



# COUNTRY SUSTAINABILITY REPORT

## KAZAKHSTAN



## ABOUT THIS COUNTRY REPORT

*The present report is part of the Sustainability Reports that Saipem started to publish in 2003, being aware of the importance of informing the stakeholders on the sustainability approach Saipem implements in the areas of the world where it operates.*

*The report focuses on a specific country or area and describes the principles, activities and performance that has been achieved by Saipem and its Operating Companies toward sustainable development.*

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

*The report has been structured using an approach consistent with the GRI Guidelines, identifying those indicators more representative of Saipem presence in the country.*

*The Country Sustainability Reports, together with the annual Saipem Sustainability Report, represent the main Saipem tools to communicate its vision for Sustainability to all its stakeholders.*

## METHODOLOGY

*This Local Sustainability Report has been developed in accordance with the principles of materiality, stakeholder inclusiveness, sustainability context and completeness. As for the annual Saipem Sustainability Report, this Local Report is strongly focused on stakeholders. All relevant and legitimate stakeholders in Kazakhstan have been identified and their needs analysed. This Report is intended to describe Saipem commitment, performance and its engagement with the Kazakh stakeholders.*

*A set of Key Performance Indicators (KPIs) was selected to support the information to be provided to stakeholders. Data are taken from the information systems used for the general management and accounting of companies' operations or from public data made available by recognised Institutions.*

*This Local Sustainability Report illustrates Saipem activities in Kazakhstan, covering all projects conducted by Saipem Companies in Kazakhstan, which represents the consolidation area of the data.*

*All data have been reported for 2009 and, when available, for previous financial years.*

*Information and data updated at 2009.*

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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 KAZAKHSTAN

## *Local Content is our critical market differentiator that creates competitive advantage*

Saipem reality in Kazakhstan can be presented by Saipem Kazakhstan Branch, Ersai as Joint Venture of Saipem and the Kazakhstan business group ERC Holdings, Saipar Drilling.

The present Case Study describes these Companies' way of being and working in the country, its interaction with local stakeholders and its socio-economic and environmental performance, for those key areas where they are present.

Local Content is their critical market differentiator that creates strong competitive advantage among other companies. Particular care is devoted in order to create conditions which allow growing of local employees as well as local industrial enterprises within the Republic of Kazakhstan.

The mission of Saipem Companies in Kazakhstan is to remunerate capital investments and to be beneficial to local communities through growing in competence and efficiency.

Finally, we pursue the satisfaction of our clients through developing effective innovative and top quality solutions, with full respect of Safety, Quality, Health, Sustainability and Environmental requirements of RoK and International Standards.

**2,997**

Number of Local Employees

**63%**

Local Content for employment

**65%**

of local suppliers and subcontractors qualified

**6,300-7,000**

people: indirect local employment generated by Ersai

**50%**

increase of base salary for employees successfully attending technical training in the Training Centre of Ersai



# LETTER FROM THE MANAGEMENT

Saipem is working in Kazakhstan through different Companies and Branches, always pursuing the satisfaction of its clients. Our presence in Kazakhstan has always been based on a commitment of working responsibly and contributing to the economic and social development in the area, and also to create stable and trustworthy relations with the local neighbouring communities, the Districts and the Oblasts authorities.

By promoting Local Content, in term of employment, transfer of know-how and professional qualification of local suppliers and subcontractors, Saipem sets a goal to contribute to the growth and development of the region. Local Content is an essential element of our policy in Kazakhstan, recognising that this can differentiate our way of working from the one of our competitors.

Besides, the very difficult climatic conditions and the sensitive areas with high environmental value and biodiversity of the Caspian Sea, have represented a technological challenge for Saipem. In fact, our company intensively worked on the development and improvement of its technological assets and operations, in order to minimise the ecological footprint of its activities, both onshore and offshore.

Aware of their responsibility, Saipem Companies in Kazakhstan have always applied a focused approach towards their employees, in promoting their growth and personal development, and guaranteeing their health and safety at work, also spreading a strong safety culture in each activity and operation conducted in the Country.

The promotion of local content and the proactive and open approach in the relation with the communities have demonstrated to be a success factor for both our present and future in the Country. Saipem scope in Kazakhstan is therefore to create long term value through a sustainable business strategy based on its 'core' attitude, generating wealth and promoting a sustainable development for the host country.

**Giuseppe Caselli**  
Saipem Country Manager Kazakhstan



# INTRODUCTION TO SAIPEM

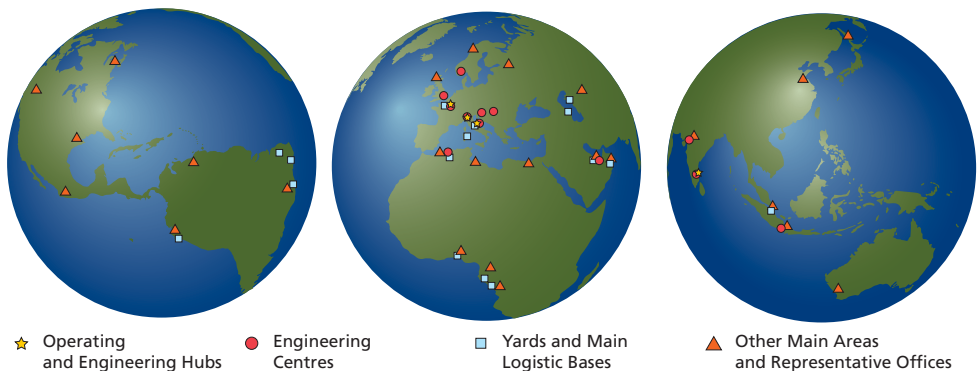
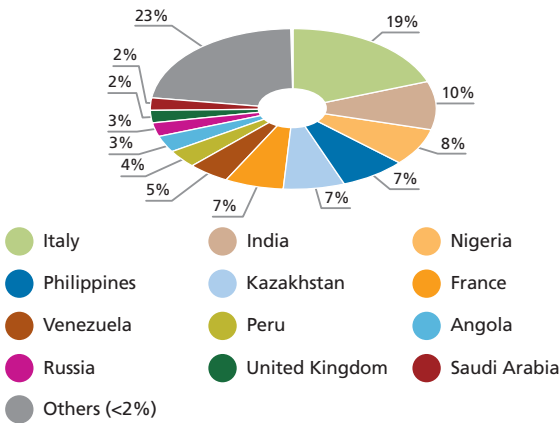
Saipem, 43% owned by Eni, is an international group with a strong bias towards oil and gas related activities in remote areas and deepwater. The Company began operations in the 1950s and it is now a leader in the provision of engineering, procurement,

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

The organisation, since providing many different kinds of services, has been rationalised into three global Business Units: Onshore, Offshore, Drilling. It enjoys a superior competitive position for 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 – activities in remote areas, deepwater, difficult oil. The Group is a truly global contractor, with strong local presence in strategic and emerging areas such as West Africa, Americas, Central Asia, Middle East, North Africa and South East Asia.

Saipem is an international company employing over 37,000 people from around 115 nationalities. The major part of its human resources (85% in 2008) is locally employed.

**Saipem workforce distribution by nationality (2008)**



# SAIPEM'S SUSTAINABILITY APPROACH

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

Saipem has a presence in many locations around the world, operating with a decentralised organisation in order to respond to local needs and sustainability issues. Everywhere it works, the Company plays an active role in the local communities, mainly offering employment opportunities, and personnel training; by working effectively with local suppliers and subcontractors, creating economic and

social value, and finally by contributing to infrastructures construction (e.g. access roads, construction camps with all the facilities such as hospitals, power generation, etc.).

Saipem's international workforce and breath of internationalism is another facet of sustainability: all personnel are treated with dignity, always respecting their rights, cultural values, local customs and traditions, their diversity and identity.

For each project, social, economic and environmental effects are continuously monitored, as well as the satisfaction of customer's requirements.



# SAIPEM AT A GLANCE

## OFFSHORE

Saipem's pioneering work in pipeline installation (a total of 28,000 km laid since late 1950s) is matched by its experience in installing offshore platforms, in which it has mastered both the heavy lift and the float-over techniques.

