 2004, which produced over 430,000 litres in 2010. We continue to make progress towards possible investment in a full-scale commercial cellulosic ethanol plant.

Our research programme with Codexis in the USA develops natural enzymes into "super-enzymes" for faster conversion of non-edible crops or plant waste to ethanol, as well as directly into components similar to petrol and diesel. With US company Virent, we are working on the conversion of plant sugars directly into high-performance liquid transport fuels. In 2010 this partnership started production at a demonstration plant that has the capacity to produce up to 38,000 litres of biogasoline a year. We have also started research into producing diesel and aviation fuel using this approach.

In early 2011, Shell transferred its interest in Cellana, a joint-venture company researching the conversion of algae into biofuel, to partner HR BioPetroleum. The decision allows us to focus on other advanced biofuels options that better suit our portfolio and strategy.

Electric and hybrid vehicles that can switch to petrol or diesel offer the potential to reduce CO_2 emissions from road transport, although this depends on how the electricity is produced. If the electricity is generated by gas-fired plants or by renewable energy, the overall CO_2 emissions will be significantly lower than if generated by coal.

Hydrogen fuel cells are expected to play a role in the longer term transport energy mix. Car makers, fuel suppliers and governments will need to work together to invest in new vehicles and distribution points in order to establish a hydrogen market and infrastructure that will bring down costs. We have invested in a number of hydrogen filling stations around the world as part of a demonstration programme. There were nine of these at the end of 2010 in the USA, China and Japan.

Cosan uses liquid derived from the crushed cane as natural fertiliser on its land. Other residues from filtering the cane and ash left from burning cane for power are also used to nourish the soil, limiting the use of chemical fertilisers.

Cosan is planning to phase out most of its manual harvesting by 2014 in advance of São Paulo state requirements. Mechanical harvesting is more efficient and removes the need for first burning the straw from the cane. Cosan is training some staff for new opportunities under mechanisation, as well as to gain new skills for employment elsewhere.

As part of our agreement with Cosan, we have drawn up a series of robust sustainability standards and procedures that must be followed. They include sound land, water management and labour practices. In the coming years, Raízen aims to have its mills and all ethanol produced from its own sugar cane certified under the Bonsucro scheme. It also plans to have certified all ethanol produced from suppliers' sugar cane.

Raízen will include our interest in Codexis and part of our interest in Iogen Energy – two advanced biofuels ventures. We expect Raízen to provide plant residue for feedstock, power, and technical expertise, which could help these advanced biofuels processes achieve commercial scale.

www.shell.com/biofuels

FUEL EFFICIENCY

Road transport emits 17% of the world's CO_2 emissions from fossil fuels. With the number of cars and trucks on the road expected to reach well over 2 billion by 2050, limiting CO_2 emissions from transport will be a major challenge. Shell is combining innovation with its long-established technical expertise in fuels to help develop more energy-efficient road transport.

Shell FuelSave – our most efficient fuel ever – is now available in 10 countries across Europe and Asia. In 2010 we started selling it in Denmark, Germany, Norway, Thailand and the UK. Shell FuelSave can save up to one litre of fuel in a 50-litre tank at no extra cost to the driver using a formulation that reduces energy loss in the engine. We estimate that by the end of 2010, almost two years since its launch, motorists using Shell FuelSave had saved over 350 million litres of fuel. Shell also offers online tips to help drivers improve their fuel economy through better driving.

Shell FuelSave Partner is a new fuel management system that combines monitoring fuel consumption with information on vehicle and driver performance. Fuel accounts for up to 30% of operating costs in the commercial road transport sector. Shell FuelSave Partner was launched in 2010 to help truck owners cut costs by using less fuel, reducing CO_2 emissions. It produces reports that truck operators can use to improve their fleet's fuel efficiency by up to 10%.

↑ *More advanced lubricants help customers save energy.*

We continue to develop and offer advanced lubricants to increase efficiency. For example, our synthetic lubricant, Shell Helix Ultra, can achieve up to 2.2% greater fuel efficiency by reducing friction more effectively in the engine.

www.shell.com/fuelsave

ROAD SAFETY

In 2010, drivers working for Shell travelled more than 1.3 billion kilometres to deliver fuels and other products to our customers or to keep our operations running. That is equivalent to circling the world around 100 times every day. We had 25% fewer road accidents in 2010 compared to 2009, but sadly seven contractors died in driving incidents. This was four more than in 2009, but fewer than in previous years.

Shell takes a range of steps to improve safety standards among our drivers. But road safety is also a challenge for society. We support the UN's Decade of Action to help reduce the 1.3 million deaths on the world's roads each year, and continue to take part in wider industry and community initiatives. With industry partners we are helping fund the second phase of a $10 million programme through the Global Road Safety Partnership to develop local road safety programmes in Brazil, China, India and parts of Africa.

We also support road safety awareness programmes. For example, Shell in Indonesia started an initiative to strengthen road safety training in schools, as 20% of road accident victims in Indonesia are children between the ages of 5 and 12. Students and teachers in the capital, Jakarta, take part in training that simulates real situations to help develop road sense. By the end of 2010, more than 4,000 children and over 200 teachers had completed the programme. We are also preparing a road safety student handbook and teachers' manual as road safety becomes further integrated into Jakarta's school curriculum.

What Shell is doing

We use in-vehicle monitoring systems to help our drivers improve their performance. These systems track actions such as speeding, harsh braking, sharp acceleration, and use of seat belts, showing drivers how they can drive more safely and more economically. In 2010, 25,000 drivers used these systems in regions where driving poses most risk such as Africa, Asia, South America, and the Middle East. We will continue to roll out these systems in 2011, along with training programmes in how to drive with better anticipation of potential hazards and more thorough planning of journeys.

Our Life-Saving Rules are also improving driver behaviour. The rules forbid speeding, and the use of alcohol, drugs and mobile phones, even hands-free, while driving. They also require wearing seat belts and planning for longer or more hazardous journeys. Those who break the rules

ENERGY EFFICIENCY

It takes energy to make our transport fuels, lubricants and chemical products. Saving energy in our operations helps to reduce our CO_2 emissions. It also reduces costs. Energy typically accounts for around half of all costs at refineries and chemical plants. We are working to improve our energy efficiency to reduce CO_2 emissions and make products that are more cost competitive. In 2010, our refineries used energy slightly more efficiently than in 2009, while our chemical plants improved significantly (pages 29–30).

Customer demand affects energy efficiency at our plants as they do not run as efficiently when operating below capacity. We continue to make underlying progress in our energy efficiency. Our global CO_2 and energy management (CEM) programme drives this improvement. It includes focused capital investments and brings common tools and technologies across our operations to optimise energy use. For example, the CEM information system monitors energy efficiency by identifying potential energy savings within production units so operators can make adjustments to the plant and its equipment. We continue to implement this programme at our plants globally.

face consequences up to and including dismissal. At the end of 2010 – 18 months after the rules came into force – violations were down by 20%.

Some of our new upstream projects, for example in China and the Middle East, add to the amount of driving we do each year. We are finding ways to reduce the need to drive, or to make it safer. The locations of drilling sites at our Changbei joint-venture gas project in China were chosen to reduce the distance our trucks have to travel on more hazardous rural roads. Bussing workers to our Pearl gas-to-liquids project in Qatar each day during construction helped avoid journeys amounting to 24 million kilometres that workers would have made in 2010. This is an approach we have also encouraged on Sakhalin Island and in Nigeria.

www.shell.com/roadsafety

OPINION

"My focus is on the safety of our community and the environment. Our county has five oil refineries and several chemical companies, including Shell's. There was a poor relationship between industry and our community. Times have changed. Our relationship with Shell has improved considerably. We have not had a major incident in the county in the past 10 years. The county's Industrial Safety Ordinance is considered to be a major factor, as well as active community involvement. Unlike some of the other refineries, Shell supported changes in regulations that have resulted in more vapour recovery systems and a significant reduction in flaring. Shell is a significant contributor to our community, both financially and through its employee participation in community projects. Shell and the community must continue to work together to resolve issues affecting our health and the environment."

