In 2017, the world continued its efforts to meet the dual challenge of rising energy demand and tackling climate change. The landmark UN Paris Agreement has set the planet a clear direction of travel towards a low-carbon future.

Getting there will mean providing much more energy with much less carbon dioxide (CO₂). It will need collaboration between business and civil society. Beyond widespread support for the Paris Agreement, there will need to be strong government policies to drive behaviour towards its targets.

The challenge is clear. Large parts of the world’s growing population still live without access to safe, reliable and affordable energy. As living standards rise, energy demand could double over the course of the century. The world is going to have to make meeting this demand part of the approach to cutting emissions. All this change offers huge opportunities to break new ground in low-carbon energy solutions and technologies.

We, at Shell, think long and hard about our role in the transition to a cleaner energy future and the steps needed to create a sustainable world economy. We continue to put respect for people, their safety, communities and the environment at the heart of our approach.

THRIVING THROUGH THE ENERGY TRANSITION

In 2017, we announced our ambition to cut the net carbon footprint of the energy products we provide by around half by 2050 in step with society’s drive to align with the goals of the Paris Agreement. This is an industry-leading aspiration that may need periodic recalibration in line with the pace of change in broader society and the wider energy system.

As an interim step, by 2035, we aim for a reduction of 20% based on our expectation of society’s movement toward meeting the goal of the Paris Agreement. This includes emissions from Shell’s operations; emissions of third parties who supply energy for that production; and our customers’ emissions from their use of the products we sell. This means we aim to help our customers reduce their own emissions through the solutions we offer.

To meet this ambition, we will step up many of our existing activities. That means bringing more biofuels, hydrogen and electric vehicle charging into the mix; more renewable power; and helping to advance technology to capture CO₂ emissions and store them safely underground. We will also use natural solutions, including forests and wetlands, to help naturally absorb emissions from uses where alternatives do not yet exist or will take time to reach commercial scale. We will produce more natural gas, the cleanest-burning hydrocarbon, and make it a priority to reduce leakage of the potent greenhouse gas methane from our gas operations.

Our continued financial resilience is vital if we are to play a successful role in the energy transition. We are working with the Task Force on Climate-related Financial Disclosures (TCFD), which in 2017 published recommendations calling...
on companies to give more information about how they assess and manage climate-related risks. The 2017 Annual Report and other publications aim to complement our 2017 Sustainability Report in responding to the TCFD recommendations, including discussing the energy transition and our portfolio resilience.

OUR CONTRIBUTION TO SOCIETY
The 2017 Sustainability Report sets out in detail our contribution to society. This includes how we play our part in achieving the UN’s sustainable development goals, which seek to address the world’s biggest challenges, from ending poverty to improving health and education to making cities more sustainable.

We work to do the right thing. Firstly, we continue our relentless focus on working with communities and managing our impact on the environment. This means in Nigeria, for example, addressing environmental challenges related to oil spills in areas with significant oil theft and illegal refining. We saw progress in 2017 with vital clean-up work starting in Bodo, an area affected by oil spills from various sources. In the Netherlands, we are working hard with our partners to find solutions to the problems caused by earthquakes as a result of gas production in Groningen. We support the people of Groningen and will meet our responsibility.

Secondly, we help provide the energy products that light, heat and cool homes and businesses, as well as providing the energy that transports and connects people, goods and services. We deliver products that contribute to people’s quality of life and, where viable, provide energy to those who lack enough access to it.

Finally, we continue to play a positive role in communities and wider society. This includes providing employment, education and paying taxes. It is about being a good neighbour. In 2017, for example, I was heartened by the courage and determination of Shell employees who helped those caught in the devastation left by Hurricane Harvey.

OPERATING SAFELY
Our goal is to work without causing any harm to people and the environment. However, we had two fatalities in 2017: a contractor died in a road accident in Alberta, Canada and there was a fatality due to a security incident in Port Harcourt, Nigeria. This is unacceptable. Safety in our operations is our top priority and we work to ensure staff and contractors are alert to their own safety, care about the safety of their colleagues and look out for any potential safety risks in our operations, however small. We need to continue to assure our plants and projects operate safely, particularly by improving our safety behaviour and enabling employees to quickly report incidents or potential incidents when they occur.

I was deeply saddened by a road tanker incident in Pakistan in 2017. In this tragedy, which was outside the scope of Shell’s safety reporting, a vehicle operated by a contractor overturned, spilling fuel that subsequently ignited and caused more than 200 fatalities and injured a number of other people. Events such as these underscore the importance of the continued focus on health and safety standards by all contractors, suppliers and employees.