Saipem has now evolved into an integrated EPCI contractor, having completed some 120 offshore construction projects over the last ten years, including groundbreaking achievements from complex deepwater developments to major trunk line systems.

FPSO (Floating Production Storage and Offloading) units are also part of Saipem's offshore line of products, both as new-built delivered turnkey to the customer, and as tanker conversions leased to and operated for the customer, as well as marine terminals and conventional buoy moorings.

Saipem owns a strong, technologically advanced and highly-versatile fleet

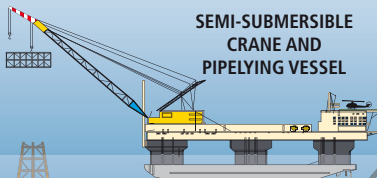
(including 28 construction vessels and FPSO), and world class engineering and project management expertise.

Saipem capabilities are also supported by significant fabrication capabilities based at the core of major oil and gas provinces (Angola, Azerbaijan, Congo, Kazakhstan, Nigeria, UAE, Mediterranean Sea and Indonesia), with a potential of fabrication of 130,000 tonnes per year.

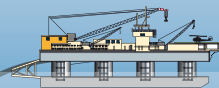
These unique capabilities and competences, together with a long-standing presence in strategic frontier markets, represent an industrial model that is particularly well suited to EPIC (Engineering, Procurement, Installation, Construction) projects.

## DRILLING

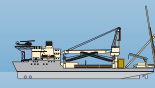
Saipem vast experience in managing drilling activities, associated with an adequate technological and operational level, have progressively developed the Company's actual capabilities. Over many decades of performance, Saipem has drilled over 7,100 wells, 1,750 of



SEMISUBMERSIBLE PIPELAYING VESSEL



J-LAYING VESSEL



DRILL SHIP





which have been offshore, totalling an overall depth of about 17.8 million m.

Offshore, Saipem operates both in shallow and deep water using jack-ups, semi-submersible units, a tender assisted drilling vessel and a drill ship. For Onshore, Saipem operates with around 100 Rigs self-owned.

**ONSHORE**

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 contractual basis, for complex oil & gas facilities, including production, treatment, liquefaction, refining and petrochemical plants, pipelines, pumping and compression stations and terminals.

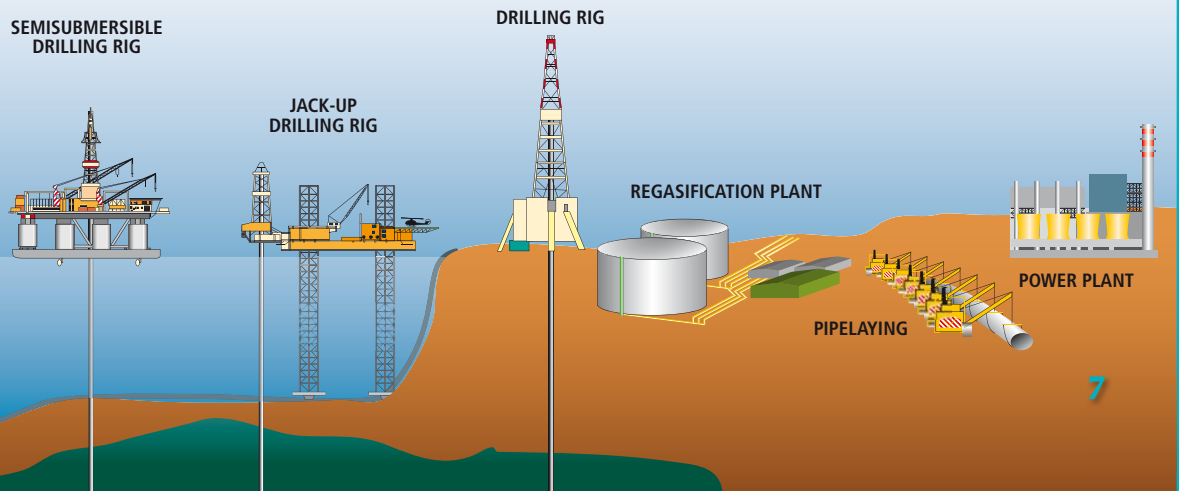
Saipem's expertise focuses on the execution of large projects with a high degree of complexity in terms of engineering, technology and operations, with a strong bias towards

challenging projects in difficult environments and remote areas. Land pipeline design and construction has historically been one of the mainstays of Saipem business. The Company has laid a record of 100,000 km of pipelines on five continents.

Saipem Group has designed and built 37 grass-roots refineries, more than 500 process units and more than 400 plants worldwide to produce chemicals from natural gas.

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

Saipem plays also a significant role in the design and execution of a large-scale civil infrastructure projects and also offers integrated environmental remediation services, such as those relating to soil and ground water and contaminated sites.



# SAIPEM IN THE WORLD

<b>REST OF EUROPE</b>		<b>2006</b>	<b>2007</b>	<b>2008</b>
Revenues	(€ million)	1,093	954	878
Investments	(€ million)	17	14	9
Workforce	(units)	5,610	3,618	4,793
Local Workforce	(% of total)	86	85	73
Energy consumption	(toe)	12,222	44,386	63,095
HSE Training	(hours)	27,105	43,991	29,444

<b>ITALY</b>				
Revenues	(€ million)			
Investments	(€ million)			
Workforce	(units)			
Local Workforce	(% of total)			
Energy consumption	(toe)			
HSE Training	(hours)			

<b>AMERICAS</b>		<b>2006</b>	<b>2007</b>	<b>2008</b>
Revenues	(€ million)	545	745	590
Investments	(€ million)	14	188	233
Workforce	(units)	2,730	4,021	4,562
Local Workforce	(% of total)	74	71	87
Energy consumption	(toe)	12,222	52,392	115,130
HSE Training	(hours)	60,497	68,401	74,357

<b>WEST AFRICA</b>		<b>2006</b>	<b>2007</b>	<b>2008</b>
Revenues	(€ million)	1,570	1,677	1,950
Investments	(€ million)	31	54	49
Workforce	(units)	5,170	5,814	6,471
Local Workforce	(% of total)	69	69	67
Energy consumption	(toe)	10,043	52,744	56,633
HSE Training	(hours)	37,861	102,014	146,953

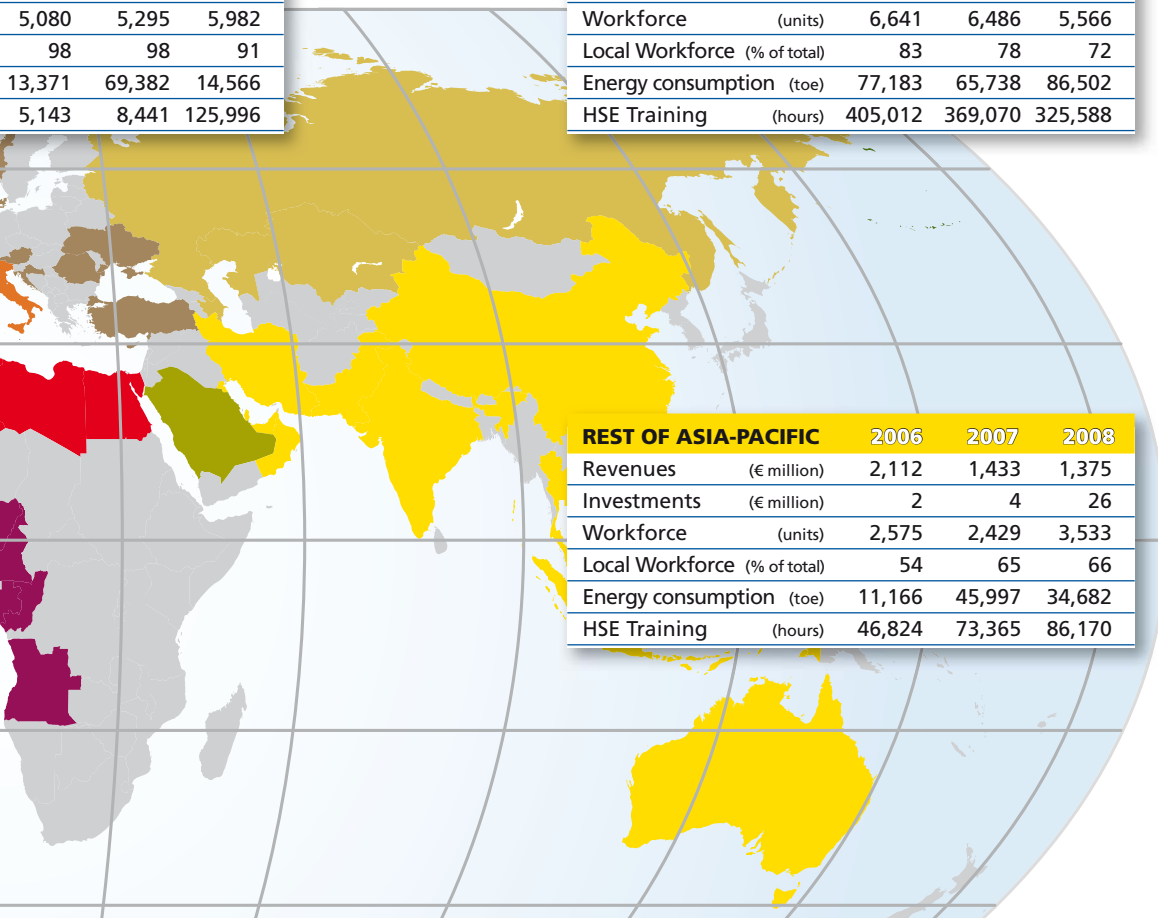
<b>NORTH AFRICA</b>				
Revenues	(€ million)			
Investments	(€ million)			
Workforce	(units)			
Local Workforce	(% of total)			
Energy consumption	(toe)			
HSE Training	(hours)			