Ralph Sattler, member of the Shell Community Advisory Panel
Martinez, California, USA

BEING ACTIVE IN COMMUNITIES NEAR OUR OPERATIONS

Two of the facilities where we make oil products and chemicals in the USA have been an active part of their local communities for many years. Martinez Refinery and Catalyst plant (Shell interest 100%) in California opened in 1915, and Deer Park Refinery and Chemical plant (refinery Shell interest 50%, chemical plant Shell interest 100%) in Texas opened in 1929. Martinez is in the heart of a residential community in the San Francisco Bay area, while Deer Park is in an industrialised area facing the Houston Ship Channel. Their settings may differ, but both have faced challenges with their local communities in the past. The City of Martinez threatened to sue Shell for damaging the community's reputation after a series of hydrocarbon releases in 2001. At Deer Park, regulators and some local politicians and environmental organisations have raised air-quality concerns in recent years.

Through significant investment in emission reduction projects and flare management processes, both plants have improved their environmental performance. They have received ISO 14001 certification for implementing robust environmental management systems. In 2010, Deer Park achieved the chemical industry's Responsible Care® 14001 standard for continuous improvement in health, safety and environmental performance.

To improve community relations at Martinez, we set up an advisory panel made up of representatives from the community, local government and public services. They meet monthly and have open discussions on the plant's environmental performance. The refinery also sponsors events such as the Shell Run for Education, held in 2010 to raise money for projects at local schools.

Being active in the local community is also central to Deer Park's approach. It is involved in an independently-run community advisory council where local residents and organisations can voice concerns. Staff volunteer in the site's Partners in Education and SERVE programmes, where they mentor local students and help clean up public land or plant trees. The site also funds educational programmes though the Deer Park Education Foundation and the Strides for Schools fun run.

Local community surveys confirm that Deer Park's programmes are improving its reputation as a respected employer and community leader. Martinez is also seeing improved relations with the city. This was recognised in 2010 when the mayor of the City of Martinez declared the first Shell Oil Products Day to mark Shell's contribution to the community.

↓ *SERVE volunteers help clean public land in the Houston area, USA.*

IMPROVING OUR PRODUCTS

Offering products that use less energy or reduce the resources used in packaging are two ways we help our customers and reduce environmental impacts. We also work to deliver safer products and find innovative uses for by-products.

SAFER PRODUCTS

Demand for consumer goods that include foams, such as mattresses and seating, is growing significantly in developing countries. Some producers add high quantities of a chemical called toluene diisocyanate (TDI) to the foam mix. However, TDI vapours can rise to levels that may not be safe for workers.

Shell makes polyols – key ingredients in foam manufacture – at our chemical plants in Singapore and the Netherlands. A team at our technology centre in Bangalore developed a new polyol to help customers in developing countries make low-density foams more safely. The result is a new grade of Shell Caradol™ that can make higher quality foam more reliably and safely using less TDI, reducing the risk of releasing toxic vapours during production. The new Caradol™ grade came onto the market in 2010, with first sales in India.

BETTER DRILLING FLUIDS

Shell continues to develop its range of NEOFLO™ drilling fluids to support responsible offshore drilling. Compared to those based on traditional oils, NEOFLO™ drilling fluids are virtually free of aromatic hydrocarbons and are more biodegradable, minimising possible harm to marine life. They comply fully with the offshore discharge requirements set by the US Environmental Protection Agency without compromising technical performance.

NEOFLO™ fluids use the same basic chemical ingredient as detergents. They circulate to cool and lubricate the well during drilling, and help remove the debris.

We are producing NEOFLO™ drilling fluids at our Geismar plant in Louisiana to meet rising demand from customers running drilling operations in Australia, Brazil, Brunei, the USA and West Africa.

LESS PACKAGING

The Ecobox™ is a new approach to packaging motor oil developed by Shell. Instead of using plastic bottles, the Ecobox™ houses oil in a flexible plastic liner encased in cardboard. It simplifies transport and storage, leaves less residual oil behind in the container, minimises spills and reduces waste. The Ecobox™ plastic liner generates 89% less plastic landfill waste than the alternative 24 quart (22.7 litre) plastic bottles, while the carton is fully recyclable.

By the end of 2010, the Ecobox™ was being used in more than 3,600 vehicle service centres in the USA and Canada, following its trial in around 200 Walmart sites in 2009. Walmart named Shell Lubricants supplier of the year for sustainability in 2010, citing Ecobox™ as a key factor. High demand prompted a multi-million dollar investment by Shell in the first Ecobox™ production line at one of our lubricants plants in the USA.

We have also redesigned our four- and five-litre plastic containers, 265 million of which are sold each year. The amount of plastic used in these containers has been cut by 10.5%, or 2,500 tonnes per year; equivalent to the weight of more than 2,000 small cars.

↓ *Testing new foam formulations, Shell Technology Centre, India.*

↑ *Sulphur from refining processes at Bukom Refinery, Singapore.*

MAKING USE OF SULPHUR

Sulphur is a naturally occurring element that is used in many industrial processes. With new oil and gas fields increasingly rich in sulphur, there is a growing surplus. Shell is finding innovative uses for this by-product, for example to enrich fertilisers and to build roads.

Sulphur is an essential nutrient for crops. Trials have shown that Shell Thiogro™, a sulphur-enhanced fertiliser technology, can increase crop yields in some types of soils. We have licensed Shell Thiogro™ in Australia, India and the USA. In 2010, farmers started to use these sulphur-enhanced fertilisers to improve their crop yields. We continue to work closely with the fertiliser industry to extend this technology to other markets around the world.

Another sulphur-based product, Shell Thiopave™, can reduce the amount of energy used in road making and strengthen road surfaces. It uses less energy as the asphalt can be mixed at lower temperatures. Shell Thiopave™ replaces up to 25% of the bitumen in the asphalt with sulphur. In a new development in 2010, Shell Thiopave™ asphalt was combined with polymer modified bitumen during the upgrade of a highway in Missouri, USA, creating a mix designed to make stronger roads. This trial is part of our efforts to achieve certification for its use on this and other US highways. We have also trialled Shell Thiopave™ on roads in China, Europe and the Middle East.

ROADS WITH A LIGHTER CO_2 FOOTPRINT

Road builders around the world face increasingly tough environmental regulations that include reducing CO_2 emissions. At the same time, some builders are choosing to include recycled asphalt in their mixture. These two requirements typically conflict as asphalt containing a high percentage of recycled material generally needs a higher processing temperature. This can result in higher CO_2 emissions than are produced by making conventional asphalt.

In 2010, we worked with a Dutch construction company to combine our established Shell WAM™ (warm asphalt mixture) process with recycled asphalt to make roads at lower temperatures. The Shell WAM™ process is already in use in a number of countries. The process uses 60% recycled material and works at 50–60°C below conventional asphalt mixing temperatures, without compromising quality. The lower temperature reduces energy use by 25–35% and results in reduced CO_2 and other air emissions.

www.shell.com/solutions

COMPLYING WITH REACH

The European Union's REACH regulation came into force in 2010. REACH stands for the registration, evaluation, authorisation and restriction of chemicals. These requirements improve transparency standards for the known health, safety and environmental effects of chemical products. European manufacturers and importers are required to assess the safety of their chemical substances for registration with the European Chemicals Agency, and provide this information to customers. REACH is one of several new laws that supplement industry initiatives to improve the management of chemicals globally.

By the end of 2010, we had registered some 260 chemical substances we produce, ensuring continuity of supply to our customers for fuels, chemicals, lubricants, bitumen and other products.

Shell companies have engaged with many different suppliers, seeking assurances that all procured materials meet the REACH requirements. Customers have also been consulted to make sure products are registered in line with their use, and to deepen the understanding of how different ways of using products can affect people and the environment. We will provide further guidance to customers on safely managing products in 2011.

www.shell.com/reach

OUR PERFORMANCE

FOR SHELL, 2010 WAS A YEAR OF GOOD ECONOMIC PERFORMANCE AND INCREASED OIL AND GAS PRODUCTION. WE DELIVERED MAJOR PROJECTS THAT WILL HELP SUSTAIN OUR FUTURE GROWTH. OUR ENVIRONMENTAL PERFORMANCE SAW IMPROVEMENTS IN ENERGY EFFICIENCY AND IN REDUCING THE NUMBER OF OPERATIONAL SPILLS. GREENHOUSE GAS EMISSIONS ROSE AS PRODUCTION INCREASED ACROSS THE COMPANY. WE ACHIEVED OUR BEST SAFETY RECORD TO DATE AND WE CONTINUED TO HELP BUILD LOCAL ECONOMIES THROUGH OUR HIRING AND BUYING PRACTICES.

