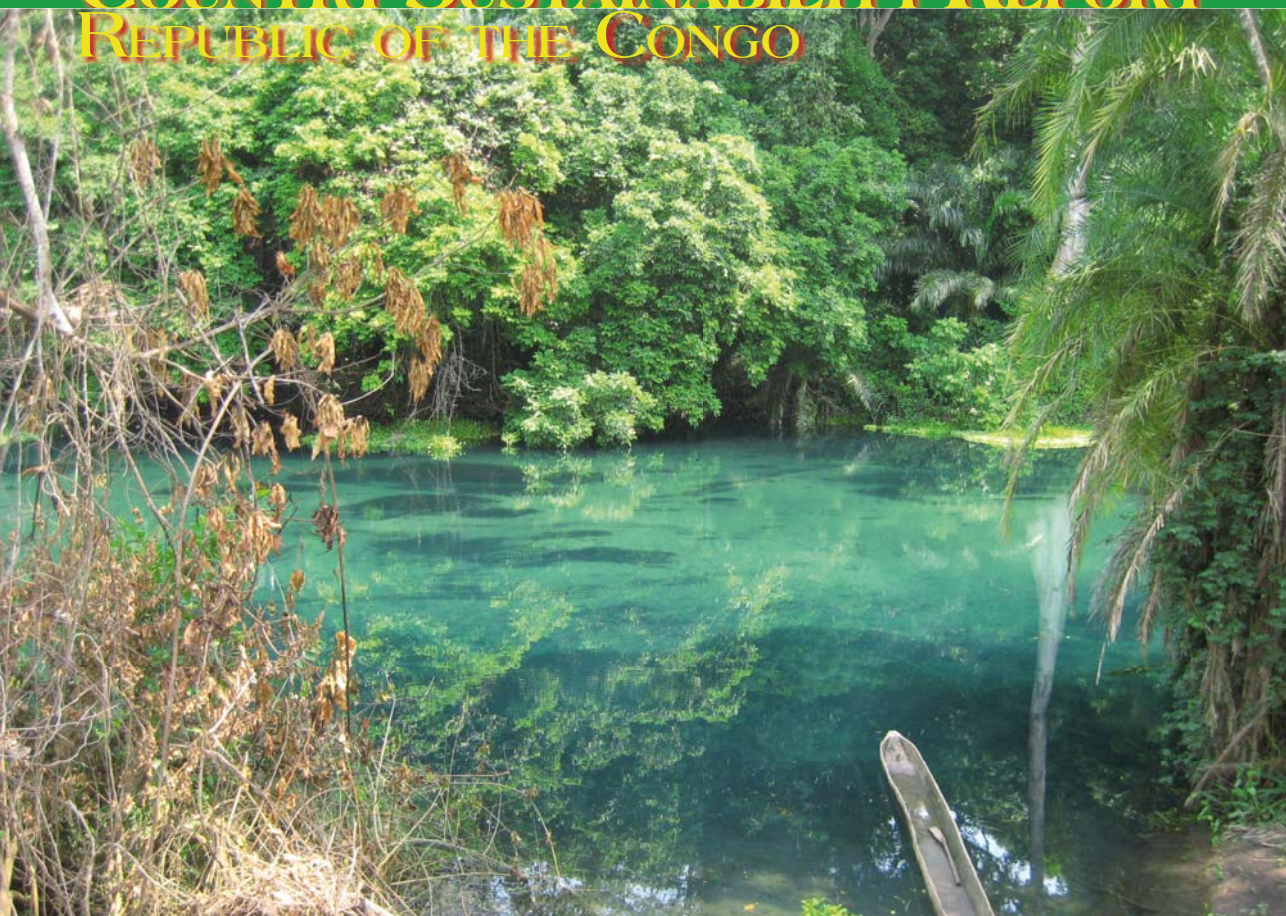


# COUNTRY SUSTAINABILITY REPORT

## REPUBLIC OF THE CONGO



## ABOUT THIS COUNTRY REPORT

*The present report is part of the Sustainability Reports that Saipem began to publish in 2003 in order to reaffirm the importance of informing stakeholders on the sustainability approach that the company implements in the areas of the world where it operates.*

*A Report focuses on a specific country or area and describes the principles, activities and performances of Saipem and its Operating Companies in relation to sustainable development.*

*This report has been designed to provide easy access to key indicators and information. It is divided into two parts: the first gives an overview of Saipem and its business around the world, while the second focuses on the specific country. The latter in turn is composed of a first section describing the country, a second describing Saipem's presence and sustainability approach therein and, finally, a third section reporting the overall sustainability performance of Saipem.*

*The Sustainability Reports, together with the annual Sustainability Reports and the Project Sustainability Reports, represent the main tools adopted by Saipem to communicate to all stakeholders its commitment and performance on sustainability.*

*The report has been drafted in accordance with the principles of materiality, stakeholder inclusiveness, sustainability context and completeness as defined in the Sustainability Reporting Guidelines issued by the Global Reporting Initiative (GRI) version G3.0. This local report focuses on the company's main stakeholders in the Congo and is intended to describe Saipem's performance and its engagement with its stakeholders in the country.*

*A set of Key Performance Indicators (KPIs) was selected to support the information provided to stakeholders.*

*The consolidation perimeter is based on the principles adopted for financial reporting and annual sustainability reporting and refers to all projects conducted by Saipem SpA and its Operating Companies in the Congo, excluding maintenance or other activities not related with projects. Data are calculated according to the operational criterion, meaning that operations in which Saipem SpA or one of its subsidiaries in the Congo exercises operational control are reported 100%.*

*Data for the company's performance reported in the document come from the management and reporting systems used by the various company functions involved in the reporting process. Data are reported for the 2011 financial year and, when appropriate, also for 2010 and 2009.*

*Information and data updated at 2012.*

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# MESSAGE FROM THE CEO



*Umberto Vergine*

Saipem is an international Oil&Gas contractor with approximately 48,000 employees and operations in more than 60 countries.

Saipem plays a significant role in its market sector and contributes substantially to the economic development of the countries in which it operates.

We consider business sustainability to be an integral part of our strategy. Our commitment is to create long-term value for all our stakeholders, especially locally, by identifying common goals and agreeing on specific initiatives. Given

the wide range and complexity of our activities, our engagement with local stakeholders requires a comprehensive approach to sustainability. Furthermore, the variety of projects undertaken and the differences between countries where these activities are performed demand that a distinctive local approach be developed.

We publish these Reports on our Local Business Sustainability in order to favour open dialogue and enhance the development of local relationships, helping us to ensure that we operate at all times in an increasingly sustainable manner.

## MISSION

*Pursuing the satisfaction of our clients in the energy industry, we tackle each challenge with safe, reliable and innovative solutions. We entrust our competent and multi-local teams to provide sustainable development for our Company and the communities in which we operate.*

# OVERVIEW OF SAIPEM IN THE CONGO



## TAKING ROOT IN THE LOCAL COMMUNITY

Since their arrival in Pointe-Noire, Saipem companies have been a mainstay of the Congolese oil services industry. Boscongo has been a leading manufacturer of jackets and diverse metallic structure, maintenance, upgrading and modification. Saipem SpA Congo branch has been working in drilling.

Both companies have been operating for over 30 years in the country. They have had a significant impact on the city of Pointe-Noire not only by providing employment but also by virtue of a 'know-how' transfer and training programs to Congolese workers through Saipem's Local Content approach.

This approach together with sustainable community initiatives and work with local suppliers, provide social and economic benefits, and a stable relationship with host communities.

Total employees:

**1,294**

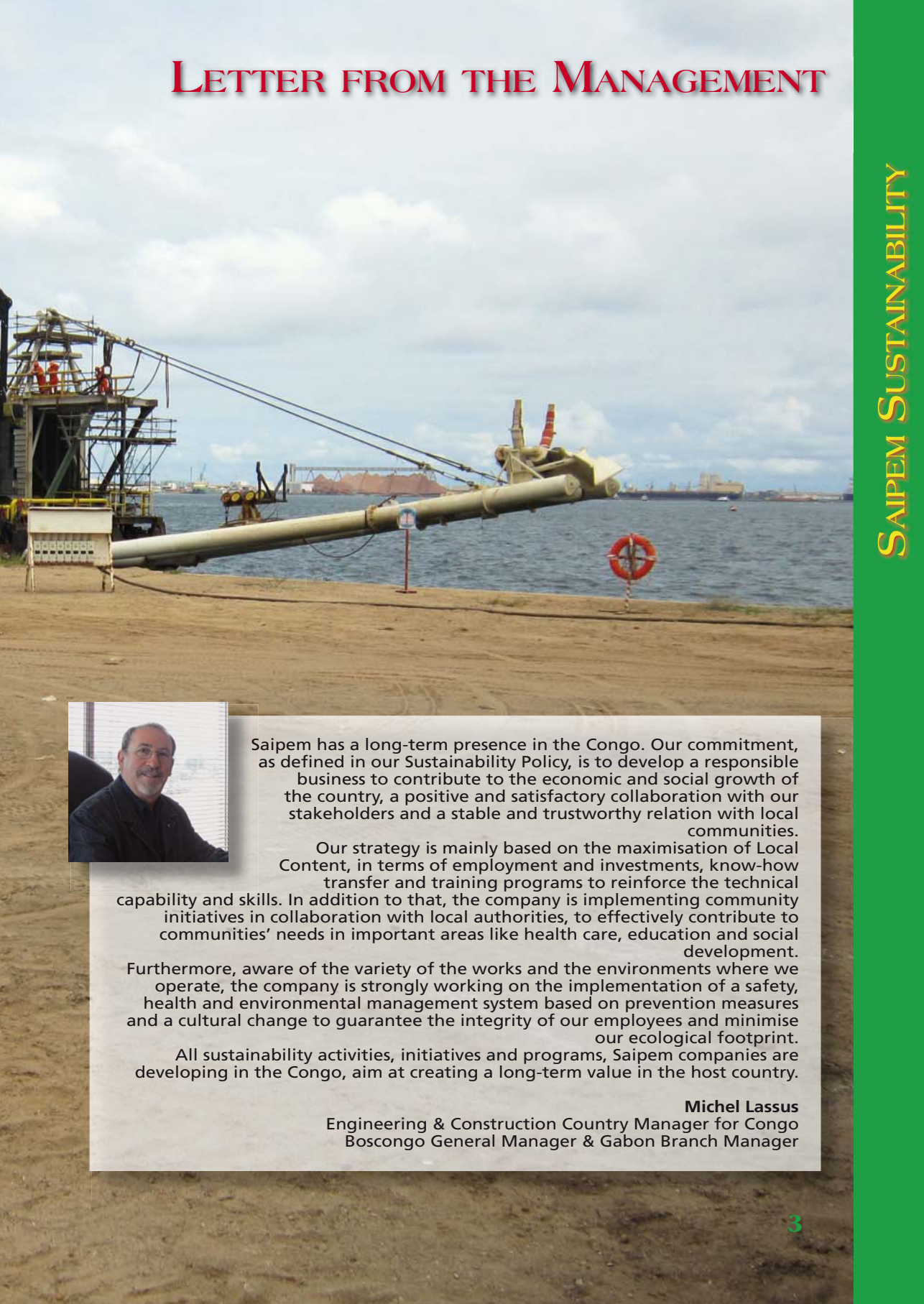
Percentage of Congolese employees vs. total workforce:

**76%**

Total purchased from Congolese vendors:

**€11.8 million**

# LETTER FROM THE MANAGEMENT



Saipem has a long-term presence in the Congo. Our commitment, as defined in our Sustainability Policy, is to develop a responsible business to contribute to the economic and social growth of the country, a positive and satisfactory collaboration with our stakeholders and a stable and trustworthy relation with local communities.

