SPDC is making good progress on responding to spills through a solid strategy, active partnerships, closer community engagements and bold security measures.

The SPDC JV continues its relentless focus to prevent spills from oil production in the Niger Delta. In 2019, the company reduced operational spills to their lowest levels, significantly reduced breaches from wellheads and cleaned up more spill sites than ever before.

There is still much work to do but through a solid strategy, active partnerships, closer community engagements, bold security and new surveillance equipment, the company is making good progress.

- Improving performance.
- Preventing illegal activity.
- Response and investigation.
- Improving remediation.
- Clean-up in Ogoniland.

The Nigeria Briefing Notes update on activities and programmes undertaken by several Nigerian companies either wholly-owned by Shell or in which Shell has an interest and which are referred to as the Shell Companies in Nigeria (SCiN). Four of these are:

- Shell Petroleum Development Company of Nigeria Limited (SPDC), a wholly-owned Shell subsidiary, which operates an unincorporated joint venture (SPDC JV) in which SPDC holds a 30% interest.
- Two other wholly-owned Shell subsidiaries, Shell Nigeria Exploration and Production Company Limited (SNEPCo) and Shell Nigeria Gas Limited (SNG).
- And Nigeria Liquefied Natural Gas (NLNG) Limited; an incorporated joint venture in which Shell has a 25.6% interest.

Data for spills >100kg.
The Shell Petroleum Development Company of Nigeria joint venture (SPDC JV) produces oil and gas in the Niger Delta. The region is made up of lush forest, farmland for cassava, pineapples and cattle grazing, large and small communities and rivers and marshes that stretch into the Gulf of Guinea. Past spills from operational and illegal activities have been well documented, resulting in a clean-up programme and, where appropriate, compensation.

The SPDC JV is working to eliminate spills from its operational activities, remediate past spills and prevent spills caused by crude oil theft, sabotage of pipelines or illegal oil refining. While SPDC operates to the same technical standards as other Shell companies globally, illegal activities continue to inhibit a normal operating environment.

When a leak is identified, the team responds to contain any spilled oil and clean up.
IMPROVING PERFORMANCE

Shell has a global ambition to achieve no harm and no leaks across all its operations. This is known as Goal Zero. To reduce the number of operational spills in Nigeria, the SPDC JV is focused on implementing its ongoing work programme to appraise, maintain and replace key sections of pipelines and flow lines. In 2019, SPDC completed another 30 kilometres of new pipelines, bringing the total laid over the last eight years to around 1,330 kilometres.

These efforts have significantly reduced operational spills over 100 kilograms to seven incidents and 28 tonnes of crude in 2019, compared to 15 incidents and 413 tonnes in 2018. This represents a year-on-year reduction of more than 90% by volume, returning the joint venture to its trend of reducing operational spills.

Community engagement and the ongoing commitment from government agencies has also helped shorten response times to incidents. SPDC’s average8 time to complete the clean-up of free and/or residual spilled oil has halved from 13 days in 2016 to seven days in 2019. Closer engagement with communities has helped SPDC to access spill locations more quickly, meaning on average that joint investigations now commence within three days in 2019 compared to six days in 2016.

However, the challenge of preventing spills relating to sabotage and theft by third parties remains. These illegal activities accounted for 95% of the SPDC JV spill incidents in 2019, a similar proportion to previous years.

In 2019, there were 1564 theft and sabotage-related spills over 100 kilograms, up from 109 in 2018. This is due to factors such as increased availability of production facilities after a major export line repair in 2017, crude theft activities in an election year when government security agents can be reassigned, and the price of crude oil and refined products that is seen as an opportunity for illegal refining. Despite preventive efforts, spilled volumes from illegal activities increased to around 2,000 tonnes of crude in 2019, compared with around 1,600 tonnes in 2018.

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SPDC has also implemented several initiatives and partnerships to raise awareness of the negative impact of crude oil theft and illegal oil refining. Examples include community-based pipeline surveillance, radio jingles and the promotion of alternative livelihoods through Shell’s youth entrepreneurship programme, Shell LiveWIRE.

PREVENTING ILLEGAL ACTIVITIES

The SPDC JV is committed to minimising the impact of third-party incidents and spills. The company works with government agencies, non-governmental organisations and communities to proactively minimise spills from illegal activity. This work includes:

- Using simplified zonal pipeline maps to enhance targeted response to third-party interference and prevent incidents from occurring. Since 2017, SPDC has also been able to remove more than 523 illegal theft points. Illegal theft points are identified by daily inspections from the air and on the ground.