## Additional data for investments

Further investments not allocated by Areas were (in € million) 458 in 2006, 1,184 in 2007 and 1,463 in 2008.

2006	2007	2008
773	1,051	1,135
8	18	68
5,080	5,295	5,982
98	98	91
13,371	69,382	14,566
5,143	8,441	125,996

CIS		2006	2007	2008
Revenues	(€ million)	1,052	1,031	1,092
Investments	(€ million)	68	75	107
Workforce	(units)	6,641	6,486	5,566
Local Workforce	(% of total)	83	78	72
Energy consumption	(toe)	77,183	65,738	86,502
HSE Training	(hours)	405,012	369,070	325,588



REST OF ASIA-PACIFIC		2006	2007	2008
Revenues	(€ million)	2,112	1,433	1,375
Investments	(€ million)	2	4	26
Workforce	(units)	2,575	2,429	3,533
Local Workforce	(% of total)	54	65	66
Energy consumption	(toe)	11,166	45,997	34,682
HSE Training	(hours)	46,824	73,365	86,170

2006	2007	2008
372	727	1,475
7	42	8
1,231	1,690	1,783
47	43	55
11,435	33,160	35,991
7,441	36,765	47,626

SAUDI ARABIA		2006	2007	2008
Revenues	(€ million)	-	1,912	1,599
Investments	(€ million)	9	65	81
Workforce	(units)	2,730	4,937	5,300
Local Workforce	(% of total)	97	97	96
Energy consumption	(toe)	35,125	59,322	64,439
HSE Training	(hours)	7,432	89,275	210,281

**Additional data for 2006**

In 2006, some data were allocated to vessels (seaworld), including a total workforce of 3,147 units, an overall energy consumption of 187,598 toe and a total 64,595 hours of HSE training.

# KAZAKHSTAN



## COUNTRY OVERVIEW

*Kazakhstan is the largest country in Central Asia and one of the most sparsely populated in the world. The country has considerable mineral wealth and vast areas of arable land. It possesses enormous fossil fuel reserves and plentiful supplies of other minerals*

*and metals. Kazakhstan's industrial sector rests on the extraction and processing of these natural resources.*

*It also has a large agricultural sector featuring livestock and grain.*

*Kazakhstan's economy is larger than those of all the other Central Asian states*

*and it now counts on significant investment in its vast upstream oil and gas resources.*

*Kazakhstan inherited significant amounts of infrastructure from the Soviet times and has a relatively well-educated population.*

## ECONOMIC AND ENERGY OVERVIEW

### Economic indicators

Gross Domestic Product (2008 est.)	(billion \$)	135.6
GDP real growth rate (2008 est.)	(%)	2.4
GDP per capita (2008 est.)	(\$)	11,500
Inflation rate (consumer prices) 2008 est.	(%)	17
Industrial production growth rate (2008 est.)	(%)	2.4
Labour force (2008 est.)	(million)	8.412
Labour force by sector (2006 est.):	agriculture	32
	industry	18
	services	50
Unemployment rate (2008 est.)	(%)	6.6

Source: CIA World Fact Book (2009) Kazakhstan.

### Energy supply and direct consumption

	Production	Import	Export	Consumption
Coal and Peat	42,271	651	(12,629)	7,272
Crude oil	65,837	6,471	(58,871)	6
Petroleum Products	-	1,704	(3,326)	8,782
Gas	22,125	9,279	(12,637)	15,759
Hydro	668	-	-	-
Combustible Renewables and Waste	73	-	-	73
Electricity	-	358	(286)	4,423
Heat	-	-	-	8,319

In thousand tonnes of oil equivalent (ktoe) on a net calorific value basis.

Source: 2006 Energy Balance for Kazakhstan, IEA Energy Statistics.





View of Atyrau

## SOCIAL AND ENVIRONMENTAL ASPECTS

### Social indicators

Population (July 2009 est.)	15,399,437
Life expectancy (2009 est.) - total population	69 (male 63, female 73)
Population growth rate (2009 est.)	0.4%
Religions	Muslim (47%), Russian orthodox (44%), Protestant (2%), other (7%)
Literacy rate (1999 est.)	99.5%
Languages (2001 est.)	Kazakh (state language) 64.4% Russian (official, used in everyday business) 95%

Source: CIA World Fact Book (2009) Kazakhstan.

### Environmental indicators

Area <sup>(1)</sup>	(sq km)	2,724,900
Land use (2005) <sup>(2)</sup> :	- arable land	(%) 8.28
	- permanent crops	(%) 0.05
	- other	(%) 91.67
Electricity Consumption (2007 est.) <sup>(2)</sup>	(bln kWh)	64.69
CO <sub>2</sub> emissions <sup>(3)</sup>	(kt)	180,925
CO <sub>2</sub> emissions per capita <sup>(3)</sup>	(t)	11.9
Freshwater consumption <sup>(1)</sup>	(mln cm)	19,906
Freshwater consumption per sector:	- agricultural	(%) 58
	- industrial	(%) 27
	- households	(%) 3.6

(1) Statistical Agency of RoK (2007) *Statistical Yearbook 'Kazakhstan in Year 2007'*.

(2) CIA World Fact Book (2009) Kazakhstan.

(3) World Statistics Pocketbook (2007) *Kazakhstan Summary Statistics*.

# SAIPEM PRESENCE IN KAZAKHSTAN



Saipem reality in Kazakhstan is represented by different Companies, namely Saipem Kazakhstan Branch with offices in Almaty, Aktau, Uralsk, Atyrau, and Aktyubinsk; Saipar Drilling, as Joint Venture Company with Parker, based in Aksai, and Ersai as merging of Saipem Group's worldwide experience in offshore and onshore construction, installation and capabilities with Kazakh business group ERC Holdings.

**Ersai Caspian Contractor Llc** (Ersai) was founded in September 2003 in Aktau and started its initial operation as investment activities with the construction of the fabrication and logistic Yard in a shore area of about 220 hectares located in Mangistauskaya Oblast, Karakia District, village of Kuryk, 70 kilometres south of Aktau city. The Yard is a fully equipped construction base with the fabrication and personnel accommodation facilities necessary to conduct its commercial activity.

The first phase of construction of the Kuryk Yard was completed in 2005, when Ersai started the implementation of Trunk Line and Production Flowline project as a subcontractor of Saipem for the client Agip KCO in Kashagan project. In August 2005, Ersai commenced the fabrication of simple steel structures under Piles and Flares Project. In

2006-2008 period, Ersai started the execution of other projects such as the Procurement and Fabrication of semi-complex steel structures such as Pipe Racks and the huge project Hook Up and Commissioning of Complex 'D' and 'A' Offshore Facilities.