THE 2017 SUSTAINABILITY REPORT
Once again, we appreciate the involvement of leading independent sustainability experts, which this year comes from the Report Review Panel. They have provided feedback that has helped our reporting become more balanced, relevant and responsive to the interests of our customers, partners and investors and made recommendations for Shell’s future reporting.

We are a founding member of the UN Global Compact and continue to support its corporate governance principles on human rights, anti-corruption, environmental protection and better labour practices.

Sustainability is essential to the way we do business. Our Sustainability Report is an account of our progress in this area as we continue to deliver energy products society needs in the transition to a low-carbon world.

Ben van Beurden
Chief Executive Officer

“We, at Shell, think long and hard about our role in the transition to a cleaner energy future and the steps needed to create a sustainable world economy.”
The 2017 Sustainability Report, published on April 9, 2018, is our 21st report. Sustainability at Shell means providing energy in a responsible manner, respecting people, their safety and the environment.

This report focuses on the key sustainability challenges we face and the many ways we are responding. It details our social, safety and environmental performance in 2017.

**TOPIC SELECTION FOR 2017**

The topic selection process identifies the sustainability subjects that were most relevant to Shell and our stakeholders or prominent globally in 2017.

Each year, we use a structured process to select the report’s content and confirm its validity. We engage with various groups and individuals to understand specific concerns about our business and its impact around the world, particularly in relation to the environment and society.

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**THE MAIN STEPS INVOLVED IN SELECTING THE TOPICS ARE:**

**Step 1:** Identify and understand topics that are important to our stakeholders;

**Step 2:** Identify topics that are important to Shell’s business strategy;

**Step 3:** Collate all the topics identified as of high importance by our stakeholders in the previous steps – these topics determine the report’s content;

**Step 4:** Identify the topics that will be covered elsewhere on www.shell.com;

**Step 5:** Consider input from our Report Review Panel to ensure that coverage is balanced, relevant and complete; and

**Step 6:** Inform Shell’s Executive Committee of the chosen topics, for their endorsement.

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**Topic selection diagram**

**Significance to stakeholders**
- External Review Committee’s previous opinion letter
- Civil society dialogues
- Stakeholder relations review
- Global media review
- Investor feedback and indexes
- Reader feedback and social media
- Reputation tracker survey
- Website visits
- Report reviews by specialist organisations

**Significance in sustainability context**
Resulting topics are considered in their broader sustainability context based on:
- World Energy Outlook
- WBCSD Vision 2050 report
- Shell business environment outlook
- Sustainability reporting guidelines and standards
- Intergovernmental Panel on Climate Change Fifth Assessment Report

**Significance to Shell strategy**
- Financial risks
- Reputational risks
- Sustainability priorities
- Key projects
REPORTING GUIDELINES
We report in line with guidelines developed by IPIECA, the global oil and gas industry association for environmental and social issues, and in accordance with the Global Reporting Initiative (GRI) version 4 (See GRI index for full details).

In 2018, we are using the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) to guide our reporting in our 2017 Annual Report and 2017 Sustainability Report, complemented by our Sky Scenario and the Shell Energy Transition Report. The TCFD was set up by the Financial Stability Board, an international body, and the recommendations call on companies to provide greater transparency about how they identify, assess and manage climate-related risks and opportunities.

More detailed information about how we report is available on www.shell.com.

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We have used external review panels to strengthen our sustainability reporting since 2005. They help us evaluate and improve the quality and credibility of our Sustainability Report.

The 2017 Report Review Panel, previously called the External Review Committee, comprises six sustainability and corporate reporting experts. Panel members are offered an honorarium for their time and expertise. This year’s panel comprised:

- Faris Natour, Germany/USA. Director, Human Rights & Business Initiative, UC Berkeley Haas School of Business, (Chair of the Report Review Panel)
- Andrew Logan, USA. Director, Oil and Gas, Ceres
- Changhua Wu, China. Chair, China Redesign Hub and Asia Region liaison, Office of Jeremy Rifkin
- Marie Morice, USA. Senior advisor, Natural Capital Finance Alliance
- Mandy Kirby, UK. Director, Principles for Responsible Investment
- Merene Botsio Tamakloe, Ghana/UK. New Partnerships Manager, CARE International

You can read more about the panel members on www.shell.com

The panel provided input as part of our content selection process and reviewed the report in depth before preparing their statement focusing on the quality of the report. The panel met to discuss Shell’s reporting, question Shell experts and prepare their statement.