2010 IN REVIEW

ECONOMIC

Our income in 2010 was $20.5 billion and we delivered $10.2 billion to our shareholders in dividends. We made net capital investments of $23.7 billion to build and sustain our business for the future. We also spent $1.0 billion on our research and development programme.

We continued to focus our efforts on those markets where we see the best potential for growth. For example, we bought businesses in countries including the USA (East Resources, Shell interest 100%) and Australia (Arrow Energy, Shell interest 50%). We also made good progress in establishing our Raízen joint venture (Shell interest 50%) with Brazilian ethanol producer Cosan.

In 2010, Shell's oil and gas production increased by 5% over 2009, to 3,314 thousand barrels of oil equivalent (boe) a day. We increased our sales of liquefied natural gas (LNG) by 25% to 16.8 million tonnes. Our refineries and chemical plants saw an increase in their overall utilisation. We reduced our underlying costs by a further $2 billion. Our exploration efforts led to nine notable oil and gas discoveries in 2010. Additions to our proved reserves exceeded our production volumes for the year.

Six major projects started production in 2010. Our Upstream business brought into operation the 100,000 boe-a-day Perdido platform in the USA (Shell interest 35%), the 250,000 boe-a-day Gbaran-Ubie oil and gas project in Nigeria (Shell interest 30%), the 100,000 boe-a-day Jackpine Mine oil sands expansion in Canada (Shell interest 60%), and several tight gas developments (Shell interest varies) in North America that together we consider as one project. The 107,000 boe-a-day Gjøa project in Norway (Shell interest 12%) also started up in 2010. Our Downstream business started production from the Shell Eastern Petrochemicals Complex in Singapore (Shell interest 100%), at our largest integrated refinery and petrochemicals facility. Other major projects, such as Pearl GTL (Shell interest 100%), the world's largest gas-to-liquids plant in Qatar, continued to move towards completion.

Shell scorecard

In 2010, sustainable development (SD) continued to account for 20% of the company's scorecard, which helps determine the annual bonus levels for employees, including members of Shell's Executive Committee (EC). For the EC in 2010, SD measures were split evenly between Shell's safety performance and our rating in the Dow Jones Sustainability Indexes (DJSI). According to the assessment of Sustainability Asset Management (SAM), the company used by DJSI, our SD performance improved in 2010. However, we were excluded from the DJSI World Index as a result of the index committee's view of the operations of Shell companies in Nigeria, leading to EC members receiving no bonus for the DJSI component of the scorecard. For 2011, the Remuneration Committee of the Board of Royal Dutch Shell plc set the SD component of the EC scorecard based on targeted measures covering safety, operational spills, energy efficiency, and use of fresh water.

PRODUCED 2% OF THE WORLD'S OIL...

...AND 3% OF THE WORLD'S GAS

$1.0 BILLION SPENT ON R&D

3.3 MILLION BARRELS OF OIL EQUIVALENT PRODUCED A DAY...

...OVER 48% OF WHICH WAS NATURAL GAS

SOLD 7.6% OF THE WORLD'S LNG

$20.5 BILLION INCOME

$23.7 BILLION NET CAPITAL INVESTMENT

$2.1 BILLION SPENT ON ALTERNATIVE ENERGY, CCS, AND CO_2 R&D IN THE LAST 5 YEARS

ENVIRONMENTAL

Greenhouse gas emissions

The direct greenhouse gas (GHG) emissions from facilities we operate were 75 million tonnes on a CO_2-equivalent basis in 2010, a 9% increase on 2009. The main reason for this rise was increased production across the company, including higher production in Nigeria due to an improved security situation.

Around 60% of our GHG emissions came from the refineries and chemical plants in our Downstream business. The production of oil and gas in our Upstream business accounted for around 35% of our GHG emissions, and our shipping activities for the remaining 5%. We continue to work on improving operational performance and energy efficiency to reduce GHG emissions.

In 2010, we met the voluntary target we set in 1998 for our direct GHG emissions from facilities we operate to be at least 5% lower than our comparable 1990 level. Shell's GHG emissions in 2010 were around 25% lower than our comparable 1990 level.

The indirect GHG emissions from our purchases of energy (electricity, heat and steam) were 10 million tonnes on a CO_2-equivalent basis in 2010, 11% higher than in 2009. We estimate that the CO_2 emissions from the use of the products we made were around 670 million tonnes in 2010.

Flaring

In 2010, the flaring – or burning off – of natural gas in our Upstream business rose by 32% compared to 2009, to 10.3 million tonnes of CO_2 equivalent. This was mainly due to increased oil production in Nigeria and the start of our contract in Iraq. Flaring made up nearly 14% of our total direct GHG emissions in 2010.

Around 20% was operational flaring for safety reasons and during the start-up of Upstream facilities. We aim to minimise this operational flaring.

The remaining 80% was continuous flaring from facilities where there is no infrastructure to capture the gas produced with oil, known as associated gas. Around 80% of this continuous flaring takes place in Nigeria where the security situation and a lack of funding from the government partner has previously slowed progress on projects to capture the associated gas (pages 18–19). Around 10% of the continuous flaring came from the Majnoon field in Iraq where we became the operator in 2010. We expect that flaring in Iraq will rise in future years as production increases and before equipment to capture the associated gas can be installed (page 17). When we acquire or become the operator of an existing facility that is already flaring or venting (releasing gas into the atmosphere) it takes time before these activities can be stopped.

Outside Nigeria and Iraq, the few facilities that continuously flare amount to less than 1% of our total direct GHG emissions. Some of these facilities are at ageing oil fields where the associated gas pressure is too low to power the compressors used to gather the gas and avoid flaring.

Our HSSE & SP Control Framework requires that all of our new facilities are designed not to flare or vent continuously.

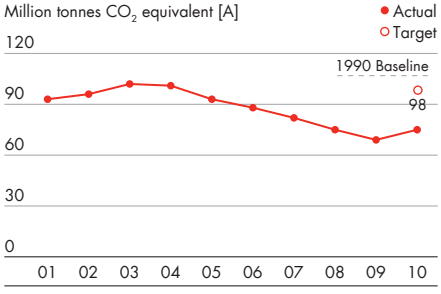
Energy efficiency

One of the ways we can manage our direct GHG emissions is to improve the energy efficiency of the facilities we operate.

In 2010, our Upstream business improved its overall energy efficiency for the production of oil and gas. This was due to a combination of increased production, new fields coming on-stream and improved techniques in field management. All our major Upstream operations have energy management plans in place. Nevertheless, we expect that the improvement will be difficult to maintain as existing fields age and production comes from more energy-intensive sources.

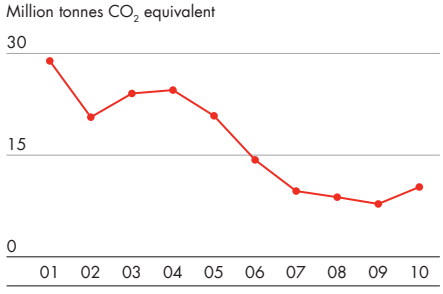
In our Oil Sands business, energy intensity in 2010 worsened slightly compared to 2009, as efforts to improve the energy efficiency of our operations were offset by the start of production at our mining expansion, the Jackpine mine (page 16).