In 2007, Ersai started the second phase of Yard development which included the extension of the quay side, by adding additional 200 m of jetty, plus the construction of 100 m mooring dolphin and 200 m service jetty; and the construction of more than 1,700 m of breakwaters protecting the Kuryk port water front basin.

Today Ersai is the leading company in Mangistau region fully equipped with all type of cutting, bevelling, welding and painting equipment and crange up to 1,000 tonnes lifting capacity which can provide very large range of services.

**Saipem** is working, as contractor company, in the context of the North Caspian Production Sharing Agreement (PSA), for the appraisal and development of 11 blocks of the Kashagan field located in the Kazakh sector of the Caspian Sea, 80 km south-east of Atyrau. It is the first large-scale offshore petroleum development in Kazakhstan.

Saipem was awarded by Agip KCO, main PSA Operator in the period 2005-2008, a series of contracts for engineering, construction and installation.

Saipem is also working with land drilling rigs in the north of Kazakhstan. Saipem is operating in Kazakhstan through its branch (**Saipem Kazakhstan Branch**).

**Saipar Drilling Co BV** (Saipar) is a Joint Venture between Parker Drilling Co and Saipem SpA, created to provide six rigs and conduct the work to Karachaganak Petroleum Operation BV. Saipar has mobilised its own Drilling Camp to place all personnel involved, providing accommodation apart from additional work places.

## MAIN PROJECTS

### Main projects conducted in the last 5 years

Name	Client	Description
<b>Ersai Caspian Contractor Llc</b>		
Pipe Racks project	Keppel Kazakhstan Llp	Procurement & Fabrication (assembling and welding of Pipe Racks; Non Destructive Test-NDT and Joint Coating of all welds; Painting and fireproofing) of Ancillary Steelwork & Piperacks.
Pipe Racks project	Agip KCO	Procurement and Fabrication of Ancillary Steelwork & Piperacks; testing of piping, supply and installation of E/I and telecom material; overall project management.
Piles & Flares project	Saipem	Assembling and Welding of cans for the various lengths of piles to be transported. Assembling and welding of flares. NDT and Joint coating of all welds. Skidding of Pipe Racks and Manifolds.
Trunklines & Production Flowlines	Saipem	Pipe Coating and Load out.
Hook-up and commissioning	Agip KCO	Hook up & commissioning of Complex D and Complex A offshore facilities. In Kuryk yard the following activities are being carried out: inshore works for the reinstatement of Loose Items, prefabrication, marine logistics.
D-Island Rig Conversion Decommissioning and Relocation of the D Island Rig 401 and Rig 402 and EPFC1	ExxonMobil	Activities execution in D&R phase consists of the following steps: material & equipment inspection; cutting; fitting; welding; non-destructive testing; final dimensional control; painting; final release inspection. Activities execution in EPFC1 phase foresees Engineering, Procurement, Fabrication and Construction.
<b>Saipem</b>		
Kashagan Field Development Experimental Program		
Trunklines & Production Flowlines project	Agip KCO	Laying and Trenching Trunkline from Very Shallow Water section to Island D (HUB1) and to Onshore Process Facilities (OPF); Laying No. 2 Fibre Optical Cables between Very Shallow Water to Island D (HUB1) and to OPF; Laying and Trenching Intrafield lines Production Flowlines, Laying Power Fibre Optical Cable, Laying Methanol and Chemical Umbilical, between Island D (HUB1) and Island A; ROW Road construction 23 km.
Piles & Flares project	Agip KCO	Manufacturing, assembly, transport and installation of 45 piles (80") and 2 flares. Total weight of around 15,000 tonnes; Installation of 17 module barges.
Development of Drilling Units	Agip KCO	Mobilisation of rigs, offshore erection and common testing of the rigs, rig-up commissioning and acceptance testing, operating drills on 12 wells on the Island D, Operations & Maintenance of drilling unit and its common devices.
Rig 5827	Zhaikmunai	Operation and maintenance of onshore drilling unit.
Rig 5870	OTG	Operation and maintenance of onshore drilling unit.
Rig 5843	Zhaikmunai	Operation and maintenance of onshore drilling unit.
<b>Saipar Drilling Co BV</b>		
Karachaganak Oil Field Rig 2 (owned by Saipem and KBG)	KPO BV	Operation and maintenance of onshore drilling unit.
Rig 107 (owned by Parker)	KPO BV	Operation and maintenance of onshore drilling unit.
Rig 216 (owned by Parker)	KPO BV	Operation and maintenance of onshore drilling unit.
Rig 249 (owned by Parker)	KPO BV	Operation and maintenance of onshore drilling unit.
Rig 258 (owned by Parker)	KPO BV	Operation and maintenance of onshore drilling unit.

**New/future projects**

Name	Client	Description
AZ 5946	Agip KCO	Provision of winterized 3000 HP offshore land drilling unit for North Caspian Sea Region.
AZ 5947	Agip KCO	Provision of winterized 3000 HP offshore land drilling unit for North Caspian Sea Region.

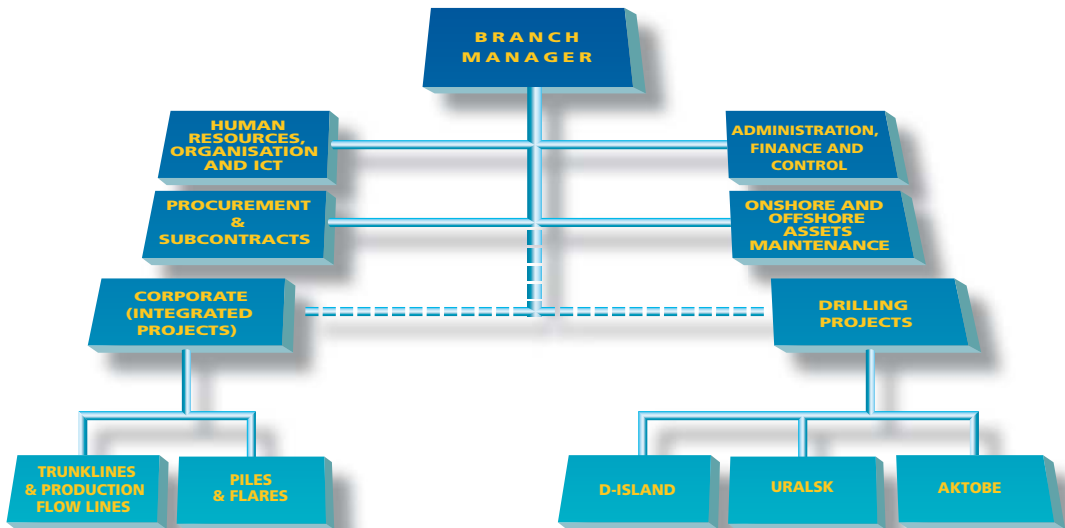
**COMPANY ORGANISATION AND MANAGEMENT SYSTEM**

All the activities in Kazakhstan are under the responsibility of the Saipem Kazakhstan Country Manager. Saipem Kazakhstan Branch is coordinated by a Branch Manager reporting directly to the BU Drilling Chief Operating Officer at Corporate. Ersai is managed by a General Director. Both Companies have a structure with Human Resources, Administration, Finance & Control, Procurement & Asset Departments, and HSE Teams or Departments.

The Health, Safety and Environment (HSE) Management System of Saipem Companies in Kazakhstan is based on the Corporate Standards and Guidelines and complies with the requirements of OHSAS 18001:2007 and ISO 14001:2004.