The 2017 panel’s mandate focused on the quality – including the credibility, completeness and responsiveness – of Shell’s reporting.

Read below some of the feedback given in the 2016 report by the expert reviewers, and our response (see table).

### 2016 RECOMMENDATIONS AND OUR RESPONSES

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<td>Shared value and social performance: For stakeholders to understand shared value and see its impact, future reporting needs to describe how it is embedded throughout Shell’s business and overall sustainable development agenda.</td>
<td>In the 2017 report, you can read more about how Shell is contributing to society and how this is connected to the UN’s sustainable development goals.</td>
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<td>Energy transition and climate change: There is a lack of discussion about how exploration and production will change over time or how in these two areas Shell will prioritise investments and activities. The report does not share with readers any targets to indicate the intended pace of Shell’s transition to a lower-carbon portfolio and it is recommended that the report include such goals in future.</td>
<td>Shell’s climate change thinking is detailed in the introduction from our CEO and Energy Transition section. You can also read more in the Shell Energy Transition Report.</td>
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<td>Product stewardship and circular economy: It is recommended that the company shares more in the report about the policies and plans that will guide development of Shell thinking on product stewardship including end of life as well as the ways that the circular economy may affect Shell’s businesses.</td>
<td>Read about our Product Stewardship policies.</td>
</tr>
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<td>Divestments: The report should explain to stakeholders how Shell addresses the environmental and social liabilities associated with divested assets.</td>
<td>In our Divestment section, you can read about our approach and how we have managed some recent cases.</td>
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REPORT REVIEW PANEL - INDEPENDENT STATEMENT

The Report Review Panel provides this independent statement on Shell’s 2017 Sustainability Report. We have had the opportunity to review two drafts of the 2017 Sustainability Report and provide feedback to Shell through conference calls and in writing. Shell has responded to our questions and suggestions. We have developed this statement independently following our review. We commend Shell on its commitment to transparency, stakeholder engagement, and continuous improvement in its approach to sustainability reporting.

We appreciate the opportunity to provide feedback and recommendations for further improving Shell’s sustainability reporting. In line with the scope of our review, our feedback focuses on the quality of Shell’s sustainability reporting rather than its sustainability performance.

The 2017 Sustainability Report focuses largely on the sustainability issues the company has identified as most material through a materiality analysis. It does so in a thorough, rigorous, and comprehensive way and provides important information in a clear, accessible and concise format. In future reporting, we recommend that Shell provides more comprehensive disclosure on social issues and water, greater balance between successes and areas for improvement, as well as greater emphasis on the ways in which the company’s sustainability efforts strengthen its core business.

The disclosure on Shell’s approach to the energy transition and its emissions disclosure are particularly comprehensive, although more emphasis on the interconnectedness between energy, water, ecosystems and watershed management could further improve Shell’s reporting. The inclusion of independent statements as well as case studies provide important context to the description of Shell’s strategic priorities and management approach in sustainability. However, we encourage the company to seek out greater balance by highlighting external opinions and case studies that offer constructive criticism of its performance.

Recommendations: We see opportunities to further improve Shell’s sustainability reporting in the following ways:

- **Social issues:** While the report provides a thorough review of Shell’s material issues, we would like to see more detailed disclosure of social issues, including Shell’s holistic approach to contributing to the UN’s sustainable development goals (SDGs), human rights due diligence, and operating in sensitive areas. We are aware that Shell provides some information on these topics on www.shell.com but we would urge the company to ensure that sufficient depth is provided in the report on these important topics. We welcome that Shell has identified the SDGs it views as most relevant to the business. Moving forward, we expect Shell to integrate the SDGs more in its reporting and provide additional information about how Shell is advancing the SDGs as a company and in partnership with others. In addition, Shell has an opportunity to more clearly emphasize the interconnectedness between environmental and social issues. We also view gender diversity and inclusion as a material issue for all companies, and Shell could provide more detail in its sustainability reporting on its approach to advancing diversity and inclusion at Shell and in the energy sector.

- **Water:** We see water as an increasingly important topic and would welcome more information on how Shell manages impacts on water beyond the facilities level. This should include information on how Shell is mitigating broader watershed impacts as well as steps it has taken to reduce risk exposure including through the setting of targets. We would also welcome data on Shell’s water performance that is specific to particular assets and geographies, as water is largely a local issue and global data reveals little to a reader.