Our strategy is mainly based on the maximisation of Local Content, in terms of employment and investments, know-how transfer and training programs to reinforce the technical capability and skills. In addition to that, the company is implementing community initiatives in collaboration with local authorities, to effectively contribute to communities' needs in important areas like health care, education and social development.

Furthermore, aware of the variety of the works and the environments where we operate, the company is strongly working on the implementation of a safety, health and environmental management system based on prevention measures and a cultural change to guarantee the integrity of our employees and minimise our ecological footprint.

All sustainability activities, initiatives and programs, Saipem companies are developing in the Congo, aim at creating a long-term value in the host country.

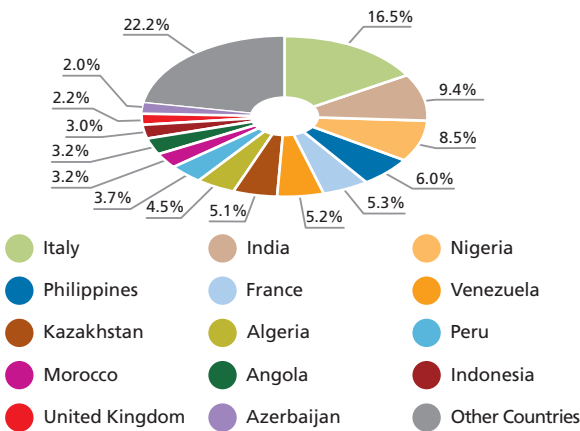
**Michel Lassus**  
Engineering & Construction Country Manager for Congo  
Boscongo General Manager & Gabon Branch Manager

# INTRODUCTION TO SAIPEM

Saipem is an international group with a strong inclination towards oil and gas related activities in remote and deepwater areas. The Company began operations in the 1950s and is now a

leader in the provision of engineering, procurement, project management and construction services with distinctive capabilities in the design and execution of large-scale offshore and onshore projects.

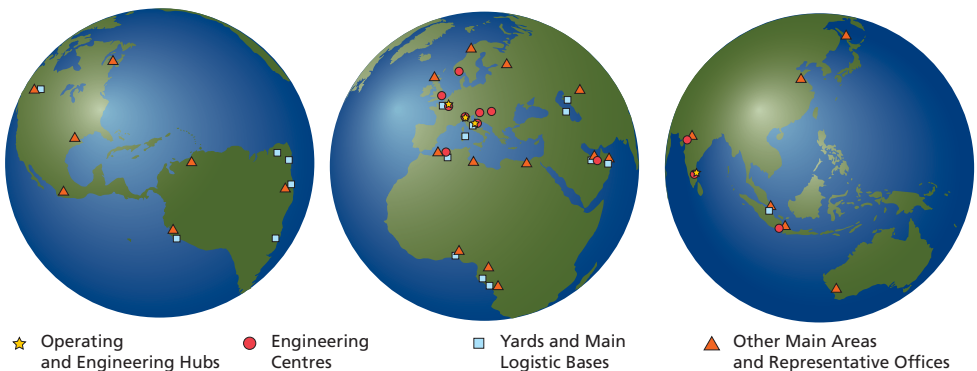
## Saipem workforce distribution by nationality (2011)



Saipem is organised into two Business Units: Engineering & Construction and Drilling. It enjoys a significant competitive position in the provision of EPIC/EPC services to the oil industry both onshore and offshore, with a particular focus on the toughest and most technologically challenging projects, namely, activities in remote areas, deep waters and difficult oil fields. The Group is a truly global contractor, with a strong local presence in strategic and emerging areas such as West Africa, the Americas, Central Asia, the Middle East, North Africa and South East Asia.

Saipem is an international company employing over 44,000 people from approximately 119 nationalities (2011).

The majority of the Group's human resources (76% in 2011) are locally employed.



# SAIPEM'S SUSTAINABILITY APPROACH

Saipem believes that a correct, open and cooperative relationship with all stakeholders is vital for the success of each complex project carried out, frequently in very remote and challenging areas.

Saipem has a presence in many locations around the world and operates with a decentralised organisation in order to respond to local needs and sustainability issues.

Wherever it works, the company plays an active role in local communities by offering employment opportunities and personnel training, working effectively with local suppliers and subcontractors, creating economic and social value and,

finally, contributing to infrastructures (e.g. access roads, construction camps with facilities such as hospitals, power generators, etc.).

The breadth of Saipem's international workforce is another facet of sustainability: all personnel are treated with dignity and their rights, cultural values, local customs and traditions, diversity and identity are at all times respected.

For each project, social, economic and environmental impacts are evaluated and continuously monitored in conjunction with the pursuit of customer satisfaction.



# SAIPEM AT A GLANCE

Saipem has world class engineering and project management expertise together with a strong, technologically advanced and highly versatile fleet. The Company is organised into two Business Units: Engineering & Construction and Drilling, which often operate in synergy for onshore and offshore projects.

## ENGINEERING & CONSTRUCTION

The E&C Business Unit is the outcome of a merger between the previous Onshore and Offshore Business Units. Offshore activities include platforms, marine terminals, pipelines and the development of deep-water fields.

Experience in EPIC (Engineering, Procurement, Construction and Installation) projects hinges on trunklines, export pipelines, infield flowlines, pipe-in-pipe systems, bundles, tie-ins and riser systems for the transportation of oil, gas and multi-phase products from depths in excess of 2,000 metres.

Saipem is also involved in the construction of marine terminals, mooring systems with conventional buoys, wharfs, jetties and FPSO (Floating Production Storage and Offloading) units.

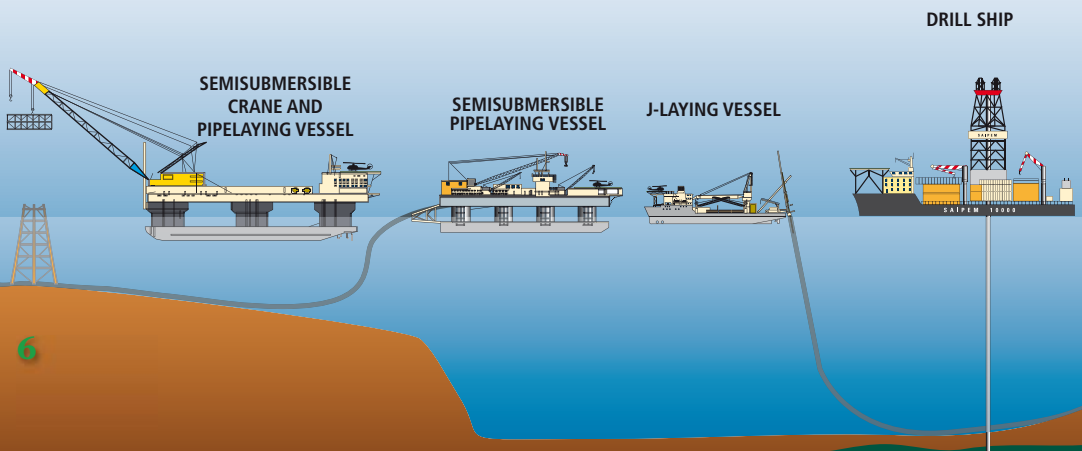
All of this is bolstered by significant fabrication capabilities based in the heart of major oil and gas provinces

such as Angola, Azerbaijan, Canada, the Congo, Kazakhstan, Nigeria, UAE, the Mediterranean Sea, Indonesia and Brazil (under construction), with an aggregate in-house fabrication capacity of over 250,000 tonnes per year.

With a fleet of over 40 construction vessels, the Company is a leader in deepwater and shallow water pipelaying and platform installation with more than 30,000 km of sealines and more than 2.5 million tonnes of offshore structures installed. The Company has completed more than 90 major EPIC projects, including several challenging large-scale integrated complexes.

Onshore, Saipem mainly serves the Oil&Gas segments, the refining and petrochemical markets, as well as a number of diversified industrial markets such as infrastructures (i.e. high speed railways, port facilities and marine terminals) and environment (especially remediation of soil, ground water and contaminated sites).

Saipem offers a complete range of services, from feasibility and front-end studies to design, engineering, procurement and field construction, most often on an EPC (Engineering, Procurement and Construction) and LSTK (Lump Sum Turn Key) contractual basis, for complex Oil&Gas facilities, including production,





treatment, liquefaction, refining and petrochemical plants, as well as for Oil&Gas transportation systems, such as pipelines, pumping and compression stations and terminals.

Saipem's expertise focuses on the design and execution of large projects with a high degree of complexity in terms of engineering, technology and project management, with a strong bias towards challenging projects in the most difficult environments and remote areas.

Saipem has designed and built numerous 'mega' Oil&Gas production facilities, 36 grass-roots refineries and more than 500 individual refining process units, as well as more than 400 plants worldwide to produce chemicals from natural gas, including the world's largest ammonia/urea complexes.

In particular, land pipeline design and construction has historically been one of the mainstays of Saipem's business. The Company has laid a record of over 60,000 km of gas pipelines, 30,000 km of oil & product pipelines and 1,400 km of water pipelines on five continents.

In recent years, the Company has designed and constructed more than 40 power plants (over 10,000 MW) and four Integrated Gasification Combined Cycle plants, two of which are the world's largest (power output of about 550 MW each).

## DRILLING

As an international drilling contractor operating in some of the harshest onshore and offshore environments, Saipem is presently contracted to major oil companies in many of the oil and gas industry's 'hotspots', carrying out important drilling programmes in Europe, the Commonwealth of Independent States (CIS), North and West Africa, the Middle and Far East and the Americas.

Saipem's vast experience in managing drilling activities with an adequate technological and operational level has allowed the company's capabilities to develop.

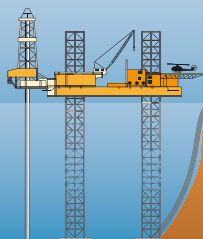
In Offshore Drilling, the Company in fact boasts a rich fleet with seven jack-ups, a Tender Assisted Drilling Barge, seven semisubmersible drilling rigs and two drillships (the Saipem 10000 and the Saipem 12000) which can operate at depths of up to 10,000 and 12,000 feet, respectively. In the Onshore sector, Saipem owns about 100 drill and workover rigs.

Over many decades, Saipem has drilled more than 7,250 wells, 1,750 of which offshore, totalling an overall depth of about 18.5 million metres, and has been involved in the workover of hundreds of wells.

SEMISUBMERSIBLE DRILLING RIG



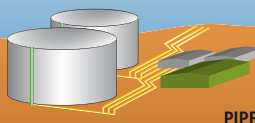
JACK-UP DRILLING RIG



DRILLING RIG



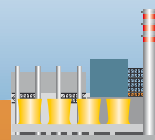
REGASIFICATION PLANT



PIPELAYING



POWER PLANT



# SAIPEM IN THE WORLD

EUROPE		2009	2010	2011
Revenues	(€ million)	1,999	1,931	1,938
Investments	(€ million)	117	122	78
Workforce	(units)	10,073	10,563	10,410
Local Workforce	(% of total)	85	80	81
Energy consumption	(ktoe)	73	78	72
Energy cons.	(ktoe/Mmh)	2.44	2.86	2.56
HSE Training	(hours)	275,969	220,360	86,465

AMERICAS		2009	2010	2011
Revenues	(€ million)	598	719	1,009
Investments	(€ million)	45	49	158
Workforce	(units)	5,218	5,122	6,665
Local Workforce	(% of total)	79	95	87
Energy consumption	(ktoe)	158	72	82
Energy cons.	(ktoe/Mmh)	7.39	3.17	2.85
HSE Training	(hours)	113,346	125,221	204,199

SOUTH CENTRAL AFRICA		2009	2010	2011
Revenues	(€ million)	2,315	2,678	2,692
Investments	(€ million)	61	38	16
Workforce	(units)	8,160	9,487	8,462
Local Workforce	(% of total)	70	64	62
Energy consumption	(ktoe)	63	75	107
Energy cons.	(ktoe/Mmh)	1.03	1.12	1.66
HSE Training	(hours)	148,707	172,701	170,316

NORTH AFRICA		2009	2010	2011
Revenues	(€ million)			
Investments	(€ million)			
Workforce	(units)			
Local Workforce	(% of total)			
Energy consumption	(ktoe)			
Energy cons.	(ktoe/Mmh)			
HSE Training	(hours)			

## Additional data for investments

Further investments not allocated by Areas were (in € million) 1,211 in 2009, 995 in 2010 and 738 in 2011.