The Companies' commitment to improve its Health, Safety, and Environment Management System has acquired a big significance during last years, which is reflected in investments that the Companies make in this direction. The Companies' Management, in addition to a financial commitment, has employed significant manpower and technical resources to provide health

**Saipem Kazakhstan Branch organisation chart**



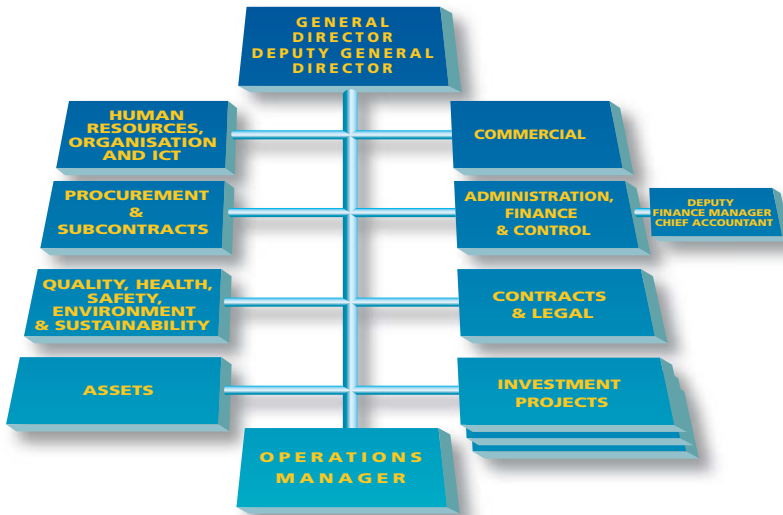


care of its employees and effective updating of work safety management process.

For the implementation of Sustainability objectives within Kazakhstan area, 2 Sustainability Facilitators were nominated in this region, one in Saipem

Kazakhstan Branch and one in Ersai, to establish a direct link between socio-economic activities in Kazakhstan and the Sustainability Team at Corporate level. The Sustainability Facilitators are supported by different departments' representatives who submit the data on regular basis.

**Ersai organisation chart**



Saipar has been incorporated in Amsterdam, The Netherlands in 2000, with official registration of a branch in

Kazakhstan in July 2000. Saipar is the drilling contractor for KPO BV, and has mobilised 6 rigs in total.

**Saipar Drilling organisation chart**



## THE APPROACH TO SUSTAINABILITY

The Sustainability Teams of Kazakhstan Saipem Companies provide a Saipem Corporate focus for Sustainability by directing policy and planning, and implementing best practice, training and reporting. Every year, Sustainability Teams together with the Companies' Management, develop a Sustainability Plan based on the analysis of the needs of Companies' stakeholders, thus creating effective Community/ Stakeholders engagement.

### Local Content

Saipem Companies in Kazakhstan are working on the promotion of local content with the creation of long-term

investments, the creation of partnership with local companies and the maximisation of projects' value executed in country, in term of local employment and procurement of materials and services.

Local content is considered a market differentiator that creates strong competitive advantage among other companies.

For operations in Kazakhstan a series of 'Local Content Rules' shall be applied, rules that were developed in accordance with Saipem's strategy for local communities development in worldwide locations where Saipem is operating, as well as taking on board the local RoK legislation and Client's commitments to local communities:

Kazakh content



- the number of Kazakhstan personnel employed in services relative to oil operations should increase each year as a result of training programs;
- goods, works and services of 'Kazakhstan Origin' should be purchased by the Operator or its subcontractors;
- equipment materials and finished products manufactured in Kazakhstan should be used, provided that they meet state and/or international standards;
- involve Kazakhstan organisations in the performance of services relative to oil operations, so long as they meet 'the standard, price and quality characteristics of similar work and services provided by non-residents' of Kazakhstan;
- develop training programs for

Kazakhstan citizens in accordance with the subsoil use contract.

### Sustainability Reporting

The Sustainability Teams issue internal reports in order to provide an overview of the Company's environmental, economic and social performance through an established Sustainability Accounting System. The Accounting System allows collecting monthly information and data about Economic performance, social performance, outdoor indicators & QHSE Performance, through a series of different performance forms.

To better monitor expenditures and to ensure transparency of data submitted to Saipem Corporate Report, a dedicated cost centre is used, to which all sustainability initiatives are charged.

## SHOWING THE SUSTAINABILITY VALUE OF LOCAL CONTENT STRATEGY

### Externalities evaluation study Ersai Caspian Contractor Llc

*Saipem's commitment to sustainability is mainly represented by a comprehensive 'Local Content Strategy'. To provide support and evidence of the value generated through its commitment to sustainability in terms of wealth, skills and entrepreneurial capacity created, Saipem had decided to measure economic and social impacts of its Local Content Strategy. In fact, measuring the tangible benefits of a Local Content Strategy is the key to demonstrate sustainability of the business and improve stakeholder relationship at local level.*

*As defined by J. Stiglitz (Nobel Prize for Economy) 'Externalities are actions of an individual or a firm that have effect on another individual or firm for which the latter does not pay (in case of positive impact) or is not paid*

*(in case of negative impact)'. Therefore Saipem Sustainability Team has implemented a methodology to measure the externalities produced by its activities in an area. In September 2009, the first pilot study with application of the externality evaluation methodology has been carried out for the activities of Ersai Caspian Contractor Llc. For the purpose of the study, four key categories of impacts have been identified: economic value, employment, human capital development and environmental impact. Moreover the quantification of each impact has also been geographically split, and each related part attributed to the following administrative boundaries: the Karakiyanskiy District, the Mangistau Oblast and the Republic of Kazakhstan. The study is clearly demonstrating, in terms of figures and multipliers, the important contribution Ersai is bringing to the Kazakh socio-economic system and the fundamental role playing by*

*Saipem in contributing to the development of the region.*

### Methodology

*Three socio-economic categories of the impacts related with Saipem Local Content Strategy have been identified and quantified, namely:*

- *Economic Value: Financial impact of payments made by Ersai Caspian Contractor Llc to finance its locally sourced operating expense and to pay taxes. It is measured as the sum of direct, indirect and induced impacts.*
- *Employment: Ersai Caspian Contractor Llc brings an important contribution to the increase of local employment through creation of direct, indirect and induced jobs.*
- *Human capital development: Ersai Caspian Contractor Llc contributes to the increase of the usable knowledge and skills of its employees in terms of additional lifetime earnings expectancy and increased employability.*

In addition to the three socio-economic categories, another category has been analysed and quantified, the environmental impacts. Per definition, environmental impact is a negative impact. The impacts are the consequence of the fact that Ersai, to be able to conduct its operations, consumes resource (water, fuel, electricity), produces waste and emissions to air.

To define the multipliers (the number that gives the magnitude of an impact or a process), a process of stakeholders engagement with quantitative and qualitative surveys has been done. The results of the quantitative survey and the data from Ersai accounting system (e.g. finance, procurement, QHSE, human resources, training, etc.) have allowed defining the multiplier for each of the identified impact.

**Quantitative Results**

Below figures summarise the quantitative results of the study.

**Economic result**

Result shows that Ersai contribution to RoK is about

1.4-1.5 times the direct expenditure in terms of local purchasing, salaries and taxes. That means if Ersai stop activities, the total impact in the Republic of Kazakhstan economy is a loss of 350-375 mln USD. As a result of its core business in the oil & gas support constructions and services sectors, Ersai is able to turn directly to local suppliers and sub-contractors more than oil operators or engineering & design companies are typically able to do (Ersai local purchasing in 2009 is equal to approximately 49% of its total OPEX purchasing).

**Employment result**

Result shows that Ersai contribution to RoK is about 3.0-3.2 times the local direct employment. That means if Ersai stop activities, the number of local unemployed will be 6,300-7,000 people, of which approximately 45% at the regional level (Mangystau Oblast) and 20% at the local level (Karakiyanskiy District).

**Human capital development result**

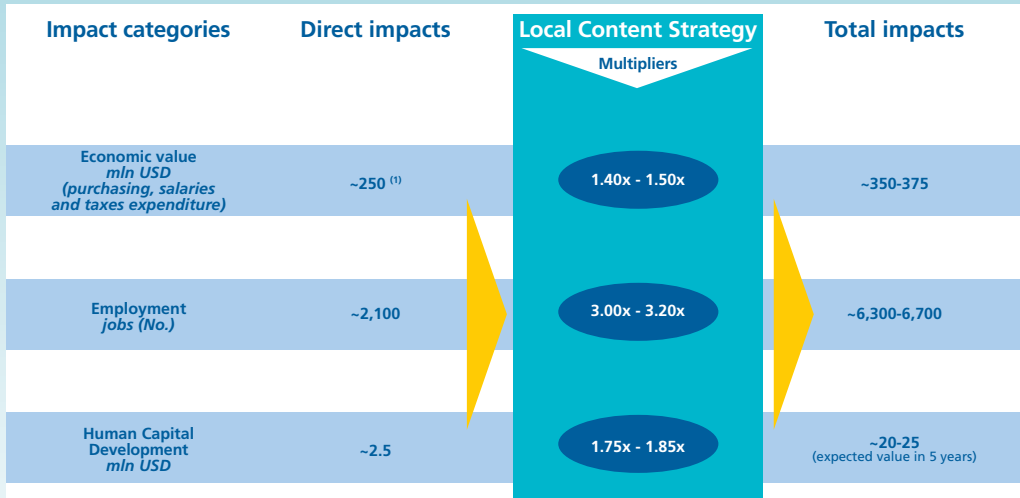
Result shows that Ersai contribution

to the RoK's capacity building is about 1.8 times its direct expenditure in training. That means if Ersai stop activities, the expected economic loss value in five years in term of lost salary for local employees is 20-25 mln USD. Total income and social taxes paid by trained Ersai employees, during the 5 years, can generate potential additional revenues of USD 6-8,000 (NPV per capita) for the Government.