- **Balance:** While the report highlights both successes and areas for improvement, overall there is an emphasis on success in the report. We see an opportunity for Shell to improve the report’s overall balance and drive continuous improvement in the energy sector by including more discussion of challenging experiences, lessons learned and areas for improvement. In addition, while we commendShell for including independent statements from civil society organisations throughout the report, we encourage it to seek more diverse voices of constructive criticism in future.

- **Metrics:** We would like to see Shell provide more context for the performance data included in the report. It is not apparent for all metrics what factors contributed to a specific outcome and what impact any management steps taken by Shell have had. Including more of this kind of information will help readers understand how Shell achieved or did not achieve the targets the company has set for itself.

- **Strategic focus and ease of navigation:** We appreciate Shell’s effort to strive for completeness. Future reports could be simplified further by putting greater emphasis on the ways in which the company’s sustainability efforts strengthen its core business. Shell could highlight fewer case studies while going into more detail and linking each more closely to the broader operating context for the sustainability priorities they seek to illustrate. Similarly, we would welcome more sign-posting to highlight the various connections across the report to Shell’s strategic priorities.

Robust sustainability disclosure is essential for Shell to meet the ambitious goals it has set for itself and for Shell’s stakeholders to assess progress and hold the company to account. We appreciate the opportunity to share our feedback and recommendations. While we saw improvements during the drafting stage, there remain opportunities to further improve Shell’s reporting, and we look forward to reviewing Shell’s progress in these areas in future reports.
OUR STRATEGY
Shell is an international energy company with expertise in the exploration, development, production, refining and marketing of oil and natural gas, as well as in the manufacturing and marketing of chemicals. Our New Energies business pursues two main areas of opportunities: new fuels for transport, such as advanced biofuels, hydrogen, and charging for battery-electric vehicles; and power, including low-carbon sources such as wind and solar as well as natural gas.

We are one of the world’s largest independent energy companies in terms of market capitalisation, cash flow from operating activities, and production levels. We explore for and produce oil and gas worldwide, both from conventional fields and from sources such as shales and deep water. We work to develop new oil and gas supplies, and have a global network of refineries and chemical plants. Shell transports and trades oil, gas and other energy-related products, such as electricity and carbon-emission rights. Our New Energies business, which we created in 2016, invests in commercial opportunities linked to the energy transition. This business focuses on new fuels, such as biofuels, hydrogen and charging for battery-electric vehicles, and power, including from low-carbon sources such as wind and solar as well as natural gas. We also invest in new business models and digital technology that improve our core business. Around 30 million customers every day are served through Shell’s global network of 44,000 Shell-branded retail stations.

IN 2017, SHELL:
- Produced 3,664 thousand barrels of oil equivalent on average per day.
- Traded more than 8 million barrels of physical crude oil on average every day.
- Sold 66 million tonnes of liquefied natural gas.
- Served 30 million customers on average every day at our retail sites.
- Made capital investments of $24 billion.
OUR PURPOSE AND BUSINESS STRATEGY
Shell’s purpose is to power progress together with more and cleaner energy solutions. Our strategy is to strengthen our position as a leading energy company by providing oil and gas and low-carbon energy as the world’s energy system changes. Safety and social responsibility are fundamental to our business approach. Shell will only succeed by working with customers, governments, business partners, investors and other stakeholders.

Our strategy is founded on our outlook for the energy sector and the chance to grasp the opportunities arising from the substantial changes in the world around us. The rising standard of living of a growing global population is likely to continue to drive demand for energy, including oil and gas, for years to come. At the same time, technology changes and the need to tackle climate change means there is a transition under way to a lower-carbon, multi-source energy system with increasing customer choice. We recognise that the pace and specific path forward is uncertain and so requires agile decision making.

STRATEGIC AMBITIONS
Against this backdrop, Shell has the following strategic ambitions:

- to provide a world-class investment case. This involves growing free cash flow and increasing returns, all built upon a strong financial framework and resilient portfolio;
- to thrive in the energy transition by responding to society’s desire for more and cleaner, convenient and competitive energy; and
- to sustain a strong societal licence to operate and contribute to society through a shared value approach to our activities.

The execution of our strategy is founded on becoming a more customer-centric and simpler company, focused on delivering higher and more predictable returns and growing free cash flow. By investing in competitive projects, driving down costs and selling non-core businesses, Shell continues to seek to reshape its portfolio into a more resilient and focused company.