<b>CIS</b>		2009	2010	2011
Revenues	(€ million)	1,186	1,232	1,709
Investments	(€ million)	95	216	27
Workforce	(units)	5,603	5,115	4,653
Local Workforce	(% of total)	72	74	68
Energy consumption	(ktoe)	34	38	43
Energy cons.	(ktoe/Mmh)	1.81	2.02	1.98
HSE Training	(hours)	131,206	84,671	121,081

<b>OCEANIA &amp; REST OF ASIA</b>		2009 <sup>(1)</sup>	2010	2011
Revenues	(€ million)	1,534	382	667
Investments	(€ million)	74	110	171
Workforce	(units)	3,925	3,074	4,011
Local Workforce	(% of total)	66	77	74
Energy consumption	(ktoe)	64	29	22
Energy cons.	(ktoe/Mmh)	7.07	2.33	1.24
HSE Training	(hours)	94,297	37,661	68,335

2009	2010	2011
1,791	2,546	2,531
4	9	11
1,749	3,107	4,523
69	74	83
33	50	73
1.96	1.36	0.97
45,258	106,323	155,568

<b>MIDDLE EAST</b>		2009 <sup>(2)</sup>	2010	2011
Revenues	(€ million)	869	1,672	2,047
Investments	(€ million)	8	6	-
Workforce	(units)	3,324	4,706	5,508
Local Workforce	(% of total)	96	83	78
Energy consumption	(ktoe)	47	70	129
Energy cons.	(ktoe/Mmh)	0.63	0.73	1.37
HSE Training	(hours)	50,112	177,109	383,856

(1) In 2009 including also Middle East countries (except Saudi Arabia).

(2) In 2009 including only Saudi Arabia.

# CONGO



## COUNTRY OVERVIEW

The Republic of the Congo became independent in 1960. In 1992 a democratically elected government took office, but a brief civil war in 1997 restored the former President, and ushered in a period of ethnic and political unrest. A final peace accord was agreed in March 2003. The Congo has a population

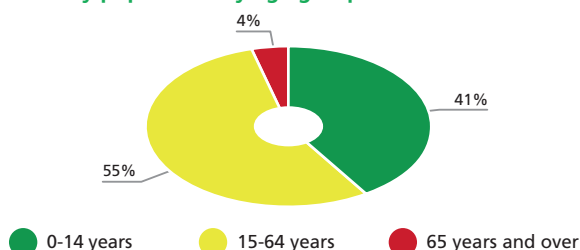
of about 4 million people concentrated in the south western portion of the country, leaving the vast areas of tropical jungle in the north mostly uninhabited. It is one of the most urbanized countries in Africa, with 70% of its total population living in Brazzaville, Pointe-Noire, or along the 332-mile

railway that connects them. In southern rural areas, industrial and commercial activity still suffered as a consequence of the civil war in the late 1990s. Indeed, during that period commercial activity other than subsistence nearly came to a halt, with the exception of the Kouilou province and Pointe-Noire.

## SOCIAL OVERVIEW<sup>1</sup>

The social situation, and in particular poverty, improved after the civil conflicts

### Country population by age groups



Source: The World Bank data (<http://data.worldbank.org/country/congo-republic>).

(1) Sources: <http://www.presidence.cg/congo/histoire.php>  
<https://www.cia.gov/library/publications/the-world-factbook/geos/cf.html>  
<http://www.state.gov/r/pa/eil/bgnl/2825.htm>

between 1997 and 1999, thanks to a calmer climate and better basic infrastructures. In March 2006, interim debt relief was approved for the Congo under the Heavily Indebted Poor Countries (HIPC) Initiative, which noted that Congo had performed satisfactorily on an IMF-supported reform programme and developed an interim Poverty Reduction Strategy. Resources granted to the Congo had to be used for poverty reduction under a reform programme closely monitored by international financial institutions. Education and health are considered the main sectors for government intervention. Important advances have

### Social indicators

Population (2010) <sup>(a)</sup>	(million)	4.043
Population growth rate: (2010) <sup>(a)</sup>	(%)	2.54
Population density (2010) <sup>(a)</sup>	(people/km <sup>2</sup> )	11.8
HDI - Human Development Index (2011) <sup>(b)</sup>		0.533
Mobile telephones (2010) <sup>(a)</sup>	(million)	3.799
Internet users (2009) <sup>(a)</sup>		202,145

(a) The World Bank data (<http://data.worldbank.org/country/congo-republic>).

(b) International human development indicators (<http://hdrstats.undp.org/en/countries/profiles/cog.html>).



Traditional  
fishing activities  
in the Atlantic  
Ocean

been made in education, particularly primary education. School enrolment rates vary a great deal according to place of residence. The literacy rate for males is about 90% while for females it is about 78%.

The government is committed to strong actions to revitalize the education system and to ensure that all children get primary schooling. School fees have been abolished, school books are now free and teachers have been recruited.

The overall expenditure for education accounts for 1.9% of GDP (2005).

In the health sector, access to health infrastructures is still limited for the Congolese population, in particular in rural areas. Life expectancy at birth is 51.6 years (*Annuaire Statistique du Congo*, 2009), and infant mortality rate is 81 deaths/1,000 live births (UNICEF, 2009). Major diseases are HIV/AIDS (adult prevalence rate of 3.4% - 2009

est.), malaria, typhoid fever, and so forth.

The percentage of the population with access to basic sanitation facilities is about 30% (UNICEF 2008). Water availability is an issue especially in rural areas, where 28% of the population has access to safe water.

## ECONOMY AND ENERGY OVERVIEW

### Economic Overview<sup>2</sup>

The Congolese economy is a free market economy. It has grown significantly since 2008, with a maximum growth of 8.8% in 2010 and a slowdown in 2011 (growth of 4.5%).

The Congolese economy is composed of three main sectors: agriculture & fishing, industry & mining, and services.

(2) Sources: <http://www.africaneconomicoutlook.org/en/countries/central-africa/congo-republic/>  
The World Bank data (<http://data.worldbank.org/country/congo-republic>).

**Economic indicators**

Gross Domestic Product (GDP) (current prices) (2011) <sup>(a)</sup>	(billion \$)	14.7
GDP growth (2011) <sup>(a)</sup>	(annual %)	4.5
GDP per capita (current prices) (2011) <sup>(a)</sup>	(\$)	3,562
GDP by sector (2011) <sup>(a)</sup>	(%) Agriculture	3.8
	Industry	76.8
	Services	19.4
Inflation rate (annual rate) 2009 <sup>(b)</sup>	(%) Brazzaville	5.0
	Pointe-Noire	3.7
Labour force (2010) <sup>(a)</sup>	(units)	1,693,324

(a) The World Bank data (<http://data.worldbank.org/country/congo-republic>).

(b) Annuaire Statistique du Congo, 2009.

The agriculture sector is mainly based on subsistence agriculture practiced in rural areas and in suburbs. It represented about 3.8% of the total GDP in 2011.

The main products are cassava leaves (for local consumption), sugar cane (for local industry) and bananas (for local consumption). In 2008 the Congolese government teamed up with the World Bank to implement an Agriculture Development project. This project, designed to boost the Congolese agriculture sector, was cofounded by the Congo and the World Bank at 20 billion FCFA. The fishing industry consists of traditional fishing (mostly practiced by local and other West African nationals) and industrial fishing (practiced by European and Asian ships). The first type of fishing is on rivers and near coastal villages while the latter is in deep Congolese and international waters.

Congolese industry is mainly divided into the Oil&Gas, timber, mineral and food sectors.

The Oil&Gas industry is the biggest in the country in terms of income and organisation. Its revenues accounted for 65% of GDP, 85% of government revenues, and 92% of exports in 2008 (World Bank). The industry is focused on upstream activities (exploration and production of oil and gas wells). This is ensured mostly by foreign based oil companies supported by local and international subcontractors. In 2011, the government expanded the activities of the State oil company (SNPC) to

exploration and production. Alongside the oil and gas distribution networks, the country has a very small downstream activity limited to one refinery with a nominal capacity of 1 million tonnes per day.

The timber industry is the second largest in the country in terms of revenues, representing 9% of total exports. It is currently made of 40 companies working on 9 million ha granted by the government. The industry is regulated by the National Timber Code. Congo has been active in certifying sections of the forest for sustainable timber development through the Forest Trust Conservancy. The industry is dedicated to exports, with less than 50% of manufacturing being local.

The main minerals exploited in the Congo are potassium, iron, gold and diamonds. Mining is carried out by private companies regulated under the Mining Code. The Congo is part of the Kimberley Process.

The services sector accounts for 32% of total GDP, consisting essentially of telecommunications, banking and transportation. In 2010, the country had 202,145 internet connections.

This is expected to increase with the optical cable for ADSL currently under implementation. The banking sector is undergoing modernisation thanks to increased competition and government regulations. More than 7 private banks are doing business in the country. The country shares the same currency with 13 other African countries.



View of the Port of Pointe-Noire

Transport services are carried out by private and public companies. Three strategic infrastructures act as pillars of the Congolese economy: the deep sea Port of Pointe-Noire, the 512 km railway that connects Pointe-Noire to the City of Brazzaville and a Port on Congo River that connects to other countries. These infrastructures mean that Congo can serve as a gateway to the sub-region.

### Energy Overview<sup>3</sup>

The Congolese energy sector consists of oil and electricity. Oil reserves are estimated at 1.6 billion barrels and gas at about 3.2 trillion cubic feet (TCF) (EIA, January 2011). The country produced

15,276,000 tonnes of oil equivalent in 2009. Because of the limited production capacity of its only refinery, the country imports oil products (211,000 tonnes of oil equivalent in 2009, according to IEA). Consumption is mainly for transportation, electricity generators and machines.

Hydropower is the main source of electricity generation, followed by conventional thermal electricity.

Hydroelectricity is generated from the Imboulou (120 MW), Bouenza (74 MW) and Djoue (15 MW) plants.

Since 2010, the country's electricity grid has been revamped and has increased from 700 km to 1,500 km, covering most major cities.

<sup>(3)</sup> Source: EIA <http://www.eia.gov/countries/cab.cfm?fips=CF>  
IEA [http://www.iea.org/stats/balancetable.asp?COUNTRY\\_CODE=CG](http://www.iea.org/stats/balancetable.asp?COUNTRY_CODE=CG)

#### Energy data (2009)

Energy production	(ktoe)	15,276
Electricity production	(kWh)	516,000,000
Electricity production from hydroelectric sources	(% of total)	64
Electricity production from natural gas	(% of total)	36
Energy use	(ktoe)	1,402
Electric power consumption per capita	(kWh per capita)	146.4
Energy use per capita	(kg of oil equivalent per capita)	356

Source: World Bank (<http://data.worldbank.org/country/congo-republic>).



View of the coastal natural environment

## ENVIRONMENTAL ASPECTS

The Congo's coastline is about 170 km long and stretches within the basin of the Congo River, which is the deepest river in the world and the second largest in terms of volume of water discharged.

There are about 30 navigable rivers

and waterways in the Congo. This abundance of water makes the Congo one of most fertile countries in Africa, featuring a rich biodiversity. Tropical rainforests cover about 60% of the country's territory and rare vegetation (limba, okoumé, acajou, sapelli, sipo, etc.) and peculiar wildlife (like gorillas) can be found.

