



EXPERIENCE **MATTERS**

2016

ANNUAL REPORT

- Despite increased security risk levels around the world, SBM Offshore security performance indicates that an appropriate level of controls was applied.

FUTURE

Although in 2016 the Company was not able to maintain the continuous improvement achieved since 2011 in safety performance, the overall high standards that SBM Offshore aspires to are being upheld. Given the deterioration in the 2016 safety performance and the fact that on-going activities in 2017 will be mainly offshore, Management has decided to renew its plan for improvements of the performance with a target of a Total Recordable Injury Frequency Rate (TRIFR) to be better than 0.32 in 2017.

The following strategy has been endorsed for 2017 to meet the objectives of continuous improvement and to achieve the goals of 'No Harm, No Leaks and No Shortcuts':

- The leadership program 'Make the Difference' will be extended to the entire workforce at shorebase and unit level – since safety performance in 2017 will be largely influenced by the offshore Operations
- Maintain focus on leadership and safety culture programs, with a specific focus on line managers and supervisors
- Launch multi-disciplinary *Life 365* campaigns and *Life Day*, including for example Quality, Regulatory Management and Operational Excellence
- Verify the implementation and application within the organization of the improvement actions identified during the International Sustainability Rating System (ISRS) maturity assessment
- Launch and roll out of the new HSSE onboarding and training program for project personnel
- With security threat levels increasing and business opportunities identified in high risk countries, monitor closely changing or emerging

threats and establish security plans and associated controls as early as possible

2.5 ENVIRONMENT

MANAGEMENT APPROACH

For SBM Offshore, managing environmental impact goes beyond compliance to environmental protection and refers to environmentally friendly innovations in the operations of its FPSOs. The Company sees clients' expectations and requirements being directed by environmental considerations. Within SBM Offshore Operations, anticipating these expectations and managing the Company's footprint go hand-in-hand with maintaining good operating practices.

The Company endeavours to operate in an environmental and sustainable manner, in order to minimize damage to local ecosystems as well as proactively protect the environment, paying attention to three key environmental aspects:

- Oil spills – by strictly following set procedures in operations and ensuring measures are in place
- Unnecessary flaring or emissions into the air or discharges into sea – through prevention when possible
- Excessive use of energy and waste – by encouraging reduced consumption, recycling and re-use

Environmental data are tracked on a daily basis, evaluated on a monthly basis and consolidated/disclosed annually. The results are compared with the previous years. In addition, SBM Offshore's environmental data are benchmarked against the IOGP averages. The results are recorded and reported in accordance with the IOGP and GRI guidelines.

2016 PERFORMANCE

In 2016, the Company continued to expand its environmental initiatives by enhancing existing programs and development of new ones including:

2 STRATEGY AND PERFORMANCE

Key achievements

- Maintenance of all existing environmental certifications (ISO14001) on shore bases and marine units (certifications for the three units that came online in 2016 will be completed in 2017)
- Revision of the environmental management system manual, reflecting the changes introduced for environmental reporting for all units
- Relocation to the new office in Vitoria (Brazil): sustainability was a key factor in its selection in line with the Company's objectives. The building has Gold LEED (Leadership in Energy and Environmental Design) certification awarded by the US Green Building Council i.e. offers low energy consumption, low CO₂ emissions, low water consumption and low waste

Key Targets and results

In order to pursue its commitment to the objectives of 'No Harm, No Leaks and No Shortcuts', the Company set the following environmental targets in 2016:

- Further reduce the flaring under SBM Offshore control relative to the hydrocarbon production by 10% compared to the 2015 performance. This is the second consecutive year where SBM Offshore sets a 10% reduction compared to the previous year;
- Achieve better environmental performance than the 2014 IOGP industry average on oil discharged in water⁶, GHG emissions⁷, flaring⁸ and energy consumption⁹;

The following Environmental performance has been recorded in 2016:

- The volume of gas flared on SBM Offshore account has increased from 118,400 (see Restatements) to 122,950 tonnes in 2016 but with

three additional units added to the scope.