Sustainability at Shell
Sustainability at Shell means providing energy in a responsible manner, respecting people, their safety and the environment.

Shell’s core values of honesty, integrity and respect for people – first laid out in the Shell General Business Principles more than 40 years ago – underpin our approach. A commitment to contribute to sustainable development was added in 1997. These principles, together with our Shell Code of Conduct, apply to the way we do business and to our conduct with the communities where we operate.

We share knowledge and experience with a number of organisations to improve approaches to areas such as environmental sustainability, climate change and technology. We also support the UN Universal Declaration of Human Rights and several external voluntary codes promoting responsible business practices, including, the UN Global Compact, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises and the Voluntary Principles on Security and Human Rights.

We support the UN Paris Agreement on climate change. We welcome and will play our part in helping governments and society to achieve the UN’s sustainable development goals, which seek to tackle the world’s economic, social and environmental challenges by 2030. We also regularly provide information to various indices, and engage with customers and suppliers through their sustainability questionnaires.
Integrating sustainability

Helping to shape a more sustainable energy future

Sharing wider benefits where we operate

Running a safe, efficient, responsible and profitable business

Our approach to sustainability is integrated across our business activities on three levels:

- **Running a safe, efficient, responsible and profitable business**
  Safeguarding and respecting people – our employees, contractors and neighbours – is fundamental to how we do business. This includes having global standards, processes and tools in place to manage safety, the environment and how we engage with communities. We aim to continuously improve the way we operate to prevent incidents and to identify, avoid where possible and minimise adverse environmental and social impacts. For more details on our 2017 performance in these areas see Our performance and data.

- **Helping to shape a more sustainable energy future**
  Achieving a more sustainable energy future requires an energy transition that allows society to reduce its emissions, tackle climate change, while also extending the economic and social benefits of energy to everyone. This ambition requires a change in the way energy is produced, used and made accessible to more people while drastically cutting emissions. It is feasible but requires urgent action and long-term vision. Shell is a willing and able player in this transition. We will play our role where it makes commercial sense, in oil and gas, as well as in low-carbon technologies and renewable energy sources. But there is the need for society as a whole to address the climate challenge. We advocate that businesses, governments and civil society work together to shape a more sustainable energy future.
  
  For Shell’s view of the energy transition and our strategic response to it, see Our strategy and the Energy transition sections.

- **Sharing wider benefits where we operate**
  We plan our business for the long term to help ensure we play a positive role in communities where we operate and in wider society. We contribute to the development of local economies by creating jobs, boosting skills, sourcing from local suppliers and helping to improve industry standards, as well as paying taxes and royalties.

- **Embedding sustainability in projects**
  Our commitment to safety, the environment and communities plays an important role in how we plan, design and operate projects and facilities. We will continue our relentless focus on managing impacts, especially in the challenging environments where we operate.

  When we invest in projects, we aim to balance the short- and long-term interests of our business. For investment decisions, we consider the economic, social and environmental risks and opportunities as well as the political and technical risks.

  Shell conducts an environmental, social and health impact assessment for every major project. As part of the impact assessment process, we engage with communities and other stakeholders, for example nongovernmental organisations, to discuss possible ways to address their concerns. This helps us understand and better manage the effects our projects could have on the surrounding environment and local communities and to comply with relevant social and environmental regulations.

  Our Health, Safety, Security, Environment and Social Performance (HSSE&SP) Control Framework has mandatory requirements to ensure the performance of these impact assessments. We also draw on international standards from bodies such as the World Bank and its International Finance Corporation, to guide our engagement with communities.
OUR PEOPLE

We train our project teams to understand how to use impact assessments to embed sustainability into project decisions. They are supported by specialists in areas such as environmental management, health and social performance including, but not limited to:

- biodiversity, waste, air, energy and water management;
- and
- indigenous peoples’ rights, cultural heritage and resettlement.

The specialists support project teams on impact assessments and help manage potential impacts on communities or the environment during project design, construction and operation.

For more details, read what sustainability means at Shell on www.shell.com.