### Environmental indicators

Country area <sup>(a)</sup>	(km <sup>2</sup> )	342,000
Freshwater withdrawal (2009) <sup>(b)</sup>	(billion m <sup>3</sup> /y)	0.046
Long term average renewable freshwater resources <sup>(c)</sup>	(million m <sup>3</sup> /y)	832,000
CO <sub>2</sub> emissions per year (2009) <sup>(d)</sup>	(million tonnes CO <sub>2</sub> eq)	1.66
CO <sub>2</sub> emissions per capita per year (2009) <sup>(d)</sup>	(tonnes CO <sub>2</sub> eq)	0.45
Threatened species (2009) <sup>(c)</sup>	(No.)	70
Forested area (2010) <sup>(b)</sup>	(km <sup>2</sup> )	224,110
Protected areas (2010) <sup>(b)</sup>	(% of total land area)	9.5

(a) Annuaire Statistique du Congo, 2009.

(b) World Bank (<http://data.worldbank.org/country/congo-republic>).

(c) United Nations Statistics Division.

(d) IEA indicators (2008) ([http://www.iea.org/stats/indicators.asp?country\\_code=cg](http://www.iea.org/stats/indicators.asp?country_code=cg)).



# SAIPEM PRESENCE IN THE CONGO

In the Congo, Saipem is represented by two Business Units (BU): Engineering & Construction (E&C) and Drilling. Under E&C BU, a local company Boscongo SA (owned 100% by Saipem sa) has been operating since 1981. From 2005 to 2011, Saipem Energy Services (SES) operated in maintenance activities. From the beginning of 2012 SES has been officially merged into Boscongo. For Drilling BU, operations are performed by Saipem SpA Congo Branch, which started operations in the country in 1975. The Group is capable of executing offshore and onshore EP(I)C projects, performing offshore drilling and managing fabrication and operation activities for all the major Oil&Gas companies.

The Head Office is located in Pointe-Noire, where also Boscongo Yard and its Marine Base are placed. Drilling onshore is based in MBoundi field while offshore drilling is in Loango and Foukanda fields.

## Engineering & Construction Business Unit

E&C activities are mainly aimed at building onshore and offshore modules for the energy industry in the West Africa area, with a particular focus on the oil and gas sector. Its main work includes jacket and deck construction,

deep offshore subsea facility fabrication, piping prefabrication and installation.

In addition, Boscongo provides services for the maintenance and upgrading of offshore platforms, engineering and methods, modifications of industrial plants, and offshore and onshore logistic support.

Boscongo's activities are underpinned by a fabrication yard, the biggest in the country with a total extension of 280,000 m<sup>2</sup>. The yard is strategically located in the industrial port complex of Pointe-Noire, within the oil and gas logistics area. The yard has a 250 m long quay that guarantees fast and easy access to the vessels providing offshore activities.

The Boscongo Yard is equipped with:

- a construction area of 90,000 m<sup>2</sup> for the fabrication of modules:
  - structure: 5,000 t/y
  - piping: 40,000 inch/y
  - total man hours: 1,000,000 h/y
- a painting workshop of 1,500 m<sup>2</sup>
- 3 MW power station
- a storage area of 55,000 m<sup>2</sup>
- its own marine base, in accordance with ISPS regulations:
  - quay: 270 m (Low Tide: 6.00 m/tide variation: 0.20 m (LAT)/2.00 m (HAT))
  - mean depth to the sea: 1.50 m (Lower Low Water)
  - load capacity 15 t/m<sup>2</sup>.



## MAIN PROJECTS IN THE COUNTRY (SINCE 2006)

Year	Name	Client	Description
<b>Engineering &amp; Construction</b>			
2012-2013	Zatchi decennial shutdown, ZAP Platform	Eni	Detailed engineering, Procurement, Fabrication, Construction, Pre-commissioning and Commissioning. Basic design, Front End Engineering Design (FEED).
2012-2014	Global services agreement offshore	Eni	Project Management, Maintenance Engineering, maintenance computer system (CMMS), general services, logistic/workshop, materials and services supply.
2011-2014	Frame agreement 'Travaux Métallurgiques'	Total	Maintenance, tanks and piping, including plating, NDT, heath treatment, scaffolding, civil works, rental of equipment and extra personnel.
2011-2013	Lot 1: PAPN Container Terminal Reconstruction and extension of quay wall G	Port Autonome de Pointe-Noire	Reconstruction of 540 m of quay wall and extension of 270 m.
2011	Usan Project	Saipem sa for Total Nigeria	Construction and load-out of a spreader frame (149 t), upper stand x2 (36.3 t), lower stand x2 (31.3 t) and grillage x2 (18.1 t).
2008-2011	EniGrid - Congo National Electrical Grid Revamping	Eni	Interconnection of the new CEC Power Plant to the 220 kV national electrical grid for electrical power dispatching all over the Country. Revamping of the existing electrical line between Pointe-Noire and Brazzaville. Construction/revamping of the related Substations.
2009-2010	Libondo jacket	Total	Engineering, Construction, Transportation and Installation of Libondo jacket (1,369 t of weight). Piles & CPs construction.
2008-2010	Moho Bilondo integration of existing Djeno terminal	Total	Installation and integration of all plant equipment, Procurement, installation of plant structures (pipe rack), civil works, plant commissioning, assistance to commissioning.
2006-2007	Ikalou project Development	Eni	Engineering and installation of 2 platforms on Ikalou field (depth: 90 m). Project features: Installation of Ikalou platform, engineering, procurement, transportation and installation of sea lines and electric cables; engineering, procurement, coating and transportation, installation of sea lines (9.8 km).
2006-2007	Awa Paloukou Djeno Terminal integration	Eni	Engineering, procurement, transportation and installation of sea line. Engineering and installation of platform. Structures: Installation of platform (pin-piles 630, jacket 1,600 t, deck 2,100 t, guide frame 350 t); procurement, coating, transportation, installation of sea line (total length: 36 km).
2006-2007	Rosa surf development project	Total E&P Angola	Spools fabrication (4 Riser, 12 Manifold), injection flow line Riser Spools, Water Injection Wellhead Jumper, primary guiding system. Spreader frame fabrication and sea fastening.

Year	Name	Client	Description
<b>Drilling</b>			
2012	Nene 1	Eni	Offshore drilling with Perro Negro 6 (PN6)
2009-2012	M'Boundi Rig 8595	Eni	Onshore drilling (19 wells drilled)
2009-2012	M'Boundi Rig 8591	Eni	Onshore drilling (17 wells drilled)
2011-2012	Foukanda	Eni	Offshore drilling by TAD Barge
2010-2011	Libondo	Total	Offshore drilling by TAD Barge
2009	Hivoua	Eni	Offshore drilling with Saipem 10000 (1 well drilled)
1975-2012	Loango	Eni	Offshore drilling & Work-over: 01 IMI Rig, 03 Slant Rigs: DP1, DP2, DP3

## Boscongo Yard Upgrading

Boscongo Yard was built in 1981 by Bouygues Offshore and mainly dedicated to the manufacture of subsea structures. The Yard was involved in more than 60% of the projects linked with maintenance of the country's oil production levels between 1981 and 1996. Between 1997 and 2006, Saipem undertook important works to upgrade the Boscongo Yard with the objective of aligning the Yard to Saipem's construction standards

and meeting clients' health and safety requirements. The first phase of the upgrading mainly consisted in checking ground resistance (quay, yard, storage area), redistributing drainage networks, optimising surfaces (production and storage), demobilising the residential units located in the central part of the Yard and building new technical and administrative offices that can be shared by all Saipem project in the Congo.

The entire effective surface has been lowered and levelled out. The working and storage area surfaces have been finished in soil cement. The construction working surface has been increased by 45% and the overall yard surface grew to 90,000 m<sup>2</sup>, 45,000 m<sup>2</sup> of which benefit from direct access to quay, which means that this surface can now be used for construction activities.

New equipment needed to perform fabrication works was mobilised; in particular, a digital Muller oxycutting machine for bracings and pipes, a plasma cutting table, a heavy chain for jacket leg assembly and a 1,500 m<sup>2</sup> covered painting cabin. A new general and transit store, a mechanical maintenance workshop and prefabrication workshop were constructed. All upgrading works have been completed in 2011 and have equipped the Yard with all necessary facilities to be able to carry out important projects such as Litchenjili (Eni SpA) and Moho North (Total E&P Congo).



### Drilling Business Unit

Saipem's drilling business in the Congo is carried out by Saipem SpA Congo Branch, which has been operating in the country in offshore drilling activities since 1975 and, since 2009 in onshore drilling and workover.

Saipem operates onshore with two rigs (5891 and 5895) located in the M'Boundi field in the north of Pointe-Noire.

Offshore activities are conducted in the Loango Field, a Tender Assisted Drilling Barge (TAD) in Foukanda field, and with Perro Negro 6 (PN6) in Nene field.

Currently, Saipem SpA Congo Branch has onshore drilling capability of 18,000 ft and offshore drilling capability of 16,000 ft.

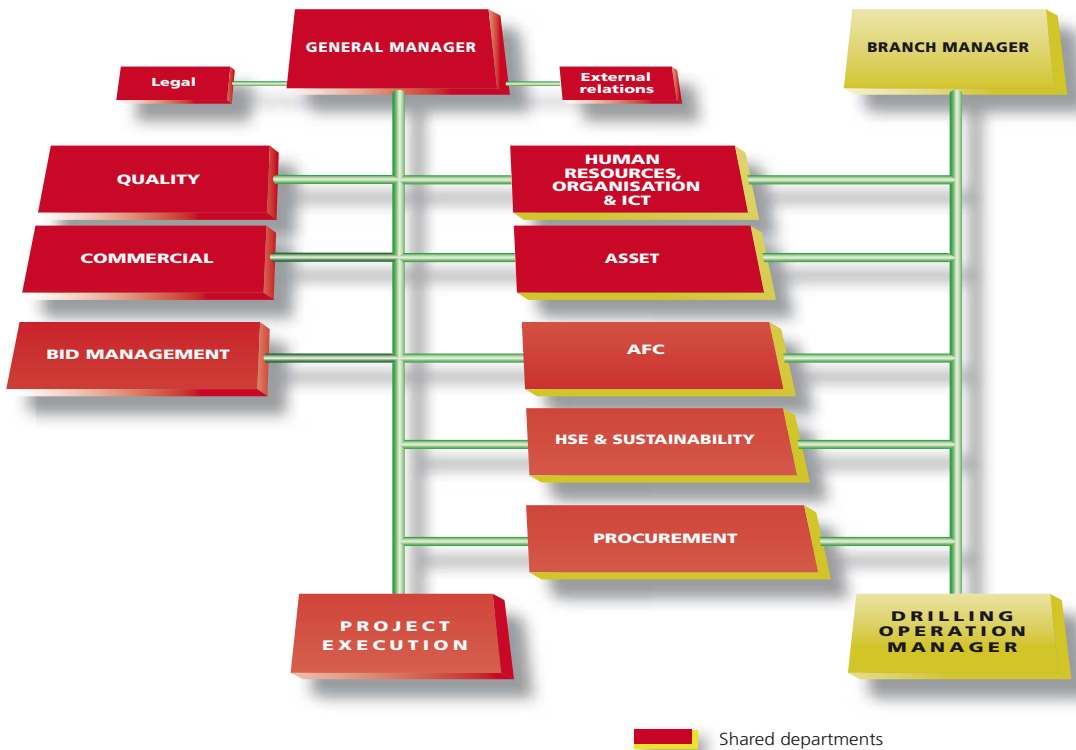
### COMPANY ORGANISATION AND MANAGEMENT SYSTEM

Boscongo General Manager is managing the E&C activities, with the support of a management team including Human Resources (HR), Administration, Finance & Control (AFC), Procurement, Asset, Quality, HSE & Sustainability, Commercial and BID departments.

Saipem SpA Congo Branch is managed by a Branch Manager and receives the support of Boscongo's Departments for HR, AFC, Procurement, Asset and HSE & Sustainability.