DIRECT GREENHOUSE GAS EMISSIONS

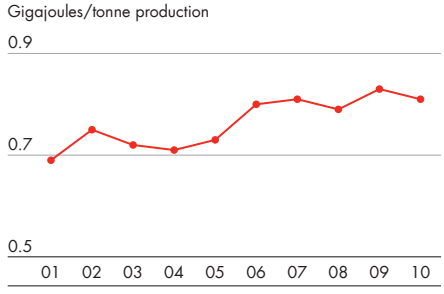


[A] Target and baseline adjusted to reflect portfolio changes

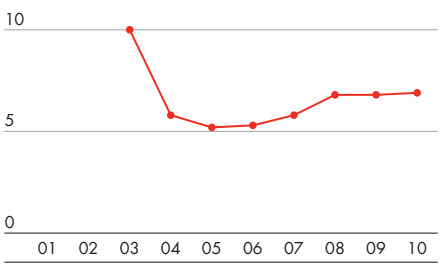
FLARING – UPSTREAM



ENERGY INTENSITY – UPSTREAM (EXCLUDING OIL SANDS)

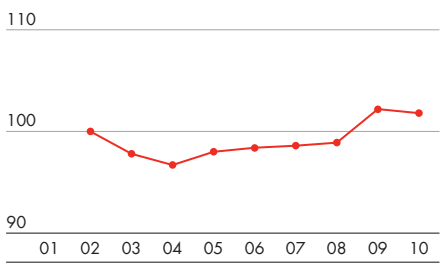


ENERGY INTENSITY – OIL SANDS



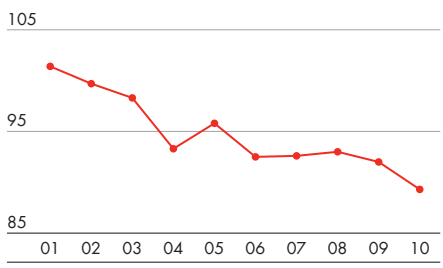
[B] Includes mining and upgrading operations

ENERGY INTENSITY – REFINERIES



[C] Indexed to 2002; based on 2006 Solomon EII™ methodology

ENERGY INTENSITY – CHEMICAL PLANTS



In 2010, the overall energy efficiency for the manufacture of oil products at our refineries improved slightly compared to 2009, helped by our CO_2 and energy management programme and increased refinery utilisation. The energy intensity of our refineries remained high compared to previous years as a result of continued reduced demand for oil products. Higher energy intensity levels are experienced at reduced output as the energy needed to run refineries does not decrease significantly at lower production levels.

The overall energy efficiency of our chemical plants improved in 2010 compared to 2009. Our chemical plants benefitted from running at higher output due to increased demand for chemicals products. They also had less planned and unplanned maintenance work.

Our refineries and chemical plants continue to implement the CO_2 and energy management programme (page 24) to improve their energy efficiency performance.

Spills

Shell has clear requirements and procedures to prevent spills, and multi-billion dollar programmes under way to maintain and improve our facilities and pipelines. However, spills still occur for reasons such as operational failure, accidents or corrosion.

In 2010, our operational spills of oil and oil products totalled 2.9 thousand tonnes, up from1.4 thousand tonnes in 2009. About 35% of this volume was from a single spill at the Montreal East Refinery in Canada. We continue to learn from such spills to improve our performance.

The number of operational spills was down significantly to 193 in 2010, from 275 in 2009, continuing the improvement trend of recent years. This was in part due to our continued investment in improving the reliability and maintenance of our facilities.

In 2010, sabotage and theft in Nigeria remained a significant cause of spills, totalling 3.0 thousand tonnes. This was a decrease in volume from recent years. However, the number of these spills increased from 95 in 2009 to 112 in 2010. See pages 18–19 for more information on spills in Nigeria.

Water

Fresh-water management is especially important wherever these resources are constrained due to limited supplies or extensive use. We assess the availability of water where we operate, and design and run our facilities in ways that help reduce their water use.

In 2010, our use of fresh water was up slightly to 202 million cubic metres, from 198 million cubic metres in 2009. Our Downstream business accounted for around 75% of our fresh-water use for the manufacture of oil products and chemicals; our Upstream operations used around 25%.

SOCIAL

Safety

We achieved our best ever safety performance in 2010. We had the lowest ever rate of injuries per million working hours – total recordable case frequency – down 15% from our previous best in 2009. Our rate of injuries that led to time off work was also the lowest ever in 2010, down around 25% from the year before.

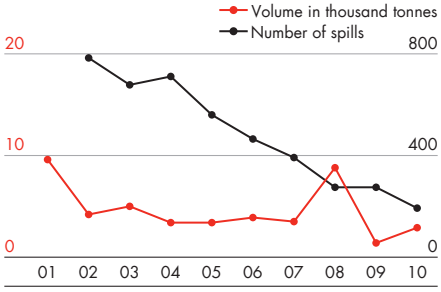
Sadly, however, 12 people working for Shell lost their lives in 2010. This was eight fewer than in 2009. One was the result of an industrial accident while welding. Seven were fatalities related to road transport, including three vehicle rollover incidents. A drowning incident resulted in two fatalities, and security related incidents on the road caused two fatalities. Our fatal accident rate – the number of fatalities per 100 million hours worked – was the lowest recorded and down over 30% on 2009.

We continue to build our safety culture to improve our performance. In 2010, our major construction projects continued to break safety records. For example, our Pearl GTL project in Qatar reached 77 million working hours without an injury that resulted in time off work. At peak construction, the project employed around 52,000 employees and contractors from more than 70 countries.

Social investment

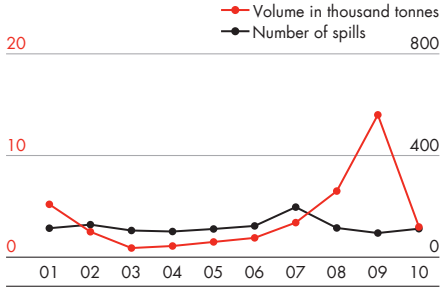
We aim to make our social investment projects beneficial to society in measurable ways and to be sustainable beyond Shell's involvement. In 2010, we spent more than $121 million on voluntary social investments

SPILLS – OPERATIONAL [A]



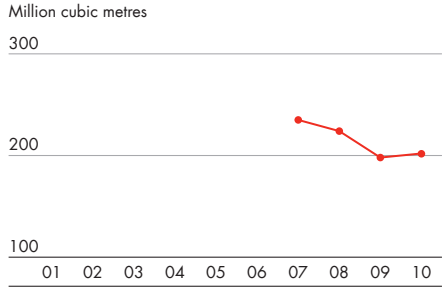
[A] Over 100 kilograms

SPILLS – SABOTAGE [B]



[B] Over 100 kilograms

FRESH WATER USE



93,000 EMPLOYED PEOPLE

90+ OPERATED IN COUNTRIES

9.6 SOLD FUEL CONTAINING BILLION LITRES OF BIOFUEL

worldwide, compared to $132 million in 2009. We estimate that $61 million of our spend in 2010, compared to $54 million in 2009, was in countries that, according to the UNDP Human Development Index 2010, have a gross domestic product (GDP) of less than $15,000 a year per person. In 2010, our social investment increased in countries such as Nigeria and Brazil, and decreased in others including the USA and Canada. Our figures do not include investments that are part of contractual agreements with host governments. We also provide significant support through donations of equipment and voluntary work by Shell employees.

Social performance
We continued to implement new company-wide standards for social performance in 2010 that were launched the previous year with our HSSE & SP Control Framework (page 2). They include requirements for the way we engage with neighbours of our major facilities. By the end of 2010, all of these facilities had assessed their status against the requirements and during 2011 will put plans in place to close gaps. We also trained 250 social performance specialists in the new requirements in 2010 (page 6).

Local procurement
Where possible, we try to buy goods and services from local businesses. In 2010, our total spend on contracting and procurement worldwide was over $60 billion. More than half of this was spent in Canada, the Netherlands, UK and USA, but we estimate almost $13 billion was spent in countries that, according to the UNDP Human Development Index 2010, have a GDP of less than $15,000 a year per person. In these countries, Shell companies spent over 90% of this $13 billion with local companies. We check that our suppliers comply with key sustainability criteria, including working conditions. In 2010, we conducted 34 independent assessments of suppliers in China, India and Taiwan on their compliance in areas such as human rights, labour practices and business integrity.