- The company has also implemented anti-theft protection mechanisms, such as anti-tamper locks and steel cages for wellheads. Around 301 cages have been installed so far and around 80 more are planned for 2020 that will all come with CCTV technology. In 2019, three breaches of the cages were recorded out of 300 attempts. As a result, wellhead-related losses significantly dropped from about 30 kb/d in 2016 to less than 1 kb/d in 2019 across all SPDC operations.

- SPDC has also implemented several initiatives and partnerships to raise awareness of the negative impact of crude oil theft and illegal oil refining. Examples include community-based pipeline surveillance, radio jingles and the promotion of alternative livelihoods through Shell’s youth entrepreneurship programme, Shell LiveWIRE.
RESPONSE AND INVESTIGATION

When a leak is identified, production is suspended, and efforts made to contain any spilled oil. We regularly test our emergency spill response procedures and capability to ensure staff and contractors can respond rapidly to an incident. In line with government regulations, a Joint Investigation Visit (JIV) team visits the spill site to establish the cause and volume of oil spilled. The team comprises representatives from SPDC, regulators, government security agencies, state governments and communities.

IMPROVING REMEDIATION

In addition to responding to recent spill incidents, the SPDC JV continues to identify and remediate legacy spill locations. In 2019, 130 sites were remediated and 123 certified by Nigerian government regulators, compared to 116 certified and 45 remediated in 2018.

Regardless of the cause, SPDC cleans up and remediates areas impacted by spills that come from its operations. In the case of operational spills, SPDC also pays compensation to communities impacted by the spill. Once the clean-up and remediation are completed, the work is inspected and, if satisfactory, approved and certified by Nigerian government regulators.

SPDC continues to identify and remediate legacy spill locations.

Bioremediation

SPDC’s remediation practices are compliant with the Environmental Guidelines and Standards for the Petroleum Industry in Nigeria (EGASPIN). The techniques adopted by SPDC are believed to be the most effective for the soil and climate conditions in the equatorial heat of the Niger Delta.

Bioremediation using land farming techniques is recognised internationally and often advocated by regulators such as the United States Environmental Protection Agency and the Environment Agency in the UK. It aims to restore the land to conditions acceptable to human health and the environment. It stimulates the natural microbial processes that break down and use the carbon-rich oil contamination as a source of food and energy, ultimately leading to its removal.

Bioremediation has wider positive impacts, for example in developing local expertise and generating employment. SPDC, however, does use other technologies where appropriate. SPDC continues to identify and remediate legacy spill locations.
**CLEAN UP IN OGONILAND**

SPDC is working with the relevant stakeholders to implement the 2011 United Nations Environmental Programme (UNEP) Report on Ogoniland. Over the last eight years, SPDC has taken action on all, and completed most, of the UNEP recommendations addressed specifically to it as operator of the joint venture.

The UNEP report recommended the creation of an Ogoni Trust Fund with $1 billion capital to be co-funded by the Nigerian government, the SPDC JV and other operators in the area. The SPDC JV remains fully committed to contributing its share of $900 million over five years to the fund and made $10 million available in 2017 to help set up the Hydrocarbon Pollution and Remediation Trust Fund with $1 billion capital to be co-funded by the Nigerian government to lead the clean-up effort.

In 2018, the SPDC JV deposited a further $170 million into the escrow account to fund HYPREP's activities, to complete its first-year contribution of $180 million. The SPDC JV in 2019 contributed the next tranche of $180 million. At the end of 2019, the total contribution made was $360 million which represents the full amount due for the two years.

SPDC continues to work with the Bodo community and others to clean up areas affected by two operational spills in 2008. A memorandum of understanding granting SPDC access to begin the clean-up was signed in 2015 and two contractors were selected to conduct the clean-up, overseen by an independent project director.

The clean-up consists of three phases: 1) removal of free-phase surface oil, 2) remediation of soil, 3) planting of mangroves and monitoring.

- The removal of surface oil started in September 2017 and was completed in August 2018.
- Field remediation activities started in November 2019 following a contract procurement process to select remediation contractors.
- 800 community workers have been medically checked, assessed for their swimming ability to ensure they can safely respond to incidents in rivers and creeks, and trained to International Maritime Organisation oil spill response levels one and two.

Remediation is expected to take around 18 months. The clean-up will only be successful if the repeated re-contamination of cleaned-up sites from illegal third-party activity stops.