### E&C Business Unit

### Drilling Business Unit





Saipem 10000

## THE APPROACH TO SUSTAINABILITY IN THE CONGO

Saipem companies operating in the Congo have a long-term and deep-rooted presence in the country. Sustainability has become an important manner of conducting business effectively, and of ensuring dialogue and cooperation with all stakeholders in order to maximise the reciprocal positive effects of the relationship between the company and the local entities impacted by its activities.

As stated in the company policy documents signed by the E&C Country Manager, the main objectives of the companies operating in Congo are:

- Preserve the integrity of employees and subcontractors;
- Protect the environment;
- Develop local content;
- Guarantee customer satisfaction;
- Engage with local communities and guarantee real and transparent relations to promote effective community initiatives.

In line with these objectives, the company has developed an HSE & Sustainability Management system based on the concepts of prevention

and continual improvement, supported directly by the Country Manager. The system is assessed monthly by the Steering Committee, in coordination with clients, and is periodically audited by different local government bodies.

Developing local content means bringing social and economic benefits to the host communities, further boosted by the creation of stable and concrete relations with them. This aspect is at all times considered during the recruitment and vendor process. Furthermore, people management focuses on the continuous improvement of personnel skills, reinforcing the skills of employees and ensuring their growth.

Customer satisfaction is another priority for building sustainable relations with clients. Companies permanently invest in developing their management systems and their people, with the objective of providing reliable quality management and control services, at all times in compliance with product and services requirements. Customer satisfaction is evaluated on a regular basis on all operating projects, and consequent actions are taken to improve company performance.

# SUSTAINABILITY PERFORMANCE

## PEOPLE

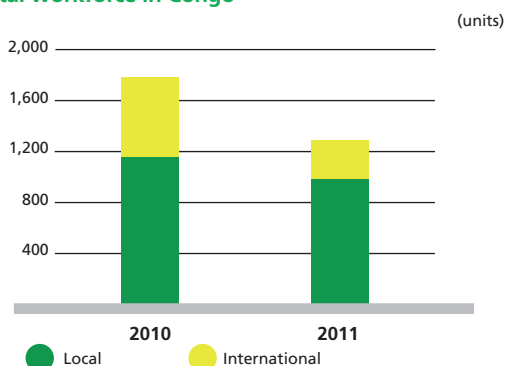
### Workforce

Saipem's total workforce in the Congo varies significantly according to the number and size of active projects. Despite this, a high level of nationals in the workforce remains constant. Over the past two years, the percentage of local employees increased from 65% to 76%. In 2011, out of 1,294 employees, 981 were local.

In order to respond to the temporary needs of each project, within the total local workforce, in addition to Saipem employees, Saipem companies make use of local workers from employment agencies. This additional workforce, which can be numerous in peak periods (almost 1,000 people in 2010), is overseen through the standard Saipem Human Resources management system (GHRS). The employment agency is selected via tenders, is subject to a qualification process and must comply with obligations, specified in the contract, regarding observance of Saipem's Code of Ethics and of a sustainability clause regarding respect for human rights in the working environment.

The workforce is organised into different categories: Senior Managers, Middle Managers, White Collars and Blue Collars. The HR management strategy focuses on maximising the employment of local people and on their development and progress towards managerial positions. This is mainly in relation to local key resources with a medium-high level of performance and potential for development. In 2011, 53% of all Middle Managers were Congolese.

Total workforce in Congo



### Total Workforce

Category		2010	2011
Senior Managers	Local	-	-
	International	1	1
Middle Managers	Local	33	35
	International	39	31
White Collars	Local	67	62
	International	248	135
Blue Collars	Local	114	106
	International	338	146
	Local Agency	941	778
<b>Total</b>		<b>1,781</b>	<b>1,294</b>

<b>Technical training</b> (number of training hours)		
	<b>2010</b>	<b>2011</b>
Managerial behaviour and skills	-	52
Technical professional skills	32	-
Other professional skills	304	192
Information Technology and languages	504	1,000
Total HR training	840	1,244
Total HSE training <sup>(a)</sup>	21,013	12,660
<b>Total training</b>	<b>21,853</b>	<b>13,904</b>

(a) HSE training hours reported in the table include those for employees and subcontractors.

### Training

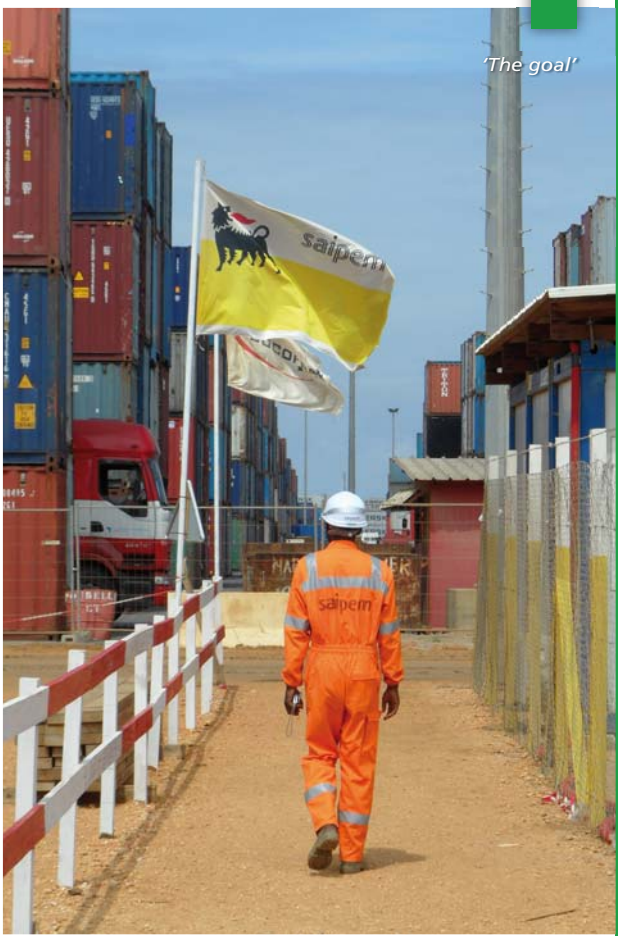
Employee training is a fundamental aspect of the company's people management strategy. Training focuses on improving the skills and competences of employees, mainly as regards information technology and languages, HSE issues, quality inspection, and welding techniques. 21,853 hours of training were provided for employees and subcontractors in 2010 and 14,003 hours in 2011.

#### Language Training

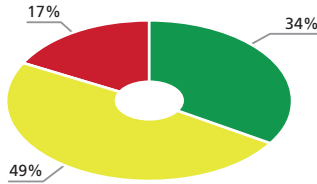
Since Saipem is a multicultural company, knowledge of foreign languages is essential. Language training is important in know-how transfer and in the self-development of employees. English courses are therefore organised for local employees to improve their ability to communicate and work in a multinational environment. Similarly, French language courses are organised for expatriates in order to facilitate communication and know-how transfer to local employees.

#### Technical and professional training

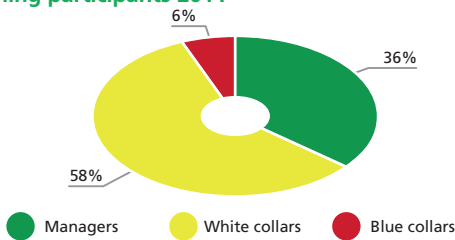
Technical and professional courses include Organisation and Human Resources Management, Business Economics, Logistics and HSE Supervision. They are mainly targeted at local employees (operative and administrative staff) and frequently conducted at different Saipem premises, mainly Paris (Saipem sa) and Milan



**Training participants 2010**



**Training participants 2011**



(Saipem SpA). These training sessions allow local employees to strengthen the network between all Saipem companies and also give them the opportunity to take a close look at practices in other companies within the Group.

**External Agency Workers, Management & Training**

As the company has implemented a management strategy for workers from external agencies which consists of

training sessions, job assessment and supervisor evaluations prior to direct hiring processes, most employees and workers from external agencies attended HSEQ and other professional skills courses.

The HSEQ training plan consists of mandatory modules required by our clients (basic offshore training, firefighting, survival at sea, etc.) and internal training (LiHS, permit to work system, waste segregation, etc.).

Workers from external agencies also undergo basic professional training and certifications, especially crane operators, lifting operators, scaffolding operators and electrical technicians. These courses are organised internally or with local certified training centres. The objective is to develop the skills and expertise of Congolese workers. Based on their performance, workers from external agencies are evaluated by their direct supervisor or department manager.

A formal request to upgrade to an in-house contract can be forwarded to the Human Resources department which assesses the application according to the company's general needs and the economic context.

**Health, Safety and Environment training**

As training is essential to prevent accidents and work-related illnesses, the entire personnel of Saipem companies

**HSE courses managed by Saipem**

- Leadership in Health and Safety (LIHS)
- Confined Spaces
- Defensive Driving (Level 1)
- Working At Height
- Work Permit
- Housekeeping
- Scaffolding
- Personal Protective Equipment
- Fire Fighting
- Spill Prevention And Response
- Waste Segregation
- Water and Energy Saving

**Technical and specialised HSE courses**

- First Aids
- Defensive Driving (Level 2)
- Offshore Modules (M7/M30/M85/M57/BOSIET)
- Electrical Risks
- Tap Root Training
- Scaffolding Inspector



BU in the Congo	HSE training	HSE training hours by area		
		Health	Safety	Environment
<b>2010</b>	<b>21,013</b>	<b>24</b>	<b>20,714</b>	<b>275</b>
E&C	18,563	24	18,264	275
Drilling	2,450	-	2,450	-
<b>2011</b>	<b>12,660</b>	<b>19</b>	<b>12,456</b>	<b>185</b>
E&C	8,340	19	8,216	105
Drilling	4,320	-	4,240	80

in the Congo as well as subcontractor staff are continuously trained and informed about all HSE issues. The first training initiative consists of HSE induction and general prevention measures and is usually carried out internally. Many technical courses on HSE aspects, held externally, are also arranged for specific job positions. The local workforce benefits from these courses by increasing its awareness and understanding of the importance of working safely in construction and drilling activities.

### Quality training

Boscongo has defined a Quality Control (QC) development programme that has significantly contributed to increasing general awareness on quality and the qualification levels of Congolese QC inspectors.

The programme, launched in early 2009 by the Quality department, has led to new qualifications in Non Destructive Tests (NDT) by three Congolese workers. After theoretical courses and about one year of on-the-job training, two of these workers have successfully passed

the qualification exam in Penetrant Testing (PT) and Magnetoscopic Testing (MT) techniques. Furthermore, an anticorrosion coating inspector was validated after passing the ACQPA-Frosio qualification exam in France. This is the second Congolese in the history of the country to obtain this prestigious qualification.

### Welding school

The welding school was set up to strengthen the technical skills of local workers in order to allow them to perform specialised work and to operate effectively. The welding school trains local employees in specialised welding methods such as Gas Tungsten Arc Welding (GTAW) and Shielded Metal Arc Welding (SMAW). A one-month, full-time training period is organised for groups of ten workers. The trainees work on three different welding machines and perform on-the-job training, thus learning how to read and understand procedures and documents related to welding activities as well as to handle the material. At the end of this training period, evaluation is made under the supervision of an

## A Frosio painting inspector at Boscongo

*In the framework of the yard QC competence development programme launched in early 2009 by the Quality department, a new qualification has been obtained by one of our Congolese colleagues. Indeed, after the mandatory*

*theoretical training sessions and almost nine months of on-the-job training, Dadet Bayenikini successfully passed the ACQPA-Frosio 'Anticorrosion Coating Inspector' qualification exam during the session held in Toulon, France,*

*in March 2011. Dadet Bayenikini is the second Congolese in the history of this country to obtain this prestigious qualification, which in fact is the highest standard in the world for painting inspection.*  
From 'UN REGARD'



Welding school

international certification agency. Figures for Qualified Welders registered since the school started are as follows: 30 welders for semi-automatic + SMAW (Shielded Metal Arc Welding); 25 welders for SMAW + GTAW (Gas Tungsten Arc Welding); 4 welders for SAW (Submerge Arc Welding).