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A guide to sustainability across the life of a project

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<th>Define</th>
<th>Execute</th>
<th>Operate</th>
<th>Decommission and restore</th>
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<td>Identify people who may be interested in or affected by the project.</td>
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<td>Engage with stakeholders (e.g. communities, host governments and NGOs) and feed responses into our risk analyses and decision-making process.</td>
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<td>Conduct baseline studies of the local environment (e.g. water, biodiversity, social livelihoods) and consider how the project may affect it.</td>
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<td>Based on assessment of potential impacts and stakeholder engagement, identify mitigation and enhancement measures.</td>
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<td>Implement a mitigation plan for project development, construction and operation.</td>
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1. Colombia baseline work: In Colombia, where we have several exploration blocks offshore, conducting extensive environmental baseline studies is a legal requirement, including sampling of aquatic animals. We collaborated with local fishermen to get better quality data. During 2016 and 2017, the fishermen were trained and given equipment, including a GPS to mark locations. They were also given cameras, to label and document the fish they caught. This resulted in a representative list of the main species caught in each fishing area and mapped variations throughout the year, providing a firm basis for the evaluation of the marine biodiversity, frequency and abundance of species. The fishermen benefited from this knowledge and received training to improve their safety. The project received positive recognition from local authorities.

2. Pennsylvania: In Pennsylvania, USA, our project to build a petrochemical facility will involve redeveloping an existing industrial site used for zinc smelting for around 100 years.

3. Groundbirch reclamation work: We comply with the terms of our permits, agreements and local laws and regulations concerning restoration of the land used by our operations. In Canada, for example, at the Shell Groundbirch project, where we use hydraulic fracturing to unlock gas trapped in rock, we are working with a First Nations indigenous community plant nursery to preserve their cultural heritage and the natural habitat. Seeds from local indigenous plants are collected and planted above pipelines and other infrastructure in the area. Matching plants with their natural habitats increases the chance of survival and results in a landscape that is more diverse and natural. First Nation community members participate in the restoration efforts, carrying out work that builds on their knowledge of plants and the ecosystem.
NEW LIFE FOR AN OLD INDUSTRIAL SITE

In Pennsylvania, USA, we are building a petrochemicals facility on an existing industrial site used for zinc smelting for around 100 years.

Minimising the impact on people and the local environment is at the heart of our plans.

After the zinc smelter had been safely decommissioned, we recycled the old equipment and waste products. We covered the site with special industrial liners and caps to protect groundwater and surface water and people building the new facility. Where areas of water on the site could not be protected, we created wetlands elsewhere. These have now grown into healthy habitats for fish and vegetation.

We used an emissions offsetting programme to help reduce the impact that building work will have on local air quality. After consulting with local residents and community leaders, we also planted native trees along the nearby river to improve the look of the construction site.

Working closely with the state environmental regulator, we are investing $80 million in mitigating the environmental impacts of converting the industrial site. Once up and running, the plant will produce polyethylene which is used in many everyday products, from food packaging and containers to automotive components.

Sustainability governance

Governance is about making sure we live up to the high standards we set as a company – on health and safety, on the environment and biodiversity, and in our relationships with local communities.

We have put clear and effective governance structures in place throughout Shell, along with performance standards and other controls. These influence decisions and actions across the Shell businesses.

Our governance procedures involves the Board of Royal Dutch Shell plc, four Board Committees, our Executive Committee, and the teams and individuals who manage our operations. We take rigorous care to ensure that standards are communicated and maintained across the business.

The Corporate and Social Responsibility committee (CSRC) is one of our Board Committees. For further details on the CSRC and how sustainability is managed at Shell see www.shell.com and our Annual Report.

THE CSRC IN 2017

The CSRC’s role is to review and advise Shell on our strategy, policies and performance against the Shell General Business Principles, our Code of Conduct and our Health, Safety, Security, Environment and Social Performance (HSSE&SP) standards.

The CSRC meets regularly to review and discuss a wide range of sustainability-related topics and to assess our sustainability performance, audit results and the sustainable development metrics that apply to the Executive Committee scorecard. It also monitors major issues of public concern that may be relevant to Shell.

Members of the CSRC during 2017 were:

- Hans Wijers, appointed Chair of the Committee with effect from May 2015;
- Sir Nigel Sheinwald, appointed a member of the Committee with effect from July 2012;
- Catherine Hughes, appointed a member of the Committee with effect from November 2017;
- Guy Elliott, appointed a member of the Committee with effect from March 2017 and stood down as a Non-executive Director of the company in October 2017; and
- Patricia A. Woertz, appointed a member of the Committee with effect from June 2014 and stood down as a Non-executive Director of the company in May 2017.