External voluntary codes
The Shell General Business Principles and Code of Conduct guide the business activities of Shell companies. But we also support a number of external voluntary codes. These include the UN Universal Declaration of Human Rights, the Organisation for Economic Co-operation and Development Guidelines for Multinational Enterprises, and the International Labour Organization Declaration on Fundamental Principles and Rights at Work. In early 2011, Shell joined the new UN Global Compact LEAD programme which strengthens our leadership in the Global Compact and our commitment to its principles.

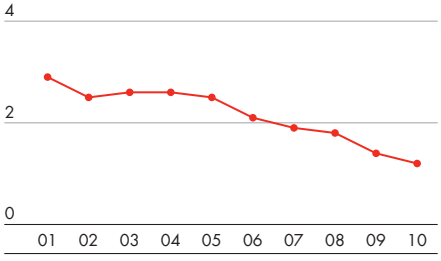
Diversity and inclusion
Our ability to deliver our business strategy while addressing environmental and social challenges depends on the quality and diversity of our people. We aim to create an inclusive work environment with equal opportunities. We measure diversity and inclusion (D&I) in part by the representation of women and local nationals in senior leadership positions. By the end of 2010, the proportion of women in senior positions was 15.3%, up 1.3% from 2009 and up 1.7% from 2008. In 36% of countries where we operate, local nationals filled more than half the senior leadership positions – down 1% from 2009, but up 4% from 2008. In 2010, more than 90% of our employees worldwide were nationals.

Our annual Shell People Survey measures employees' views of the inclusivity of their workplace. In 2010, 66% felt positive about this, down 3% from 2009 and down 1% from 2008. 13% felt negatively about inclusion in the workplace, up 2% from 2009 and up 1% from 2008.

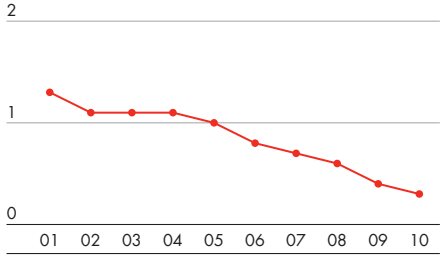
Training
We continue to invest in the training and development of our employees and joint-venture staff. Our focus is on building technical capability and safety critical competencies and skills. In 2010, we provided over 375,000 training days for employees and some of our joint-venture partners. This included training more than 4,000 people in leadership skills. We also certified 430 supervisors in drilling and well completions as part of our rigorous drilling training programme (page 4). More than140 senior project engineers completed our externally accredited Project Academy programme to improve the delivery of our major oil and gas projects.

Code of Conduct violations
Shell employees, and contractors working for Shell, must abide by our Code of Conduct. In 2010, there were 205 violations of the Code of Conduct reported (compared to 165 in 2009 and 204 in 2008). As a result we ended our relationship with 77 employees and contractors (compared to 126 in 2009 and 138 in 2008).

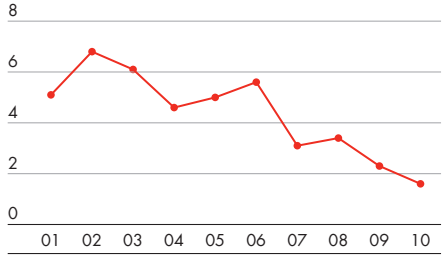
TOTAL RECORDABLE CASE FREQUENCY
Injuries per million working hours



LOST TIME INJURY FREQUENCY
Injuries per million working hours



FATAL ACCIDENT RATE
Fatalities per 100 million working hours



11,000 SUPPLIED TONNES OF BITUMEN PRODUCTS EVERY DAY...

...ENOUGH TO RESURFACE **350** KILOMETRES OF ROAD

$13 BILLION SPENT WITH LOWER-INCOME COUNTRIES

ENVIRONMENTAL AND SOCIAL DATA

ENVIRONMENTAL DATA	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
Direct greenhouse gas emissions (GHGs) [A]										
Total GHGs (million tonnes CO_2 equivalent)	75	69	75	82	88	93	101	102	96	93
Carbon dioxide (CO_2) (million tonnes)	72	66	72	79	85	89	96	97	92	87
Methane (CH_4) (thousand tonnes)	125	127	126	119	124	173	192	187	196	261
Nitrous oxide (N_2O) (thousand tonnes)	2	2	2	2	2	2	2	3	4	3
Hydrofluorocarbons (HFCs) (tonnes)	24	25	23	28	24	20	13	9	11	4
Flaring [B]										
Flaring (Upstream) (million tonnes CO_2 equivalent)	10.3	7.8	8.8	9.7	14.3	20.8	24.6	24.1	20.6	28.9
Flaring (Upstream) (million tonnes hydrocarbon flared)	3.5	2.6	2.8	3.4	4.8	7.0	8.1	8.1	6.8	9.5
Energy intensity										
Upstream excluding Oil Sands (gigajoules per tonne production) [C]	0.81	0.83	0.79	0.81	0.80	0.73	0.71	0.72	0.75	0.69
Oil Sands (gigajoules per tonne production) [D]	6.9	6.8	6.8	5.8	5.3	5.2	5.8	10.0	n/c	n/c
Refineries: Refinery Energy Index [E]	101.8	102.2	98.9	98.6	98.4	98.0	96.7	97.8	100.0	n/c
Chemical plants: Chemicals Energy Index	89.3	92.0	93.0	92.6	92.5	95.8	93.3	98.3	99.7	101.4
Acid gases and VOCs										
Sulphur dioxide (SO_2) (thousand tonnes)	139	141	175	212	233	226	247	257	240	236
Nitrogen oxides (NO_x) (thousand tonnes)	159	142	150	145	154	157	172	193	195	191
Volatile organic compounds (VOCs) (thousand tonnes)	133	126	130	148	185	199	213	226	324	309
Ozone-depleting emissions										
CFCs/halons/trichloroethane (tonnes)	0.0	0.4	1.4	0.6	0.3	0.8	2.3	3.0	7.7	4.5
Hydrochlorofluorocarbons (HCFCs) (tonnes)	20	24	26	27	35	35	42	44	57	45
Spills and discharges [F]										
Sabotage spills – volume (thousand tonnes) [G] [H]	3.0	14.0	6.5	3.4	1.9	1.5	1.1	0.9	2.5	5.2
Sabotage spills – number [H]	112	95	115	197	123	111	101	105	128	114
Operational spills – volume (thousand tonnes) [G]	2.9	1.4	8.8	3.5	3.9	3.4	3.4	5.0	4.2	9.6
Nigeria	0.7	0.3	7.1	1.6	1.4	0.1	0.0	0.4	0.2	5.2
Rest of world	2.2	1.1	1.7	1.9	2.5	3.3	3.4	4.6	4.0	4.4
Operational spills – number [G] [I]	193	275	275	392	465	560	711	678	784	n/c
Nigeria	30	37	42	52	41	63	48	48	66	110
Rest of world	163	238	233	340	424	497	663	630	718	n/c
Hurricane spills – volume (thousand tonnes)	0.0	0.0	0.0	0.0	0.0	2.9	1.0	0.0	0.0	0.0
Oil in effluents to surface environment (thousand tonnes)	1.6	1.5	1.7	1.6	1.8	2.3	2.1	2.3	2.4	2.8
Fresh water use										
Fresh water use (million cubic metres) [J]	202	198	224	235	n/c	n/c	n/c	n/c	n/c	n/c
Waste disposal										
Hazardous (thousand tonnes)	921	962	688	907	716	631	714	675	781	n/c
Non-hazardous (thousand tonnes)	1,079	1,139	996	1,899	1,154	632	421	443	480	n/c
Total waste (thousand tonnes)	2,000	2,101	1,684	2,806	1,870	1,263	1,135	1,118	1,261	n/c

[A] Petroleum Industry Guidelines for Greenhouse Gas Estimate, December 2003 (API, IPIECA, OGP), indicate that uncertainty in greenhouse gas measurements can be significant depending on the methods used. CO_2 equivalent is a term used to express the total emissions of the major greenhouse gases, including CO_2, methane, nitrous oxide and hydrofluorocarbons. In 1998 we set a voluntary target for 2010 of 5% lower direct GHG emissions from facilities we operate than our comparable 1990 level. Direct GHG emissions for the 1990 Base Year for our major facilities have been adjusted in accordance with the requirements of ISO 14064-1. It has not been technically feasible to determine the 1990 emissions for some recent acquisitions. We have updated our 2009 figures following recalculation of the data.