### Safety

Saipem companies operating in the Congo are strongly committed to the

Saipem Safety Vision and at all times diffuse a safety culture within the workplace. The HSE&S management system has been structured on the concepts of 'Prevention' and 'Continual improvement', with the objective of ensuring efficient work practices and preserving the integrity of employees and subcontractors, as defined in the HSE&S Policies.

The system is assessed on a monthly basis by a Steering Committee, in coordination with clients, and is

## Interview with Moukoko Mabele Dimitrie Congolese method engineer, now working in France

What was your first job in Boscongo?

*I was hired as a Methods Construction Engineer. Also, during my apprenticeship at Boscongo I was Works Supervisor, Design Engineer and Quality Control Supervisor.*

What was the experience like working for Boscongo?

*At Boscongo, the Methods department works closely with the Design Office and with the Lifting and Construction departments. Overall the staff is cooperative and rigorous in implementing the various tasks assigned.*

How do you consider the influence of Boscongo in improving your technical skills

and your way of working?

*Boscongo was my first employer after school. I have become a*



*Methods Engineer thanks to the various projects I took part in at Boscongo beginning in 2007. I was hired after graduation in July 2007, having been on practical training for 3 years between ISTAC*

*(my school) and Boscongo.*

Do you consider that the work at Boscongo improved your job level (new job position, goals, mission, any other experience that you want to describe)?

*Thanks to the coaching of the Saipem sa Methods Department, I can now work independently on basic Methods tasks. I continue this apprenticeship experience by quarterly assignments to Saipem sa in Paris where we have prepared the construction of a USAN Spreader Frame and I'm currently supporting the lead Methods Engineer in the construction of a 1,700 t jacket in Nigeria.*

periodically audited by different government entities. The last audit (2011), conducted by the Ministry of Hydrocarbons, qualified the Boscongo HSE&S management system as 'compliant with HSE standards'. Day by day, safety is becoming an issue for all people in all Saipem company teams. The reorganisation process in the HSE&S Department is also underpinning this strategy. Each Business Unit has now been assigned a dedicated and experienced HSE&S team coordinated by the Country HSE&S Manager.

### Safety statistics

Overall, figures for Saipem companies operating in the Congo (including both Saipem and subcontractor employees) show a positive trend with regards to performance indicators such as LTIFR (Lost Time Injury Frequency Rate), TRIFR (Total Recordable Incident Frequency

Rate) and SR (Severity Rate). Indeed, from 2010 to 2011, all indicators are down significantly for both Business Units.

Safety performance improvements are a consequence of management's commitment to implementing the HSE system. This comprises intensive work to diffuse a safety culture throughout Saipem by focusing on training via the Leadership in Health and Safety (LIHS) programme, as well as several proactive measures such as Safety Hazard Observation Cards (SHOC) analysis, job safety analysis, coordination meetings, audits and inspections.

### Leading proactive indicators

Leading proactive indicators play an important role in monitoring the HSE&S Management system. They are part of the prevention strategy developed by Saipem companies operating in the

### Safety statistics

	Total in the Congo		E&C		Drilling	
	2010	2011	2010	2011	2010	2011
Worked man hours	4,776,819	3,821,477	3,580,075	2,661,750	1,196,744	1,159,727
LTI Frequency Rate	0.42	0.00	0.28	0.00	0.84	0.00
Severity Rate	0.00	0.00	0.00	0.00	0.00	0.00
TRI Frequency Rate	2.93	0.79	1.68	0.38	6.68	1.72

### Leading indicators

	Total in the Congo		E&C		Drilling	
	2010	2011	2010	2011	2010	2011
SHOC Cards	14,976	13,590	9,237	1,585	5,739	12,005
Tool Box Talks	5,530	6,038	2,938	1,793	2,592	4,245
HSE Meetings	2,543	4,248	465	318	2,078	3,930
Job Safety Analysis	5,321	3,496	534	512	4,787	2,984
HSE Inspections	2,847	3,278	894	199	1,953	3,278
HSE Management Visits	493	256	275	39	218	217
HSE Training	21,013	12,660	18,563	8,340	2,450	4,320

Note:

Entire annual data 2010 and 2011, considering Saipem's employees and subcontractors.

E&C 2010: Boscongo Yard, Projects (Libondo Jacket, EniGrid, TAD Revamping and MohoBilondo) and SES.

E&C 2011: Boscongo Yard, Projects (Travaux Metallurgiques, Eni Grid, BEPNR and Port PNR Project) and SES.

Drilling 2010 and 2011: Onshore (Mboundi Rig 91, Rig 95), Offshore (Loango and TAD) and Logistic Base at PNR.

Congo. 'Prevention' is also achieved through the promotion of a proactive reporting culture.

**Safety Hazard Observation Card (SHOC):** the use of SHOC helps workers learn to recognise safety hazards and ensures the promotion of ideas to improve safety directly from the workforce. As of 2011, 13,590 SHOC cards were reported between E&C and Drilling Business Units.

**Tool Box Talks:** periodic safety lectures (e.g. weekly) to educate workers about creating and maintaining safer working conditions. Attendance is mandatory for both Saipem and subcontractor workers.

**Job Safety Analysis (JSA):** a procedure which helps to understand and identify previously undetected hazards and to define health and safety measures for each particular task or job operation.

A JSA will also assist in completing comprehensive accident investigations.

**HSE Inspections:** these are regular, but often without advance notice. Trained inspectors (who can also include representatives of other departments such as Operations, Assets, Human Resources, etc.) carry out inspections in both fixed and temporary (i.e. construction sites) locations.

#### **Reward programme**

In order to encourage worker involvement in health, safety and environmental protection, Saipem companies in the Congo have established a reward programme. This consists of public recognition for a worker who shows good HSE performance. The selection of the person is done on a weekly basis, with an evaluation method that considers (i) the best SHOC card (unsafe act/

Toolbox in N'Kouni



behaviour observation) reported, (ii) safety intervention 'Safety Stories', and (iii) good HSE practices. In 2011, Saipem began to apply the 'LiHS Safety Stories' award in the Congo: the person who makes a good intervention is invited to share it with all workers as an example of safe behaviour. During this first year of the initiative, 8 safety stories were submitted and published at the main entrances and on boards located on site, and the 8 people received rewards.

**Leadership in Health and Safety (LiHS)**

LiHS is a Saipem training programme launched by Corporate Top Management in 2007. It is targeted at achieving change in safety behaviour and culture. The programme has several dynamic elements which teach self-analysis of our behaviour. It also suggests ways to lead an intervention in the event of unsafe behaviour or situations and to reinforce safe behaviour in general. The programme comprises videos, analysis and group exercises and aims to convey the message 'The Safer the Better'. LiHS is conducted at every level of employment category, from management to workers, and is becoming an important tool to change everyone's behaviour regarding safety at work.

One of the objectives of the programme is to create 'Leaders' in health and safety, people who believe in and apply the Saipem Safety Vision and who intervene in unsafe acts and reinforce safe behaviour while adopting a conflict-free approach. During the last phase of the LiHS 'Leading behaviours' initiative, all of our leaders were recognised for their courage to intervene and were rewarded by management and encouraged to continue in their mission. The LiHS programme was launched in the Congo in 2008 by the General Manager, who transmitted the Saipem Safety Vision to all manpower at a general meeting. Once LiHS was announced, the phases unfolded according to the Corporate schedule. In 2011 Saipem companies operating in

the Congo arrived at the fourth phase. A total of 506 people were trained in 2010, with 2,413 hours. In 2011, on the other hand, thanks to intensification of the programme, 2,059 people were trained with 3,821 hours divided between 'Five Star', 'Workshops' and 'Leading Behaviours' phases. Considering the importance of this training, subcontractors, partners and main clients also took part.

**Little Leadership in Health and Safety (L-LiHS)**

Little-Leadership in Health and Safety 'L-LiHS' is a special training programme for children of employees. The objective is to train them in prevention measures to be applied at home or wherever they happen to be, and mainly to remind their parents about safety at work through the message 'Take care Daddy'. L-LiHS is based on the power of a mother's and father's love as a key device for children to change their parents' attitude towards safety. The workshop was structured into four hours, with a dynamic plan that included the interactive participation of parents and children. To maintain the children's attention for four hours educational materials such as cartoon films, theme analysis, dancing, sketch, painting and songs were used. Furthermore, an actor





Kids doing drawings during the Little LiHS workshop

was hired and trained in LiHS to work with children in a specialised way.

The safety themes were selected with due regard for their application at work and at home. These were 'PPE Personal Protective Equipment', 'Scaffolding', 'Manual handling of loads', 'Signals', 'Housekeeping' and 'Pollution prevention'.

The workshop was prepared for interaction between parents and children and during the 4 hours everyone worked on themes related to the dynamics of safety. At the end of the programme the children did drawings based on the themes developed in the workshop. These were hung up in their parents' workplaces to remind them of the special message from their children. Boscongo initiated L-LiHS in 2011. At present, it has 46 little leaders who are ambassadors of a safety culture at home and at work, today and in the future.

## Health

The Saipem Health Management System ensures internally managed medical assistance on all sites and projects worldwide. In the Congo the system mainly focuses on:

- adequate medical equipment, medicines, training and emergency protocols on all Saipem sites;
- health training and prevention programmes: malaria, cardiovascular disease prevention programme, vaccinations, etc.;
- Pointe-Noire to be 'MedEvac focal point'

for all vessels and barges operating in the Congo and in the vicinity.

## Health organisation

Saipem has a clinic and a team of 10 medical personnel, comprising 1 doctor (coordinating medical activities in the Congo), 4 nurses in the Boscongo Yard, 2 nurses in the Port project and 4 nurses in the Saipem SpA onshore drilling field (M'Boundi).

The main clinic located in the Boscongo Yard provides medical assistance to employees and subcontractors working on the base and on offshore operational sites. The clinic was refurbished in 2011 and is now equipped with 1 emergency room, 1 observation room, 2 consulting rooms, 1 nursing care and laboratory room, 1 reception and 1 equipment storage area.

Besides the curative medical assistance, the medical department provides preventive activities such as periodical employee examinations and immunizations, health risk assessment, and education programmes focusing on malaria awareness and sexually transmitted diseases (STD). This is done during medical counselling or general tool box talks.

## Health Prevention and Promotion Programmes

The 'Cardiovascular disease prevention' programme places special emphasis on the prevention of risk factors for cardiovascular disease, how to diagnose them and how to fight them.

Awareness was raised through general toolbox, poster and electronic messages. The campaign included also (i) dissemination of the link-line calculation of body mass index (BMI) and (ii) calculation of cardiovascular risks over a 5 year period for Saipem employees aged over 40 years. As regards results, 928 employees attended the campaign. From these 144 Saipem employees over 40 years of age were enrolled for the Cardiovascular Disease Prevention Programme. The 'DT polio vaccination' programme was activated as a response to an epidemic of acute poliomyelitis declared in the Congo in November 2010. The Congolese government launched an emergency plan for vaccination against polio from November 2010 to February 2011, with the support of partners such as WHO and UNICEF.

To ensure that Saipem employees receive this vaccination, the Medical Department prepared a schedule of vaccinations for all employees. The Monovalent oral polio vaccine was conducted in 4 stages:

- 1<sup>st</sup> dose from November 12 to 16, 2010;
- 2<sup>nd</sup> dose from December 3 to 6, 2010;
- 3<sup>rd</sup> dose from December 27 to 30, 2010;
- 4<sup>th</sup> dose from February 21 to 23, 2011.

In total 1,106 people were vaccinated, including 812 employees (96 internationals and 716 locals) and 294 subcontractor employees and employee family members.