CSRC ENGAGEMENT

In 2017, the CSRC discussed topics including Shell’s operations in the Niger Delta, Nigeria and Groningen, the Netherlands, human rights, natural capital, the energy transition, greenhouse gas emission targets and CO2 and methane-related developments. The committee also conducted several site visits. Sir Nigel Sheinwald and Guy Elliot visited the Bacton gas plant on the UK’s North Sea coast and met with community members to discuss, among other topics, how to redistribute sand and sediment to protect the coastline. Hans Wijers visited the Pernis refinery in the Netherlands and discussed the challenges and opportunities for the facility with the leadership team. The committee, along with the CEO, also visited Shell’s project in Pennsylvania, USA, to learn about the transformation of the site from a zinc smelter to a chemical plant and to meet with local stakeholders and contractors to discuss a range of HSSE topics.
Reporting against aspirations

This table represents a selection of global metrics that we track within Shell. These metrics have been selected because they reflect the direct impact of our operations on people and the environment. We used them to set our goals and measure progress in 2017 and to define priorities for 2018.

We review our metrics regularly to ensure we capture the information needed to improve our performance. For example, we introduced Goal Zero for personal safety at Shell in 2007. Since then, we have broadened the goal to aim for no harm to people and the environment. The metrics used to measure our greenhouse gas performance of refineries and chemical plants changed in 2017, and further changes to upstream and integrated gas emissions are planned for 2018. More information on our performance, definitions of the indicators and the referenced goals are provided in the environmental, social and safety data sections.

Goals, performance and plans for 2017 and beyond

<table>
<thead>
<tr>
<th>Goal 2017</th>
<th>Progress in 2017</th>
<th>Priorities in 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRCF &lt; 0.9</td>
<td>Total recordable case frequency (TRCF)</td>
<td>In road safety, continue to focus on effective implementation of proven practices across all lines of business.</td>
</tr>
<tr>
<td>Achieve total recordable case frequency (TRCF) – the number of injuries per million working hours – below 0.9 for employees and contractors.</td>
<td>2013</td>
<td>2014</td>
</tr>
<tr>
<td>Goal Zero has been our ambition for personal safety since 2007.</td>
<td>1.2</td>
<td>1.0</td>
</tr>
<tr>
<td>In 2017, we achieved our lowest ever number of injuries. (See Safety performance).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leaks &lt; 130</td>
<td>Number of operational process safety Tier 1 and 2 events</td>
<td>Strong focus on asset integrity and quality of operational execution, including through the group-wide roll out of our Process Safety Fundamentals.</td>
</tr>
<tr>
<td>Achieve a number of operational leaks below 130 (classified as “operational Tier 1 &amp; 2 process safety events”).</td>
<td>2013</td>
<td>2014</td>
</tr>
<tr>
<td>Since 2011, we have extended our ambition of Goal Zero to process safety.</td>
<td>311</td>
<td>251</td>
</tr>
<tr>
<td>From 2017, we combined operational Tier 1 &amp; 2 safety events when setting the target. Previously, we only used Tier 1 events.</td>
<td>We saw an increase in leaks in 2017 compared to 2016. (See Safety performance).</td>
<td></td>
</tr>
<tr>
<td>Goal Zero extends to the environment with our goal of no operational spills.</td>
<td>Volume of operational spills in ‘000 tonnes</td>
<td>Continue to improve learning from process safety events with high potential impact.</td>
</tr>
<tr>
<td></td>
<td>2013</td>
<td>2014</td>
</tr>
<tr>
<td>In 2017, we had the lowest volume of operational spills we have ever recorded. (See Environmental performance).</td>
<td>0.9</td>
<td>0.7</td>
</tr>
</tbody>
</table>

In 2017, we achieved our lowest ever number of injuries. (See Safety performance).
Flaring emissions < 8.1
Reduce flaring in our upstream business (million tonnes CO\textsubscript{2} equivalent)

Our policy is to reduce any continuous flaring or venting to as low as level as reasonably practical. We are a signatory of the World Bank’s “Zero routine flaring by 2030” initiative.

![Flaring emissions chart](chart.png)

- Flaring in million tonnes CO\textsubscript{2} equivalent [A]

  - 2013: 7.4
  - 2014: 13.0
  - 2015: 11.8
  - 2016: 7.6
  - 2017: 8.2

[A] We have updated our 2017 upstream flaring from 8.0 million tonnes of CO\textsubscript{2} equivalent as published in our 2017 Annual Report and Form 20-F to 8.2 million tonnes following finalisation of 2017 data. The scorecard outcome for 2017 was not affected by this update. (See Flaring).