**Qualitative Results**

A stakeholders' survey has been conducted to collect qualitative information. In total 17 stakeholders have been interviewed, 12 of them were local suppliers, while the remaining were representatives of local institutions and administrative/social bodies.

The survey was conducted in two parts. In the first part, the stakeholders were asked to rank from 1 (no impact) to 5 (decisive impact) the perceived impact of Ersai on some selected topics, naming:



Note: Economic value and Employment figures refer to year 2009 whilst Human Capital Development refers to expected figures in a 5 years time horizon.  
(1) Direct impacts calculation considers salaries as retained earnings; source: Arthur D. Little analysis.



1. Overall impact - How do you rate the overall impact of Ersai activities to the local economy/ society as a whole?
2. Local market development - How do you rate the overall impact of Ersai activities to the development of the local market?
3. Employment – How do you rate the impact of Ersai activities in the creation of new jobs in the district?

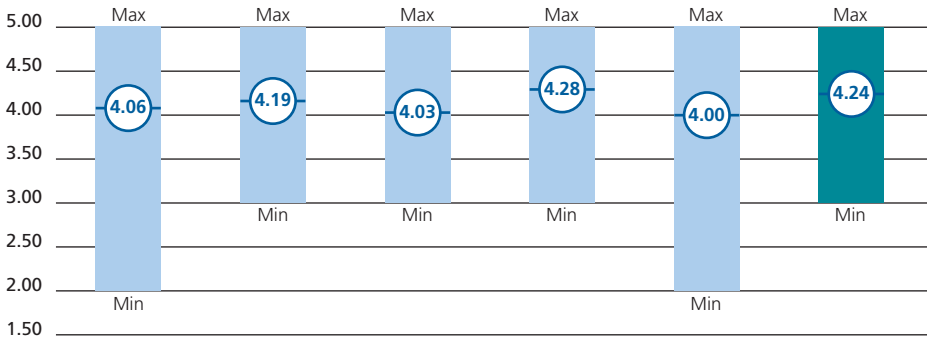
4. Household income - How do you rate the impact of Ersai activities in terms of change incurred in the income level of households in the district?
5. Know-how improvement/ Skills enhancement - How do you rate the impact of Ersai activities in terms of change incurred in the local workforce skills?
6. Quality of life - How do you rate the impact of Ersai activities in

terms of change incurred in the quality of life of resident people?

In the second part, the stakeholders were asked to identify, starting from a long list of externalities which was the major impact of Ersai for each of the economic, social and environmental area.

The charts below summarise the results derived from the survey.

### Qualitative Results

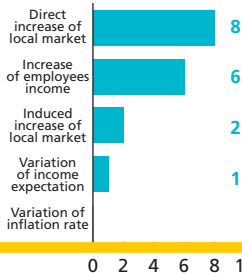


**Local market development    Employment    Household income    Know-how improvement    Quality of life    Overall**

Average results of the stakeholders' survey. Each stakeholder provides a rank on the perceived impact of Ersai on the 6 different topics, grading them from 1 (no impact at all) to 5 (decisive impact). The value on the circle is the average score.

### Perceived major impact of Ersai activities in the economy

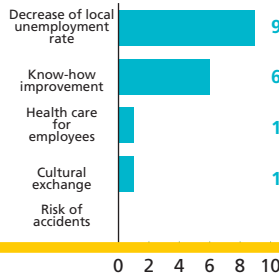
(No. quotations)



The variation of inflation rate, which emerged from the 2004 SIA Report as one of the potential negative effect of Ersai operations, is not perceived as such by stakeholders.

### Perceived major impact of Ersai activities in the social area

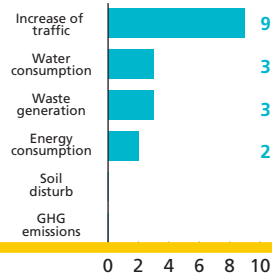
(No. quotations)



Despite know-how improvement is perceived on average as the most impacted category, it has not been suggested as the top impact in the social domain.

### Perceived major impact of Ersai activities on the environment

(No. quotations)



Increase of road traffic is a major stakeholders' concern; this likely to be due to its highest visibility if compared to other impacts.

# SUSTAINABILITY PERFORMANCE

## PEOPLE

Employees represent the main key resource for strategy implementation and the basic factor of sustainability in Saipem Group. The importance of human resources' role in Saipem is the base of Company's Personnel Management Policy.

Involving highly qualified and motivated employees, creating good environment for their effective work and continuous professional development are the basic purposes of Saipem Companies in

Kazakhstan ('the Companies'). With full regard and respect to its employees, the Companies carry out fair and open policy at all working stages. General obligations of the employees and the Companies are stipulated in Collective Agreement and Labour Contract.

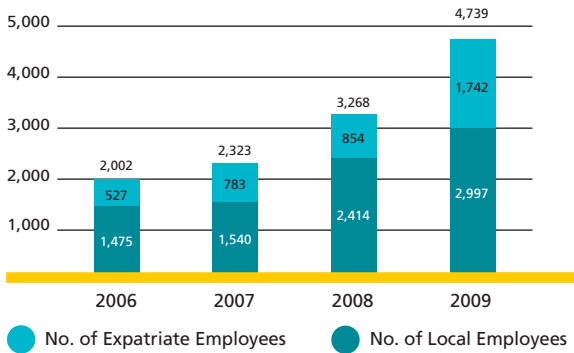
## Total Workforce

Saipem Companies in Kazakhstan employed 4,739 people in 2009, 63% of them are local.

Saipem's commitment to local employment was driven by different targets. The Companies in Kazakhstan are approaching a strict policy to involve as much local employees as possible.

The local content strategy satisfies external stakeholders such as local authorities and clients who have a direct interest in it. There are two aspects that mainly characterise the Companies' relationship with its employees: a high investment in training and an important interest in HSE matters.

## Increase of Saipem Companies' local staff over total workforce



## People Management

One of the programs for development of Local Content is the 'Retention Plan'. This is the program to motivate

Women employees in Ersai



Key Resources and retain them in the Companies. The advantages of the program are the implementation of a 'loyalty' attitude within the Companies' resources, career prospective and job continuity. A personal saving account has been created for each employee in the KazInvestBank, where every year the Companies allocate a deposit, depending on seniority achieved, of the Monthly Basic Gross Salary. This project is scheduled for a 5-years-period for each Key Resource. Up to now, 63 Key Resources have signed their Retention Plan Agreements.

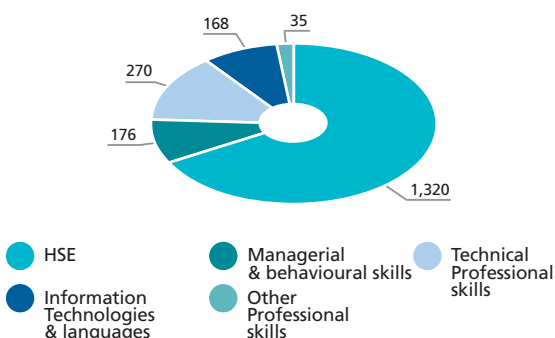
The second approach is the 'Assessment of Potential' with the aim to gather information, which may be useful in appraising the potential skills of young resources. Seventeen employees have passed the Assessment, the information collected allowed the Head of Departments and Supervisors to accurately plan the steps of their professional development, and analyse their strengths and areas of improvement.