Relative to the Company's hydrocarbon production, the gas flared under SBM Offshore's account per production has decreased from 3.48 in 2015 (see Restatements) to 2.76 tonnes of gas flared per thousand tonnes of hydrocarbon produced (21% reduction). The target of 10% reduction compared to 2015 performance has been substantially exceeded;

- The total gas flared in 2016 was 21.7 tonnes per thousand tonnes of hydrocarbon produced, of which 87.3% was either requested by the client or did not exceed the client/regulatory allowance. This is 46% more than the IOGP benchmark¹⁰;
- Offshore GHG emissions from energy generation and gas flared relative to the hydrocarbon production decreased compared to 2015. A total of 6,247,825 tonnes of GHG have been produced in 2016, representing 140 tonnes of GHG per thousand tonnes of hydrocarbon produced, which is 12.5% better than 2015 and 8.5% better than the industry benchmark¹¹. This decrease is mainly due to a relatively stable volume of emissions while production increased by 31% with two new generation 3 FPSOs brought online as well as a 7% reduction in the volume of GHG emissions in Angola;
- The volume of energy consumption used per hydrocarbon produced remains stable compared to 2015 (1.16 gigajoules of energy per tonnes of hydrocarbon produced compared to 1.13 in 2015 (see Restatements), which is 17% lower than the industry benchmark¹²;
- Slight increase in the volume of oil discharged to sea per hydrocarbon production. The average volume of oil discharged was 2.59 tonnes per million tonnes of hydrocarbon produced, while

⁶ 7.5 tonnes of oil discharged to sea per million tonnes of hydrocarbon produced

⁷ 153 Tonnes of GHG Emissions per thousand tonnes of hydrocarbon production

⁸ 14.8 tonnes of gas flared per thousand tonnes of hydrocarbon produced

⁹ 1.4 gigajoules of energy per tonnes of hydrocarbon production

¹⁰ Companies participating in the 2014 IOGP benchmark reported 14.8 tonnes of Gas Flared per thousand tonnes of hydrocarbon produced, Report 2014e, p.34

¹¹ Companies participating in the 2014 IOGP benchmark reported 153 tonnes of GHG emissions per thousand tonnes of hydrocarbon produced, Report 2014e, p.24

¹² Companies participating in the IOGP benchmark consumed 1.4 gigajoules of energy for every tonnes of hydrocarbon produced, Report 2014e, p.32

the IOGP average is 7.5. This is 65% lower than the industry benchmark;

- No hydrocarbon spill exceeding one barrel in size (159L) has been reported in 2016, which means that the normalized number of oil spills offshore greater than one barrel per million tonnes of hydrocarbon produced is 0 for 2015, while the industry benchmark¹³ is 0.13.

FUTURE

The Company has been able to reduce the gas flared under SBM Offshore account per production by 51% in two years and wants to further reduce gas flared under its control in 2017. In order to make the environmental targets more relevant for each unit, the Company has decided to adopt a different approach in the target setting for 2017. Each unit has set its own target in terms of flaring reduction. Targets range from 5 to 25% reduction between units, with a consolidated average of 9.6% reduction for 2017 at Company level.

Similar to previous years, SBM Offshore has set the target to achieve better environmental performance than the 2015 IOGP industry benchmark¹⁴ for the other environmental aspects: GHG emissions, Energy Consumption, Oil in Water and Oil Spills per production.

In line with its long-term strategy, SBM Offshore has included the following environmental initiatives as part of its HSSE program for 2017:

- Align SBM Offshore practices with ISRS requirements on Environmental Hazard identification, control and monitoring
- Continue with the improvement on environmental emissions reporting

2.5.1 CO₂ CHALLENGE

A competition was designed to address the issue of climate change, while leveraging expertise to create a competitive edge. Starting in 2015, SBM Offshore tested the creative talents of its engineers by asking them to propose innovative solutions to reduce CO₂ emissions offshore. Five teams of young entrepreneurial employees from around the world found intelligent solutions to reduce CO₂, while increasing operational efficiency on SBM Offshore's FPSOs and MOPU.

In 2016 the teams came together to share and pitch the top ideas to the jury. The winning solution, a special Flare Management System was adopted and installed offshore in December 2016 as a pilot, with the intention of expanding it to the rest of the fleet in the future. The winning team engaged with offshore crews to find the innovative solution to reduce emissions, while also increasing awareness for the issue of flaring and climate change. The pilot project also reports on the cause, source and remedy of environmental incidents on a daily basis with the objective to manage and reduce emission levels. Feedback from this pilot provides valuable information for the development of the HSSE and Sustainability Dashboard, which is part of the Group's Digitization project (see section 2.3.2 Fleet).

CO₂ Challenge Findings

- Recommendations from the CO₂ Challenge to improve reporting of GHG emissions, by means of introducing actual gas density to calculate actual GHG emission levels, have been implemented; the result is more accurate reporting (see section 6.1.7 Environmental Reporting).
- Solutions and ideas that were not part of the winning solutions have been captured for action and follow up. Improvements on offshore operations are managed on the FPSO directly with onshore support. Other ideas have been shared with SBM Offshore's R&D program.

¹³ Companies participating in the IOGP benchmark reported 0.13 oil spill offshore greater than one barrel per million tonnes of hydrocarbon produced, Report 2014e, p.70

¹⁴ Not yet published by IOGP