[B] The rise in flaring emissions in 2010 is primarily due to increased production in Nigeria, as well as inclusion of flaring in Iraq following the start of our production contract with the Iraqi government in 2010. Flaring in Iraq amounted to 0.3 million tonnes of hydrocarbon in 2010. We have updated our 2009 figures following recalculation of the data.

[C] Data reported in accordance with IPIECA guidelines. We have updated our 2008 and 2009 figures following recalculation of the data.

[D] We have updated the last five years of data to reflect the operation of cogeneration facilities. The data includes mining and upgrading operations. It does not include in situ production.

[E] We have indexed our refinery energy intensity data to the year 2002. This allows for easier comparison of current performance to our starting point. The index is based upon the Solomon Associates Energy Intensity Index 2006 methodology.

[F] All spill volumes and numbers are for spills over 100 kilograms.

[G] We have updated our 2009 figures following completion of investigations to confirm spill volumes.

[H] All sabotage and theft related spills have occurred in Nigeria except in 2007 (0.7 thousand tonnes outside Nigeria) and 2006 (0.6 thousand tonnes outside Nigeria).

[I] We have updated our 2009 figure following review of the data. The number of operational spills reported for the years 2004 and 2005 also contain a small number of hurricane spills.

[J] We have updated our 2007 figure following review of our data and portfolio.

n/c Not calculated.

www.shell.com/performancedata

See page 37 for more information about our data.

SOCIAL DATA

	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
Fatalities										
Total number	12	20	26	21	37	34	31	45	51	35
Employees	0	1	2	1	2	3	2	5	8	2
Contractors [K]	12	19	24	20	35	31	29	40	43	33
Fatal accident rate (FAR)										
Fatalities per 100 million working hours (employees and contractors)	1.6	2.3	3.4	3.1	5.6	5.0	4.6	6.1	6.8	5.1
Injuries										
Total recordable case frequency (TRCF)										
Injuries per million working hours (employees and contractors)	1.2	1.4	1.8	1.9	2.1	2.5	2.6	2.6	2.5	2.9
Lost time injury frequency (LTIF)										
Lost time injuries per million working hours (employees and contractors)	0.3	0.4	0.6	0.7	0.8	1.0	1.1	1.1	1.1	1.3
Illnesses										
Total recordable occupational illness frequency (TROIF)										
Illnesses per million working hours (employees only)	0.8	0.6	1.2	1.5	1.8	2.0	2.1	2.0	2.0	2.3
[S] **Security**										
Using armed security (% of countries)	9	17	17	16	15	19	18	22	16	18
Using armed company security (% of countries)	1	1	1	2	2	2	2	2	1	2
Using armed contractor security (% of countries)	6	10	9	12	9	11	11	22	12	12
Gender diversity [L]										
In supervisory/professional positions (% women)	26.3	26.4	24.7	24.6	23.2	21.8	20.7	19.5	18.9	17.7
In management positions (% women)	17.0	16.1	15.3	17.7	16.2	12.9	12.2	11.3	9.2	9.3
In senior leadership positions (% women)	15.3	14.0	13.6	12.9	11.6	9.9	9.6	9.6	8.8	7.9
Regional diversity [L]										
% countries with majority of local nationals in senior leadership positions	36	37	32	33	25	36	n/c	n/c	n/c	n/c
[S] **Staff forums and grievance procedures**										
% staff access to staff forum, grievance procedure or other support system	100.0	99.1	100.0	100.0	99.2	100.0	100.0	99.9	99.9	99.9
[S] **Child labour (% countries with specific procedures in place)**										
Own operations	99	98	100	99	95	88	83	78	86	89
Contractors	96	97	99	98	89	69	61	57	56	57
Suppliers				96	82	62	63	50	42	41
Integrity										
Code of Conduct violations [M]	205	165	204	361	n/c	n/c	n/c	n/c	n/c	n/c
[S] Contracts cancelled due to incompatibility with Business Principles	40	24	49	35	41	63	64	49	54	100
[S] Joint ventures divested due to incompatibility with Business Principles	0	0	0	0	0	0	0	1	0	0
[$] **Contracting and procurement**										
Estimated expenditure on goods and services from locally owned companies in lower-income countries ($ billion) [N]	13	12	12	13	10	9	6	5	n/c	n/c
Social investment [O]										
[$] Estimated voluntary social investment (equity share) ($ million) [P]	121	132	148	170	140	127	106	102	96	85
[$] Estimated social investment spend (equity share) in lower-income countries ($ million) [Q]	61	54	61	65	n/c	n/c	n/c	n/c	n/c	n/c

[K] We have updated certain types of contractor road fatality for 2004, 2005, and 2006 to align with industry reporting practice and our HSSE & SP Control Framework.

[L] Diversity data gathered by our human resources system.

[M] Code of Conduct violations gathered by our global helpline and through internal channels.

[N] Estimated expenditure in countries where gross domestic product amounts to less than $15,000 a year per person (source: UNDP Human Development Index 2010). For consistency we have updated this data back to 2007 to match the latest index.

[O] Social investment spending varies from year to year depending on business climate, locations and type of activities under way. This is voluntary social investment and does not include social investments made through contractual agreements.

[P] In 2010 overall voluntary social investment spend decreased due to increasingly stringent classification of the data. On a comparable basis, voluntary social investment increased by 4% in 2010.

[Q] Estimated voluntary social investment spend in countries where gross domestic product amounts to less than $15,000 a year per person (source: UNDP Human Development Index 2010).

[$] *Social investment and contracting and procurement data collected via our financial system since 2007.*

[S] *Data obtained from an internal survey completed by the senior Shell representative in each country.*

n/c Not calculated.

EXTERNAL REVIEW COMMITTEE

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Motoko Aizawa
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Shell, for the sixth successive year, has invited an External Review Committee to assess the content of its sustainability report. This letter provides our assessment of Shell's 2010 Sustainability Report. We express our views as individuals, not on behalf of our organisations.

INTRODUCTION

The Terms of Reference of the External Review Committee (ERC) are to review the Shell Sustainability Report for content, credibility and balance, by reference to the AA1000 APS Principles of inclusivity, materiality and responsiveness.

The 2010 review process changed to allow the ERC to hold its first face-to-face meeting with Shell earlier than in past years, in October 2010. Planning for the report's structure and content were still taking place, and the ERC discussed inclusivity and materiality of issues with senior management during our meetings.

The Committee welcomed this opportunity for early engagement, which was supplemented with a second face-to-face meeting in January 2011, and a series of conference calls. During these engagements we continued to focus on the issues identified, as we reviewed and commented on successive drafts of the report.

Shell senior management are very engaged with the ERC. They are open and frank in discussion, and listen to ERC suggestions. This gives a welcome robustness to the ERC's role. It is from these interactions and our own knowledge that ERC judgements are drawn in commenting on this year's report.

The backdrop to Shell's 2010 Sustainability Report was the tragedy of *Deepwater Horizon* and the subsequent oil spill in the Gulf of Mexico. Shell assisted BP and took immediate steps to review, confirm and reinforce its own safety procedures at all offshore facilities worldwide. Safety remains a key priority for Shell and further progress has been evident in the past year as the mandatory 12 Life-Saving Rules have been embedded. However, there is now a wider duty-of-care expectation from the public about how oil and gas operations are undertaken.

Shell's 2010 reporting theme is meeting energy demand by securing diverse energy in a responsible manner. This reflects Shell's recognition of the strategic importance of operating responsibly, acknowledging the growing importance of social performance, whilst developing energy from multiple sources.

2010 SUSTAINABILITY REPORT

In addressing the 2010 Report, the ERC reflected on the comments made in our opinion letter in the 2009 Report. We took note of the progress made as well as the further challenges faced by the company in 2010.

Nigeria

In 2009, the ERC suggested that Shell should more clearly explain the difficulties of doing business in such a challenging operating environment.