It is worth to point out that with the purpose to develop Kuryk Local Content in Ersai, 26% of local people are from Kuryk, who are mainly recruited in the beginning as trainees and go through professional training at the Professional Training Centre and then involved in operational activities.

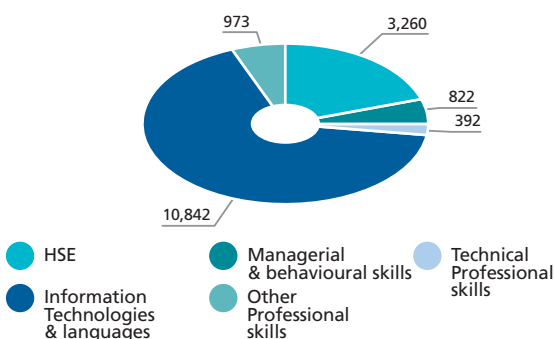
### Training

Under the program 'Karaganda State University Students', 15 graduated have been employed by Ersai in different disciplines (welding, Quality Control, environment, etc.); with a mentoring from highly qualified international specialists. An agreement about an 'Innovation and Education' Consortium called 'Corporate University' has been signed between Karaganda State Technical University and Ersai with the purpose to establish a cooperation with mutual interest where a well experienced Contractor submits the most challenging requirements from the

### 2008 Saipem Training Man Hour



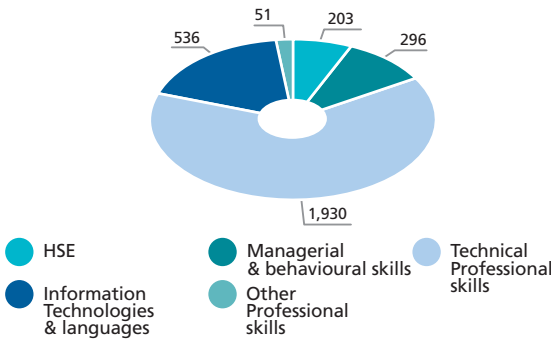
### 2009 Saipem Training Man Hour



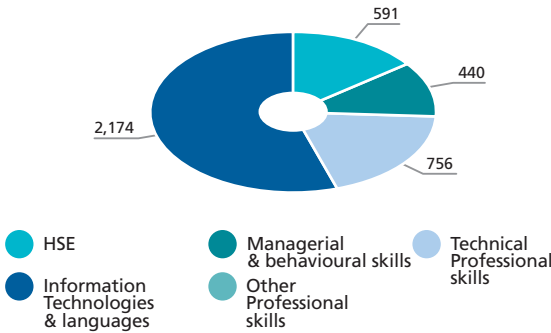
offshore industry to one of the most prestigious and reputed University in the Republic of Kazakhstan and the latter fine-tunes their courses accordingly.

In the frame of the promotion of Local Content, Saipem Companies in Kazakhstan has launched the Young Graduates Program. In January 2008, 24 young graduates with engineering background from Uskemen, Karaganda and Almaty Technical Universities were selected with the aim to develop local personnel to cover important roles in the Companies. Training of young graduates includes intensive English language courses, training on the job in

### 2008 Ersai Training Man Hour



### 2009 Ersai Training Man Hour



Kazakhstan and abroad (Italy, Croatia, etc.), Saipem internal courses on QHSE, multicultural teambuilding, problem solving, Project Management, Risk and Opportunities Knowledge Management, etc.

For the improvement of qualification of Local employees, Ersai has opened a Daughter Company 'Professional Training Centre' LLC inside the Ersai Kuryk Yard to train welders, pipe fitters, steel carpenters and other specialities.

The Professional Training Centre has acquired attestation which includes all the qualifications in the area of industrial safety and will be focused on provision of secondary technical training with the duration of 1.5 years and professional courses with the duration of 3 months, thus satisfying its industrial needs in provision of human resources.

In 2008, Saipem Kazakhstan Branch started to train 9 local employees with the aim of qualification on PASSO welding.

This was the first time of a PASSO welding course in Kazakhstan; the course has been accredited by the Aktau Technical Institute, under the approval of the Marine Inspection Body, as course for Welder Certification.

The language barrier is one of the biggest problems in multinational

Training on the job



Companies. To mitigate this problem, in 2007 English courses started on board addressed to all crew members and at the training centre of the Ersai Kuryk Base. At the same time, D-Island Drilling Project developed an English training course on board.

Also, in order to promote Company's core objectives and to disseminate the Top Management's strong commitment toward HSE objectives, the local HSE personnel working in Saipem Kazakhstan Drilling BU, participated in a two-weeks training course organised by Saipem, in Romania.

One of the good examples of local content training and development can be local crew of Tie-in Barge (M10), the scope of activities is connecting the pipelines from Karabatan OPF (onshore) and HUP-island in the Kashagan field and from island to island pipeline. Today the percentage of local personnel onboard of tie-in barge grows to 80%. Besides, training activities helped to increase the qualification and expertise of local employees from helper to rigger.

#### Quality of living

For the improvement of living conditions in Kuryk Base, recreational facilities have



been built during the last two years such as soccer pitch and new gym facilities.

*Welding training conducted by Karaganda University Lecturer*

#### Safety

Saipem Companies in Kazakhstan are strongly committed to Saipem Safety Vision and always intend to diffuse the safety culture at the working place. HSE performance during 2006-2009 has been maintained at lower level through preventive measures like training, toolboxes, meeting, engineering controls, proper maintenance program

Safety performance				
	2006	2007	2008	2009
Worked Man Hours	8,520,701	8,374,044	10,888,112	13,595,251
Lost Time Injuries	16	6	10	11
LTI Frequency Rate	1.88	0.72	0.92	0.81
Fatal Frequency Rate	0.00	0.00	0.00	0.00
Total recordable Frequency Rate	3.29	2.39	2.20	2.21

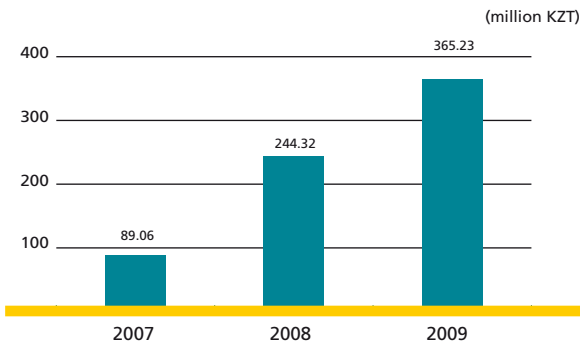
Leading indicators				
	2006	2007	2008	2009
Safety Hazard Observation Cards	3,536	3,408	4,732	4,762
Job Safety Analysis	9,985	3,035	5,385	6,276
Tool Box Talks	26,719	28,104	39,955	47,345
HSE Meetings	4,943	5,388	4,972	3,336
HSE Inspections	4,022	4,414	5,926	5,426





Our workforce in Kashagan

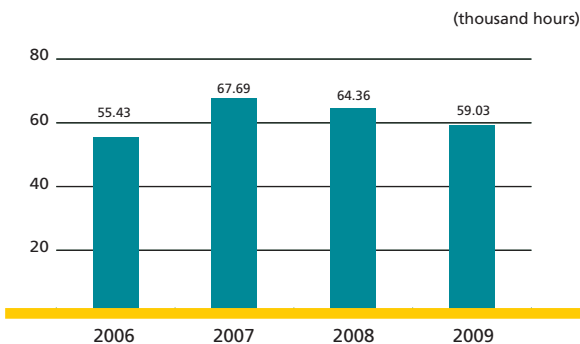
### HSE Expenditures



and etc. 43 Lost Time Injuries (LTI) have been recorded in 41,378,108 man hours of work during year 2006-2009.

In 2008 the Piles and Flares and Trunkline Projects achieved the outstanding on the Kashagan field remarkable achievement of 2,000,000 and 2,500,000 worked man hours, i.e. hours worked without Lost Time Injuries, since the beginning of the Projects. This is a good result of all employees of Piles and Flares and Trunkline Projects team for the high Safety Standard that has been maintained and improved in time despite the huge challenges and adverse conditions.