'Snake bite awareness' conducted on all Saipem sites located near the tropical forest, such as Rigs in M'Boundi and the EniGrid project in Mayombe Forest. Even before camps were installed, an awareness programme was carried out to inform personnel about the appropriate behaviour to take in the event of snake bite. The training sessions were based on Corporate Saipem guideline 'Module 12: Animal bite'. The programme started on September 2011 and since then 60 attendants have participated in 2 different sessions.

#### Emergency drills

Regular drills of Medical Emergency Evacuation (MedEvac) are held in order to ensure continuous improvement of the medical evacuation preparedness of all teams, including operations teams. During 2010, 16 MedEvac drills were held for the Engineering & Construction BU and 8 in the Saipem SpA Onshore Drilling field (M'Boundi). In 2011, on the other hand, 18 drills were reported for the E&C BU (including communication drills) and 4 for Saipem SpA Onshore.



*MedEvac drill in the forest of Mayombe*



### Communication

Saipem companies operating in the Congo keep stakeholders and staff informed about their activities by circulating a newsletter called 'Un Regard'. This was founded in April 2010 with the objective of constant integration with the company's sustainability approach.

Since its creation, there have been 8 editions of 'Un Regard' and more than 73 articles. All of this is thanks to the collective efforts of the HSE&S, Quality, Production and Human Resources departments. The newsletter is

published in French, English and Italian. 'UN REGARD' is distributed to other Saipem companies worldwide in order to share Best Practices & Lessons Learned. The most important feedback is from employees, clients, and local governments, who express their appreciation and provide comments on the sustainability activities communicated.

### ENVIRONMENT

In accordance with Saipem Corporate standards and government environmental requirements,

Drilling rig in M'Boundi







Celebrating the World Environment Day

environmental management is targeted at pollution prevention and mitigation of impacts associated with the activities. In March 2011, the Boscongo Environmental Management System successfully passed a government environmental audit.

**Environmental Awareness**

Environmental training and awareness campaigns are permanent activities targeted at all workers according to job description. Weekly messages focusing on eco-friendly behaviour are directed to administrative staff and operational workers. Once a month, the general weekly toolbox deals with an environmental protection theme. Moreover, environmental awareness is raised continuously through pre-job meetings in each workshop. Furthermore, Saipem companies in the Congo apply the Corporate Awareness Campaign on environment, focusing on the following themes:

- Waste minimisation;
- Spill prevention and response;
- Water and energy saving.

**Spill prevention and response**

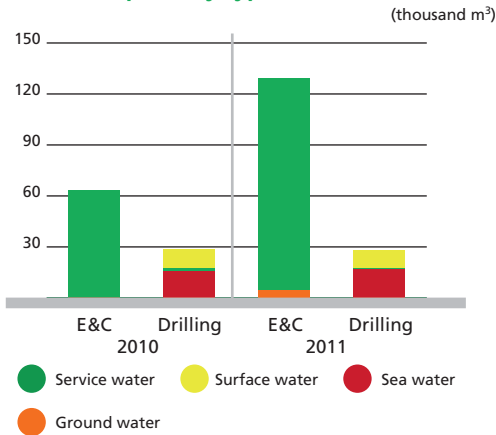
Spill prevention equipment has been installed in high risk areas of the Boscongo Yard, such as fuel handling and storage, the maintenance workshop and oil and chemical storage areas. This equipment includes:

- a new oil storage system, with installation of a special tank to avoid cylinders, thereby reducing the spill risk during handling, collection and transport;
- a secondary containment system and spill kits on diesel storage and used oil area to ensure adequate response in the event of spills.

A Spill Response Brigade was set up in 2011. This is a team of workers qualified through a specific training programme focusing on spill response material handling and procedures. Six workers from the mechanical workshop have already taken the training course and are qualified as spill responders. In order to improve the preparedness of the Spill Response Brigade, spill drills

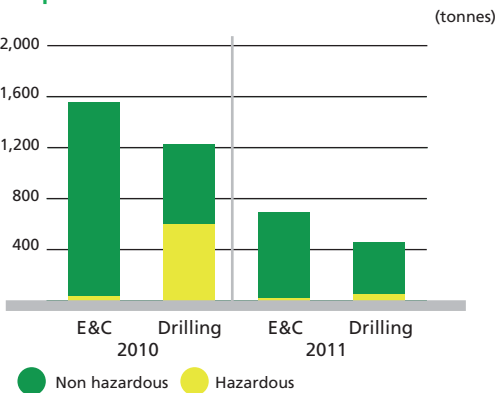
are planned on a quarterly basis. They are based on actual scenarios from past spills or risks of spill, and involve operative and sometimes administrative personnel. This is an opportunity to apply and check the spill response techniques.

### Water consumption by type



Note: the increase in water consumption in 2011 is mainly due to: the use of ground water from the well in Boscongo Yard to balance water shortage from the public network due to technical issues; the Yard renovation activities, such as building of new facilities and water losses during the water network upgrading; the realisation of the USAN project in Boscongo Yard.

### Waste production



Note: in 2010, a large amount of mixed industrial hazardous waste was produced during the upgrading of the TAD barge (first half of 2010).

### Water consumption

Water consumption by Business Units is from different sources depending on the activity and the location. For the Engineering & Construction BU located in the city, water is sourced from the public waterworks and from water wells. It is used for general services in the yard and guest houses, the medical centre, and for maintenance and construction activities.

For the Drilling BU, specifically the Saipem SpA Onshore (M'Boundi) drilling field, water comes from a surface source and is used mainly for general camp services.

The company is carrying out several water saving activities, such as a specific water saving campaign, awareness raising messages through toolbox talks, training, and signs and posters on all Saipem's sites. Continuous inspections of the internal water network (pipes, taps, etc.) are carried out to detect leaks and to implement immediate corrective action to stop water loss.

In addition, a general refurbishment of the internal water network in is ongoing in the Boscongo Yard. The existing water network is very old, and has leaks and unnecessary connections that lead to losses in the system. Initiated in early 2011, the programme is run by a team from the Asset department in the Civil Engineering division. So far, more than 14 water pipe connections have been changed or repaired. At the same time, the water network map has been updated to facilitate future intervention.

### Waste management

A procedure for waste management was put in place with the objective of giving greater attention to this environmental aspect. The procedure focused on waste minimisation and on the monitoring of its generation, transport and final disposal.

Considering the local context, the main activities are the application and promotion of the 3R principle (Reduce, Reuse and Recycle), in particular for non-hazardous waste such as wood, paper and plastic. Of all activities



*Training on waste separation and management*

coming under 3R, the reuse of wood to fabricate artisanal furniture and products (tables, chairs, and crane pads), the progressive elimination of disposable glasses and cups, and the strong campaign to reduce paper consumption (double-sided printing, reuse of notebooks, etc.), are the most relevant. Furthermore, a culture of ‘waste segregation’ was established according to the type of waste generated in the administrative and construction areas. A colour code was applied to facilitate identification and segregation of each type of waste. This practice has improved waste management in terms of minimisation and recording.

In the administrative area, a new format was put in place to ensure proper recording of waste generation, type of waste, subcontractor identification and final disposal. Moreover, an HSE audit schedule is being carried out on waste services companies to ensure the proper collection, transport and disposal of waste. In 2011, 6 subcontractors underwent audit.

### Energy consumption

Two energy sources are used, namely fuels (diesel and gasoline) and electricity (from the public grid). Overall fuel usage in the Congo for Saipem operations

#### Energy Consumption

		Total in the Congo		E&C		Drilling	
		2010	2011	2010	2011	2010	2011
Diesel	(tonnes)	5,644	7,753	1,333	1,375	4,311	6,378
Electric Energy	(kWh)	1,681,373	541,465	1,681,373	541,465	-	-
Gasoline	(tonnes)	-	4	-	4	-	-

Note for all environmental data:  
 E&C: Boscongo Yard (data take into consideration the projects inside the yard) and SES.  
 Drilling: Onshore (Rig 91 and Rig 95). Offshore by TAD.

varies according to the volume of work, since it is mainly used for generators, equipment and cars.

A total of 7,753 tonnes of diesel and 541,465 kWh of electricity from the public grid were consumed in 2011.

By way of response, the company is committed to reducing energy consumption in the Congo. The first step includes several energy saving training campaigns carried out in 2011, mainly targeting the use of electricity. These campaigns consist of informing both administrative and operational workers on the need to save energy in their activities, by briefing them on the general environmental impact of energy consumption.

## CUSTOMERS

Saipem companies operating in the Congo mainly work for locally registered units of several Oil&Gas companies.

Thanks to their presence in the country since 1980, Saipem companies have accompanied customers in their growth for the past 30 years and have naturally established themselves as key partners in the Congolese Oil&Gas industry. This historical relationship is continuously maintained not only in the framework of projects executed, but also throughout regular joint initiatives that aim to sustain the development of the local socio-economical context.

Annual satisfaction evaluation also constitutes a privileged channel for open communication with customers and is a key input for the continuous improvement of Saipem companies. In 2009 and 2010, Boscongo carried out a customer satisfaction evaluation. The study concluded that there were 'good' improvements in QHSE, engineering, pre-commission and socio economic management.

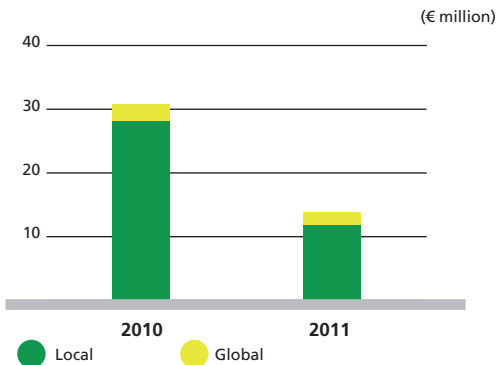
## VENDORS

Saipem's commitment to local content through the promotion of local vendors is demonstrated by the amount of purchases from local suppliers and subcontractors. After the introduction of the SAP system in late 2009, the total local purchases amounted to about €28 million, accounting for 91% of the total expenditure in 2010. This fell to €12 million in 2011. The local goods purchased mainly consist of fuel, logistical materials, car accessories, office furniture and drilling equipment, while services purchased are primarily training, quality testing, security and waste. In total, about 100 different local suppliers and subcontractors have been involved.

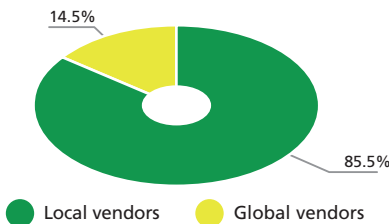
## LOCAL COMMUNITIES

A key tenet of a sustainable business strategy is the promotion of long-term socio-economic development in the regions where Saipem has a long-standing presence. In conjunction with a strong local content focus, Saipem also contributes to the improvement of the standard of living

### Total purchased



### Percentage of purchases by Local and Global vendors



**Focus on subcontractor development**  
**Diving subcontractor: TPSMI**

*TPSMI is a diving company which started operations in Gabon in 1993. It has been present in the Congo since 2008. TPSMI now has bases in the Congo, Angola, Cameroon and Gabon. The company was chosen as one of the main subcontractors for Saipem Energy Service through specific diving audits that were carried out*

*to check the quality of its services. The selection of TPSMI was also based on its ambitious local content development programme. The company's objective is to train local qualified professional divers. It has been funding local personnel for training as certified IMCA professional divers in South Africa. This modular training scheme was*

*designed to ensure that the Learner Diver is capable and competent to dive safely as a commercial diver and to develop a career path, starting out as a diver helper and working his/her way up to certified professional diver. Through the contract with TPSMI, SES has indirectly provided employment opportunities to 5 Congolese divers.*

of local populations through various local community initiatives focusing on healthcare, education, social development, environment and culture. In the Congo, community initiatives are

carried out directly by Saipem companies or through partnership with important institutions and associations. In Pointe-Noire, two types of communities have been identified: (i) an urban



Works at  
Boscongo Yard



community composed of citizens of the town, mainly working in commercial activities and industry, and (ii) a rural community composed of inhabitants dedicated to agriculture and fishing. According to the specific context and the needs identified, initiatives mainly focused on the promotion of education for children in the urban community (collaboration with schools and awareness campaigns), while for rural community initiatives focused mainly on health promotion.