- Continue to link staff bonuses to the management of greenhouse gas emissions.
- In November 2017, Shell and seven other energy companies signed guiding principles for reducing methane emissions across the natural gas value chain.

Refinery GHG intensity < 1.15
For our refineries, achieve a GHG intensity below an intensity of 1.15 tonnes of CO\textsubscript{2} equivalent per Solomon’s Utilised Equivalent Destillation Capacity [UEDC\textsuperscript{TM}]

Chemicals GHG intensity < 0.45
For our chemical plants, achieve a GHG intensity below an intensity of 0.45 tonnes of CO\textsubscript{2} equivalent per tonne of petrochemicals produced (See Energy efficiency).

![Refinery GHG intensity chart](chart.png)

- Refineries: tonnes CO\textsubscript{2}e per Solomon’s Utilised Equivalent Destillation Capacity [UEDC\textsuperscript{TM}]

  - 2013: 1.16
  - 2014: 1.18
  - 2015: 1.14

- Chemicals: tonnes CO\textsubscript{2}e per tonne of petrochemicals produced

  - 2013: 0.42
  - 2014: 0.44
  - 2015: 0.46
  - 2016: 0.45
  - 2017: 0.48

In 2017, we have changed our metric for reporting from energy intensity to GHG intensity, and can currently provide data for three years of performance.

- Continue to link staff bonuses to the management of greenhouse gas emissions.
- Continue to focus on maintenance measures to enhance the reliability of our equipment and reduce emissions through leaks.

Effective community feedback
Our community feedback mechanism [CFM] has been used to address community concerns since 2012. We continue to progress the implementation of our standard online community feedback tool which helps to strengthen tracking and reporting of concerns.

![Community feedback chart](chart.png)

- We conducted a full evaluation of our online community feedback tool to understand how it has been used across our projects and facilities. Following the evaluation, we identified a number of areas for improvement, which are now being considered to enhance the tool.
  - We developed the CFM self-check to assess the effectiveness of the mechanism based on UN Guiding Principles and Human Rights criteria for implementation in all major facilities and projects. (See Social performance).
  - Aim to enhance the online community feedback tool, based on the improvement areas we identified in 2017, for example, the user friendliness to ensure short response times. The improvements help to ensure we are able to effectively track and record feedback, and support projects and facilities in responding quickly to concerns.
  - Identify further improvement opportunities for the CFM implementation from the self-check exercise, to meet the UN Guiding Principles and Human Rights effectiveness criteria.
In 2017, sustainable development continued to account for 20% of the Executive Directors’ annual bonus scorecard, which helps determine the annual bonus for the Executive Directors.

Targets are set each year by the Board’s Remuneration Committee and the outcomes against these targets are reported retrospectively in the Annual Report. The same annual bonus scorecard approach applies to senior management and other employees.

The metrics on sustainable development in 2017 had equal weighting between our safety (10%) and environmental (10%) performance. The safety component covers personal and process safety and the environmental component includes greenhouse gas (GHG) emissions for the first time in three specific business areas: refining, chemical plants and flaring in upstream assets.

In 2017, GHG metrics covered around 60% of direct and energy indirect emissions from our operated portfolio. The GHG metrics in the 2018 scorecard have evolved and coverage has increased to around 90% of operated emissions. The refining and chemicals metrics will be retained and emissions coverage in upstream and midstream will be measured on an intensity basis and expanded beyond flaring.

### Scorecard structure

<table>
<thead>
<tr>
<th>Operational excellence</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td>12.5%</td>
</tr>
<tr>
<td>LNG liquefaction volumes</td>
<td>12.5%</td>
</tr>
<tr>
<td>Refinery and chemical plant availability</td>
<td>12.5%</td>
</tr>
<tr>
<td>Project delivery</td>
<td>12.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sustainable development</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>10%</td>
</tr>
<tr>
<td>Personal safety</td>
<td>5%</td>
</tr>
<tr>
<td>Process safety</td>
<td>5%</td>
</tr>
<tr>
<td>Refining GHG intensity</td>
<td>4%</td>
</tr>
<tr>
<td>Chemicals GHG intensity</td>
<td>3%</td>
</tr>
<tr>
<td>Upstream flaring</td>
<td>3%</td>
</tr>
</tbody>
</table>