The 2010 Report begins to address this through the frank open letter from Mutiu Sunmonu, Chairman of Shell Companies in Nigeria. This is supported by information on Shell's economic contribution to Nigeria, and further detail on improving local community connections through active engagement, especially the global memorandum of understanding (GMOU) approach. Shell has also committed to greater transparency regarding operations in Nigeria, as detailed in this report.

The ERC welcomes the attention given in the 2010 Report to the important issue of how Shell companies operate in Nigeria. Whilst the progress is noted, the ERC recognises that many challenges remain to achieving lasting solutions.

Social Performance and Community Development

In 2009, the ERC called for further evidence of how Shell was integrating social performance and community engagement in the development of its projects. The 2010 Report covers the first full year following the reorganisation of sustainable development activities within the company. While the report does not refer to the reorganisation in detail, an illustration is given of how

integration is happening through the emerging role of sustainable development integrators. This role has arisen in part from the recognition that when some of Shell's projects have been delayed it is often due to a lack of local community support. The company is seeking to address this through building its capability in this area.

As the process of assessing social performance continues to evolve during 2011, the ERC expects that Shell will develop a more comprehensive social performance strategy against which key metrics will be identified to strengthen this aspect of Shell's sustainability reporting. The current absence makes it difficult to assess Shell's social performance implementation and impact. Today, external expectations for Shell's social performance are as high as those for its environmental performance. The ERC seeks more information in future reports on the impact of Shell's investments and future intentions in communities where it is active, especially in the light of the reported declining voluntary contributions to social investment for a third year, though the ERC understands this in part reflects the re-categorisation of such investment. Current results as reflected in the 2010 Report are mixed. The evidence of a strategy around social investment and its impact needs to be developed and explained in future reports.

The 2010 Report contains more vignettes of Shell's activities and work with communities, which are welcome. The ERC expects that the learning from these and other experiences will be more widely shared throughout Shell. We also hope that "speak up" facilities will be set up for local communities, as at Sakhalin, wherever Shell operates.

Shell and the Energy Future

In the 2009 Report the ERC found the report's theme of Shell's contribution to the global transition to a lower-carbon energy future and the "six pathways" to be useful. In 2010, Shell continues to use the six pathways to plan and manage internally its efforts on climate change, whilst externally communicating their substance. So in the 2010 Report the subjects of the six pathways are individually referred to and developed. This is also linked to Shell seeking to communicate a broader approach to sustainability by describing its environmental footprint in a more integrated manner, for example.

Shell is actively committed to playing its part in the move to a lower-carbon energy future. Shell's commitment is described through raising the production of natural gas, focusing on sustainable biofuels, and developing carbon capture and storage technologies.

Shell is also looking at increasing the energy efficiency of its own operations. In 2010 there were some improvements in energy efficiency but direct greenhouse gas emissions and flaring both increased in line with higher production levels. The increase in flaring occurred primarily in Nigeria and with the inclusion of Iraq in Shell's portfolio.

While the ERC feels that Shell demonstrates industry leadership in addressing climate change, it encourages Shell to take further actions in its operations, investments and public engagements to help society move towards a more sustainable future.

FURTHER COMMENTS AND CONCLUSION

The ERC welcomes Shell's publication in this report of the CO_2 price of $40 per tonne which is used in all of its major investment decisions. It is hoped that other companies will follow this openness.

Another arena where Shell is showing leadership is in the area of human rights, piloting the human rights framework developed by Professor John Ruggie of "Protect, Respect and Remedy". The ERC looks forward to learning in future reports how Shell will further develop its approach to human rights.

This year's Report includes details of the planned new sugar-cane ethanol joint venture with Cosan in Brazil. Whilst environmental issues are reported on, the ERC recommends that social issues related to greater mechanisation, human rights and land use be expanded upon in future reports.

The ERC notes the collaboration between Shell and other companies in 2010 to improve tailings management in oil sands processing using new technology. Shell has developed this technology to reduce the drying time of tailings from years to weeks. The ERC welcomes Shell's leadership and transparency in sharing this intellectual property.

The ERC sees the 2010 Report as representing a transition in Shell's sustainability reporting. It clarifies Shell's approach to operating responsibly, articulating the challenge of developing new energy supplies in an environmentally and socially responsible manner, and the importance of working with others to successfully address the world's current and future energy needs.

www.shell.com/erc

ERC OVERVIEW

The Committee met in person twice in The Hague, the Netherlands, and on other occasions by teleconference. We held meetings with key Shell senior management and other personnel to discuss in detail Shell's approach to sustainable development and its sustainability reporting.

Our review did not include verification of performance data underlying the report, or the information on which the case studies in the report were based. In addition to our comments on the company's reporting, we separately provided Shell with our observations on the company's sustainability performance. In recognition of our time and expertise, an honorarium was offered, payable either to us individually, to our organisation, or to a charity of our choosing. We were also offered reimbursement for the expense of our travel and accommodation.

ABOUT OUR REPORTING

We began reporting voluntarily on our environmental and social performance with the first Shell Report that covered 1997. Our reporting focuses on the environmental and social challenges that most affect business performance and matter most to our key stakeholders. These include local communities, non-governmental organisations, shareholders, investors, customers, partners, governments, employees, media, academics, contractors and suppliers. We use a thorough process to select content for our reporting (see diagram).

Throughout the year we also provide information to the Dow Jones Sustainability Indexes, FTSE4Good, the Carbon Disclosure Project and other organisations that help investors understand the economic, environmental and social performance of companies.

Internal controls such as audit trails and statistical checks help assure the accuracy of the Shell Sustainability Report. An External Review Committee of independent experts helps make sure our reporting is balanced, relevant and responsive to stakeholders' interests. Lloyd's Register Quality Assurance Ltd has provided limited assurance of our direct and indirect greenhouse gas emissions data for 2010.

We report in accordance with the Global Reporting Initiative (GRI) and in line with the International Petroleum Industry Environmental Conservation Association (IPIECA) guidelines. GRI confirmed our A+ reporting level for the information contained in this Sustainability Report, the Royal Dutch Shell plc Annual Report and Form 20-F 2010, and on www.shell.com.

www.shell.com/gri
www.shell.com/ipieca

Shell supports the UN Global Compact and its 10 principles covering human rights, labour, environment and anti-corruption. Sections of this Sustainability Report cover Shell's progress in 2010 in these areas. Further details of our contribution to the UN Global Compact are on the Shell corporate website.

www.shell.com/globalcompact

We provide more infomation about our sustainability reporting on our website.

www.shell.com/sdreporting

This report is supported on the Shell website by more detailed information on our approach to sustainable development and related issues.

www.shell.com/sustainability

GRI REPORT GRI CHECKED

Global Compact LEAD PARTICIPANT

sam 2011 gold class

FTSE4Good

CARBON DISCLOSURE PROJECT

CONTENT SELECTION PROCESS

Our reporting focuses on the environmental and social challenges that matter most to our key stakeholders. We use a thorough process to select content for our reporting based on information from external and internal sources. This process includes:

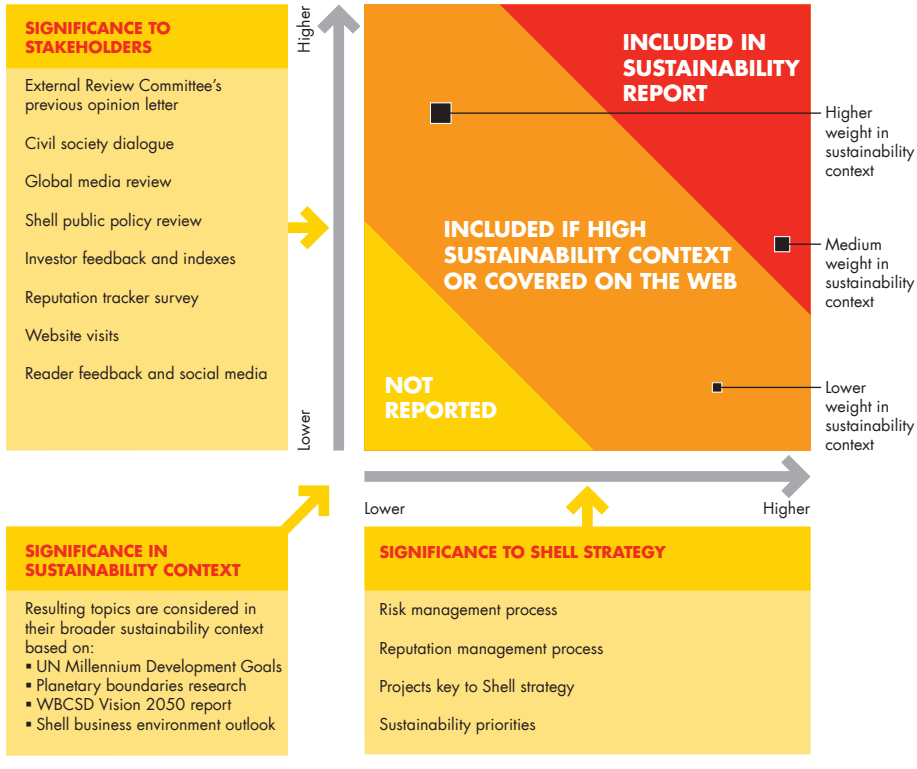
STEP 1: Identify and understand topics of significance to our stakeholders through a range of stakeholder engagements and reviews.