### Promoting education

#### Technical education development

Saipem companies in the Congo have developed a strategic partnership with IST-AC, a scientific department of the Catholic University of Central Africa. The partnership with IST-AC is based on the provision of apprenticeship opportunities, with the objective

of training Congolese engineers and maintenance technicians in the Boscongo Yard.

The programme requires the student to spend 50% of his/her school time in the institute for theory classes, while the remaining 50% is spent in the yard for on-the-job practice.

The company provides permanent tutorship during the training period, covers the schooling fees and gives remuneration to the students for the training period. Students who graduate under this partnership have priority in the recruitment process. Up to 2011, 16 students were trained and 6 were hired by the company.

#### Tree conservation and planting

Boscongo started environmental education program in partnership with the public secondary school Antoine Banthoud, in Pointe-Noire. The first theme developed was 'Tree conservation



Rural communities in the Congo

and planting', which consisted of 2 awareness sessions on forest protection and the activity of planting 10 trees in the school area.

The trees are now 'sponsored' by 20 pupils.

The sponsorship consists of ensuring that the trees are regularly watered, treated well and protected.

Monthly assessments are taking place and, at the end of the program, the pupils who have kept the trees in good condition are rewarded with small prizes.

In addition, environmental awareness sessions continue carried out twice a month by the Biology teacher.

As part of the organisation and support of this initiative, Boscongo provides all the necessary equipment for the tree planting competition: watering cans, wheelbarrows and shovels which are kept at school's warehouse.

## Promoting safety

### Road Safety in communities

The 'Road Safety' (*Sécurité Routière*) programme is targeted at improving the safety behaviour of drivers and at raising community awareness of accident prevention measures. It is a collective programme involving several leading Oil&Gas companies operating in Pointe-Noire (Total, Eni, Apave, SERVETEC, Dietsmann, SPIE, SGS, Prezioso, Baker Hugues, Bouara & Sarl, and Geoservices, among others).

The first part of the programme was conducted in 2 schools in the Djeno rural community, where more than 100 pupils attended a special training protocol to recognise road risks and signals used to prevent accidents. The second part consisted of an expo-exhibition in centre of Pointe-Noire, where all the companies involved presented different themes on



The tree planting program

the prevention of road accidents. The expo-exhibition was opened for a day and a half and received more than 100 visitors who attended different sessions on themes such as 'safety belts', 'speed' and 'signals', as well as other topics presented through training stands, videos, sketches and simulators. During this important event, which saw the presence of representatives of local government, all the leading Oil&Gas companies of the programme signed a policy undertaking to continue their activities in order to achieve safe driving behaviour in Pointe-Noire. Boscongo participated in the organisation of all these activities, and contributed with important proposals such as the 'ABC model for speeding' to analyse the behaviour of fast drivers, and the composition of an original song 'Defensive driving' as an awareness tool for children.

This programme was an important example of working together towards a sustainable goal - community safety.

## Promoting environmental protection

### Public awareness campaigns

Cleaning campaigns were carried out with the objective of making the public aware of the importance of preserving the ecosystems. Boscongo was the first private company to develop and support this kind of public campaign in Pointe-Noire. Two 'Beach cleaning' campaigns were successfully conducted in two different marine ecosystems: the 'Pointe-Noire bay' and the 'Mangrove Songolo'.

The first campaign was carried out in Pointe-Noire bay where the Port Project is located, and before the construction operations start. The campaign was very appreciated by local authorities and information was published in local newspaper.

The second campaign 'Mangrove Songolo' was chosen because it is a sensitive area close (10 km) to the Boscongo Yard and because this



mangrove has been polluted by urban waste.

105 Saipem employees participated as volunteers, motivated and enthusiastic, with the objective of creating awareness among citizens on the importance to protect the beaches and avoid pollution. Several stakeholders such as local authorities, clients, and the population of the community were invited to the campaigns.

**Promoting health**

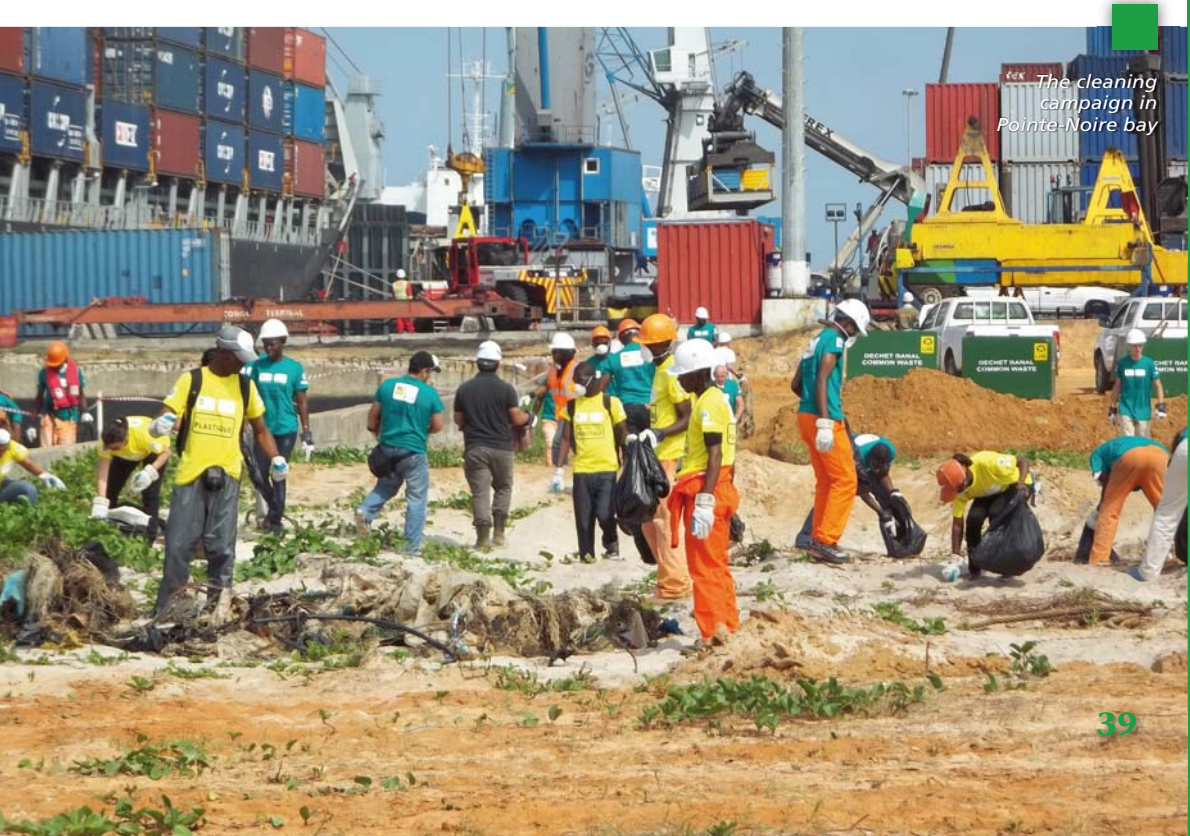
For communities, health initiatives focus mainly on the fight against two major diseases: malaria and AIDS.

**Malaria prevention programme for rural communities**

The ‘malaria prevention programme for rural communities’ was conducted in partnership with the Ministry of Health for the Kouilou region, in accordance with WHO and UNICEF recommendations, the National Plan against malaria and the Saipem malaria control programme. In 2011, the programme involved

4 different villages of the Loango community who attended awareness and training initiatives carried out by the Ministry of Health for the Kouilou region (where the community is located). The training sessions were based on prevention measures, proper use of nets and how to recognise malaria symptoms. To ensure that messages were understood, sessions were carried out in the native language.

Following the training sessions, 204 insecticide-treated nets were distributed to 113 pregnant woman and children under 5 years, who are vulnerable to malaria, according to WHO guidelines. The programme considered a monitoring phase to verify the proper installation and use of the insecticide-treated nets distributed and to develop tests to evaluate the retention level of messages conveyed during the awareness raising session. Three visits were made to the community and very encouraging results were recorded: 71% of insecticide-treated nets were properly installed and 91% of families had completely understood the message on malaria prevention.



*The cleaning campaign in Pointe-Noire bay*



Distribution of insecticide-treated nets during the malaria prevention programme



The programme considered future activities such as the technical training of local medical staff on malaria tests and the provision of malaria rapid tests for bush clinics.

### Awareness campaign against AIDS

The Kersivac (Kermess Sida Vaccance) is an annual youth awareness campaign organized by the National Council for the Fight Against AIDS (Conseil National de Lutte Contre le SIDA - CNLS). It consists of sessions with films and plays, educational games and a voluntary test. The main objectives are to raise awareness among teenagers and students of preventive measures and to invite people to participate in voluntary and anonymous AIDS testing. Boscongo participated in 2011 and 2012 with a stand at which the company's medical staff provided information and offered free eye tests, and logistic support. Further activities against AIDS are being planned with the support of the CNLS, the main stakeholder in this area of vital importance.



Kersivac for the fight against AIDS

# FUTURE CHALLENGES

In their long-term vision in the Congo, Saipem companies aim at becoming the leader in engineering, construction and drilling, in terms of quality, reliability, technology and sustainability, taking advantage for future challenging projects.

In order to succeed, Saipem companies are intended to:

- continue and reinforce the local content model established, promoting local employees' careers development;
- select cutting-edge technologies for

operational competitiveness and best practices for environmental protection;

- continue and reinforce the relation with clients and vendors, with flexibility to operate within any contractual model, sharing knowledge and experiences;
- maintain a safe and healthy working environment for employees and avoid any disturbance to neighbouring communities.



Offshore operations



## GLOSSARY & ACRONYMS

### AFC

Administration, Finance and Control

### EPIC

Engineering, Procurement, Installation and Construction

### EPC

Engineering, Procurement and Construction

### FCFA

Congo Central African Franc

### GDP

Gross Domestic Product

### HAT

High Antimeridional Tide

### HR

Human Resources

### HSE

Health, Safety and Environment

### HSE&S

Health, Safety, Environment and Sustainability

### ISPS

International Ship and Port facility Security code

### LAT

Low Antimeridional Tide

### LTI

Lost Time Injury. Any work-related injury, which renders the injured person temporarily unable to perform any regular job or restricted work on any day/shift after the day on which the injury occurred. In this case 'any day' includes rest day, weekend day, and holiday. The day of the accident is not counted when calculating lost workdays. Fatalities and permanent total disabilities are included in the calculation of the total the number of the Lost Time Injuries

### LTIFR

Lost Time Injury Frequency Rate

$$LTIFR = \frac{\text{No. LTI} \times 1,000,000}{\text{Total worked man hours}}$$

### MedEvac

Medical Evacuation

### NDT

Non Destructive Testing

### PNR

Pointe-Noire

### TAD

Tender Assisted Drilling barge

### TRI

Total Recordable Incidents. Term to define the sum of Lost Time Injuries (including fatalities and permanent disability cases), work restricted cases and medical treatment cases

### TRIFR

Total Recordable Incidents Frequency Rate

$$TRIFR = \frac{\text{No. TRI} \times 1,000,000}{\text{Total worked man hours}}$$

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#### Feedback

What you think of this Case Study matters to us. As we are constantly striving to improve our reporting, we would very much welcome your feedback. We will also be pleased to answer any questions you may have.

Contact us at: [sustainability@saipem.com](mailto:sustainability@saipem.com)

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