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**SPDC ACTIONS ON UNEP RECOMMENDATIONS**

Since 2011, SPDC has taken action on all the recommendations addressed specifically to it as operator:

- Re-assessed 15 SPDC JV sites mentioned in the UNEP report and remediated further where required with the sites certified by government regulators.
- Completed an inventory and physical verification of assets for decommissioning and working with joint venture partners and the FGN to develop a decommissioning plan for these assets.
- Completed a comprehensive review of its oil spill response and remediation techniques and made a number of improvements in line with industry best practices.
- Collaborated with the Rivers State Government to deliver water to impacted communities and built water facilities, which are expected to be upgraded as part of HYPREP’s planned activities.
- Trained contractors on clean-up and remediation techniques and assigned specialist supervisors to a number of project sites to ensure effective oversight and compliance.
- Continuing to carry out regular aerial monitoring of the JV’s facilities in Ogoniland, including the creeks and pipelines, to identify new incidents or activities (such as theft and sabotage) which may result in environmental damage.
- Providing improved public access to information such as Joint Investigation Visit reports and spill incident data via a spills information web site (https://www.shell.com.ng/sustainability/environment/oil-spills.html).

For more information on the activities of HYPREP go to hyprep.gov.ng.

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**FROM THE FRONTLINE**

Interview with Chima Nicholas Agomuo, Remediation Certification Inspector, Remediation and Oil Spill Response Team

**Background/Education:** B.Sc. Geology

**Joined Shell:** June 2000

**Impact:**
I get the most pride and satisfaction when I see that the leak has stopped and the leak site is clean. Then some time later, I’ll return and see that the restoration process is ongoing, that I’ve been able to take care of that.

**Approach:**
We work to stop the free flow of the spill and reduce it as much as possible to reduce the impact on the environment. We work as a team and this makes it so much easier and faster to do what we do.

**Hopes:**
We work as a team to protect the environment. If we protect it, we make it safe for generations to come, to enjoy it and to live comfortably on it.

**Challenges:**
The response team is the first line of response activity. It is a collective effort, not a sole responsibility. You have team members that are there any time you call them to support the response activity.

“I GET THE MOST PRIDE AND SATISFACTION WHEN I SEE THAT THE LEAK HAS STOPPED AND THE SITE IS CLEAN.”

Chima Nicholas Agomuo,
Remediation Certification Inspector,
Remediation and Oil Spill Response Team.

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**We work as a team.**

Chima Nicholas Agomuo,
Remediation Certification Inspector,
Remediation and Oil Spill Response Team.
The companies in which Royal Dutch Shell plc directly and indirectly owns investments are separate legal entities. In this Briefing Notes “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 terms are also used where no useful purpose is served by identifying the particular entity or entities. “Subsidiaries”, “Shell subsidiaries” and “Shell companies” as used in this Briefing Notes refer to entities over which Royal Dutch Shell plc either directly or indirectly has control. Entities and unincorporated arrangements over which Shell has joint control are generally referred to as “joint ventures” and “joint operations”, respectively. Entities over which Shell has significant influence but neither control nor joint control are referred to as “associates”. The term “Shell interest” is used for convenience to indicate the direct and/or indirect ownership interest held by Shell in an entity or unincorporated joint arrangement, other than all third party interest.

This Briefing Notes contains forward-looking statements (within the meaning of the U.S. Private Securities Litigation Reform Act of 1995) concerning the financial condition, results of operations and businesses of Royal Dutch Shell. All statements other than statements of historical fact, 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 such as “aim”, “ambition”, “anticipate”, “believe”, “could”, “estimate”, “expect”, “goals”, “intend”, “may”, “objectives”, “outlook”, “plan”, “probably”, “project”, “risks”, “schedule”, “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 Briefing Notes, 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) reserves 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. No assurance is provided that future dividend payments will match or exceed previous dividend payments. All forward-looking statements contained in this Briefing Notes 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 risk factors that may affect future results are contained in Royal Dutch Shell’s 20-F for the year ended December 31, 2019 (available at www.shell.com/investor and www.sec.gov). These risk factors also expressly qualify all forward looking statements contained in this Briefing Notes and should be considered by the reader. Each forward-looking statement speaks only as of the date of this Briefing Notes, April 9, 2020. Neither Royal Dutch Shell plc 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 Briefing Notes.

This Briefing Notes may contain references to Shell’s website. These references are for the readers’ convenience only. Shell is not incorporating by reference any information posted on www.shell.com.

Shell LiveWIRE is a Shell trademark.

We may have used certain terms, such as resources, in this Briefing Notes that United States Securities and Exchange Commission (SEC) strictly prohibits us from including in our 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.

**CAUTIONARY NOTE**