STEP 2: Identify topics of significance to Shell's business strategy through our established internal processes.

STEP 3: Combine the results into a matrix and assess each topic in terms of its wider economic, environmental and social impact. Each topic is then assigned a weighting according to its significance in "sustainability context". To determine "sustainability context" we review authoritative research and forecasts on environmental and social topics published by public institutions and governmental organisations.

STEP 4: We include all the highest priority topics in our report. Those at the next level of importance are included if they have a higher weight in "sustainability context", otherwise they are covered on the Shell website.

STEP 5: Our External Review Committee reviews the content selection to ensure that coverage is complete, relevant and balanced.



ABOUT OUR DATA

There are inherent limitations to the accuracy of environmental and social data. We recognise that our environmental and social data will be affected by these limitations and continue to improve the integrity of our data by strengthening our internal controls.

All non-financial data in this report are reported on a 100% basis for companies and joint ventures where we are the operator. Environmental data are for our direct emissions unless otherwise stated. We report in this way, in line with industry practice, because these are the data we can directly manage and affect through operational improvements.

Operations acquired or disposed of during the year are included only for the period we had ownership. Other data are collected from external sources, staff surveys and other internal sources as indicated.

We only include data in this report that have been confirmed by the end of March 2011. If incidents are reclassified or confirmed, or if significant data changes occur after preparation of this report, they will be updated in the following year's publication. Data marked in the social data table come from an internal survey completed by the senior Shell representative in each country. The accuracy of environmental and social data may be lower than that of data obtained through our financial systems.

Data provided are subject to internal controls. Lloyd's Register Quality Assurance Ltd has provided limited assurance of our direct and indirect greenhouse gas (GHG) emissions data for 2010. Limited assurance means nothing has come to the auditor's attention that would indicate that the data are not correct. For GHG emissions we provide more detailed data on our website.

www.shell.com/ghg

Unless otherwise noted, estimates of the number of homes served are based on the electricity consumption of an average European household. Conversions into US dollars are based on the average exchange rates for 2010.

SHARE YOUR OPINION

If you have any views on issues raised in this report, or on the report itself, please email:

sustainabilityreport@shell.com

REPORT SPECIFICATIONS

The paper used for this report is Satimat Green, a Forest Stewardship Council (FSC) certified paper, produced from 60% FSC-certified recycled fibre and 40% FSC-certified virgin fibre. All virgin fibres are Elemental Chlorine Free (ECF) bleached, without using chlorine gas. The inks used are vegetable oil-based. The laminate used for the cover is eco-friendly and allows the report to be fully recycled.

The printing of this document was carbon neutral: certified carbon-offset projects compensated for the CO_2 emissions.
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Cautionary note

The companies in which Royal Dutch Shell plc directly and indirectly owns investments are separate entities. In this publication "Shell", "Shell group" and "Royal Dutch Shell" are sometimes used for convenience where references are made to Royal Dutch Shell plc and its subsidiaries in general. Likewise, the words "we", "us" and "our" are also used to refer to subsidiaries in general or to those who work for them. These expressions are also used where no useful purpose is served by identifying the particular company or companies. "Subsidiaries", "Shell subsidiaries" and "Shell companies" as used in this publication refer to companies in which Royal Dutch Shell either directly or indirectly has control, by having either a majority of the voting rights or the right to exercise a controlling influence. The companies in which Shell has significant influence but not control are referred to as "associated companies" or "associates" and companies in which Shell has joint control are referred to as "jointly controlled entities". In this publication, associates and jointly controlled entities are also referred to as "equity-accounted investments". The term "Shell interest" is used for convenience to indicate the direct and/or indirect (for example, through our 24% shareholding in Woodside Petroleum Ltd.) ownership interest held by Shell in a venture, partnership or company, after exclusion of all third-party interest. This publication contains forward-looking statements concerning the financial condition, results of operations and businesses of Royal Dutch Shell. All statements other than statements of historical fact are, or may be deemed to be, forward-looking statements. Forward-looking statements are statements of future expectations that are based on management's current expectations and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in these statements. Forward-looking statements include, among other things, statements concerning the potential exposure of Royal Dutch Shell to market risks and statements expressing management's expectations, beliefs, estimates, forecasts, projections and assumptions. These forward-looking statements are identified by their use of terms and phrases such as "anticipate", "believe", "could", "estimate", "expect", "goals", "intend", "may", "objectives", "outlook", "plan", "probably", "project", "risks", "seek", "should", "target", "will" and similar terms and phrases. There are a number of factors that could affect the future operations of Royal Dutch Shell and could cause those results to differ materially from those expressed in the forward-looking statements included in this publication, including (without limitation): (a) price fluctuations in crude oil and natural gas; (b) changes in demand for Shell's products; (c) currency fluctuations; (d) drilling and production results; (e) reserve estimates; (f) loss of market share and industry competition; (g) environmental and physical risks; (h) risks associated with the identification of suitable potential acquisition properties and targets, and successful negotiation and completion of such transactions; (i) the risk of doing business in developing countries and countries subject to international sanctions; (j) legislative, fiscal and regulatory developments including regulatory measures addressing climate change; (k) economic and financial market conditions in various countries and regions; (l) political risks, including the risks of expropriation and renegotiation of the terms of contracts with governmental entities, delays or advancements in the approval of projects and delays in the reimbursement for shared costs; and (m) changes in trading conditions. All forward-looking statements contained in this publication are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. Readers should not place undue reliance on forward-looking statements. Additional factors that may affect future results are contained in Royal Dutch Shell's 20-F for the year ended December 31, 2010 (available at www shell.com/investor and www.sec.gov). These factors also should be considered by the reader. Each forward-looking statement speaks only as of the date of this publication, April 14, 2011. Neither Royal Dutch Shell nor any of its subsidiaries undertake any obligation to publicly update or revise any forward-looking statement as a result of new information, future events or other information. In light of these risks, results could differ materially from those stated, implied or inferred from the forward-looking statements contained in this publication. We may have used certain terms in this publication that the guidelines of the United States Securities and Exchange Commission (SEC) strictly prohibit us from including in filings with the SEC. U.S. Investors are urged to consider closely the disclosure in our Form 20-F, File No 1-32575, available on the SEC website www.sec.gov. You can also obtain these forms from the SEC by calling 1-800-SEC-0330.

OTHER SHELL REPORTS

WWW.SHELL.COM/ANNUALREPORT

ALL INFORMATION FROM OUR REPORTS IS AVAILABLE FOR ONLINE READING AND FOR DOWNLOADING AS A PDF FILE

The webpages contain interactive chart generators, downloadable tables in Excel format, hyperlinks to other webpages and an enhanced search tool. Sections of the reports can also be downloaded separately or combined into a custom-made PDF file.

Annual Report and Form 20-F for the year ended December 31, 2010
A comprehensive operational and financial report on our activities throughout 2010.

Annual Review and Summary Financial Statements 2010
A summarised operational and financial overview of Shell.

Investors' Handbook 2006–2010
Five years' detailed financial and operational information, including maps.

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