### Total HSE Training Hours



One example of safety improvement is the Incentive scheme launched on D-Island, Drilling Project. Workforce was divided into different crews; after 6 months a final evaluation had been prepared and the Best 3 Crews received a prize. Good participation from workforce has been noticed during 2008, for this reason in 2009 the program has been launched again. Similar incentive schemes have been conducted within Ersai and Trunkline Project (Karabatan Site).

For the effective implementation of HSE Management System, the

following initiatives have been planned so far:

- to elaborate *ad hoc* 'Risk assessments' for all the identified micro-activities to review;
- Leadership in Safety (LiS) training cascaded down, by the Management, to all Workforce 5 Stars Intervention training for all Foremen;
- Confined Spaces Entry training for all Foremen and Supervisors;
- 80% of Safety Hazards Observation Cards (SHOC) followed up by the relevant Responsible within 1 week;
- to assist Expatriated Supervisors/ Foremen with translation during Safety Tool Box Talks;
- to fully implement the Journey Management Plan, with particular emphasis to the emergency response in case of a car accident;
- to investigate the causes of these accidents and to organise special arrangements for avoiding them.

In year 2008, Ersai has been certified against OHSAS 18001 Standard for its Safety Management System.

More than 698 million KZT were spent in 2007-2009 for execution of HSE activities on banning of injuries, risk decrease, accident rate and unplanned losses.

The basic activities are:

- modernisation of processing equipment, technical devices and emergency alarm; equipment maintenance; introduction of progressive and safe technologies;
- provision of employees with personal protective equipment; training and advance training; improvement of work on HSE; hazard and risk management, banning of traumatism, reduction of accidents rate, decrease of risks and unplanned losses.

To facilitate First HSE Induction of new Employees and Visitors, a new Training facility was installed at the main Gate of Ersai Caspian Yard; so that first Induction and PPE distribution can

be performed on arrival to the Kuryk Base.

The Companies' Top Management is strongly committed to the professional growth of Local Safety personnel. In particular the following training activities were carried out:

- **Leadership in Safety 'Train the Trainer' Course** conducted by Saipem Corporate Representatives.
- **Leadership in Safety Course** conducted by Saipem Corporate Representatives. All HSE English speakers were trained.
- **IMS Internal Auditors** conducted by BV Certification at Kuryk Yard.
- **International Certificate in Occupational Safety and Health** conducted by 'British Safety Council Services'. 2 Safety Representatives were trained.
- **Safety & Labour Protection as per RoK Legislation** conducted by local college 'Standard Group LLD' and representative of Mangistau Labour Department. The entire Safety Department was trained.
- **Production Safety as per RoK Legislation** conducted by local college 'Bolashak'. The entire Safety Department was trained.
- **Hazard Awareness/Risk Assessment** conducted by client Agip KCO. The entire Safety Department was trained.
- **Special Training Courses** on Confined Space Entry Safety, Hazard Identification, Work Safety at Heights, Safety Watch at the work place conducted for all Safety Staff. Pursuant RoK Law and New Fire-Fighting Plan, a fire drill in Saipem office in Atyrau has been conducted jointly with 'SP & ASR' Unit of Department of Emergency Situation.

#### Leadership in Safety (LiS)

In 2007 Saipem Corporate HSE Department began the Development of the Leadership in Safety (LiS) workshop, an innovative and highly interactive training program with the far reaching aim of creating a



*LiS in Ersai*

strong Safety Culture within Saipem. During 2008 Saipem Companies' Management & Supervisory Staff has attended 1.5 days LiS workshop.

It is now with a great satisfaction that Saipem Companies in Kazakhstan can consider the first application phase of the guiding values of LiS in Kazakhstan concluded.

Through a series of workshops and meetings, the basic framework was conveyed to all employees with an identical sense of uniformity and commitment, involving almost two thousand people, located in different areas and often at great distances from each other (Atyrau, Aktau and Kuryk).

On the one hand, the emotional impact of the video along with the words of Saipem's CEO, Pietro Franco Tali provided the ideal bridge between the intentions of top management at head office and the world of Saipem's operating activities, emphasizing the single intent which binds these two worlds. On the other, the work carried out by the facilitators forged an immediate connection with the listeners, creating that direct dialogue which is the basis of any training experience. In this regard, it shall be emphasized the importance of the results by the team of facilitators, both those who came

from Saipem Corporate and here in Kazakhstan.

LiS Cascading Event for the personnel working on D-Island was conducted together with the employees' wives and children. It is innovative in the simplicity of the message and its ability to get that message across collaborators and their families.

Good feedback from the Client and our workforce has been noticed.

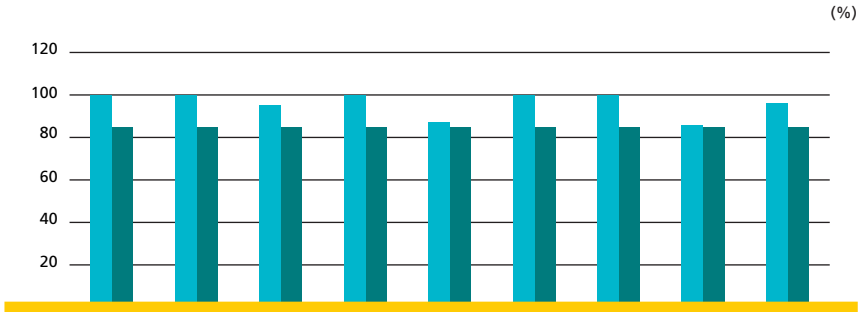
## Health

Employees' health is a priority of Saipem Companies in Kazakhstan. The medical team comprises 60 persons (of which 54 are local), both doctors and nurses.

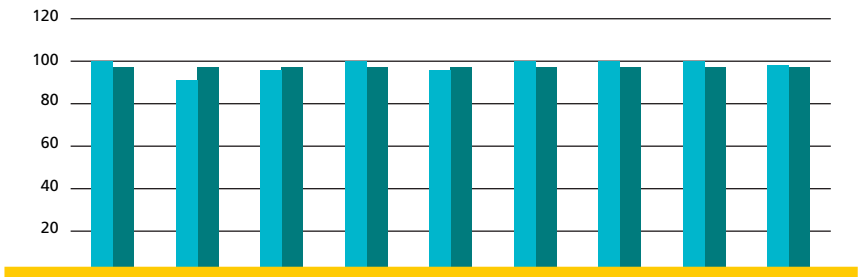
In addition to curative medical assistance, the team carries out preventive medical activities through medical fitness examinations, vaccination and different informative campaigns thus minimising medical curative costs to zero.

Ersai Kuryk Base has a clinic and a medical licence for provision of first aid and transportation. In addition to that, Ersai is working with the Mangystau Regional hospital in Aktau, used as primary evacuation hospital for Ersai employees in case of need. In year 2008, Ersai has refurbished

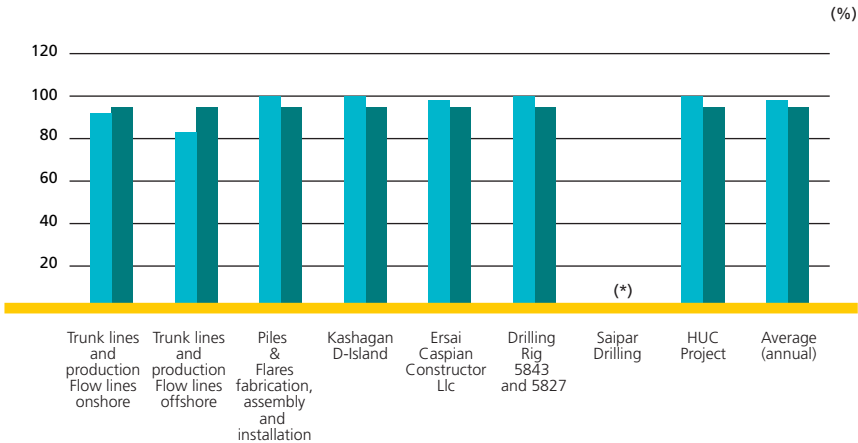
Vaccination of the Expatriate personnel



Accomplishment of the medical fitness examination for the Expatriate personnel



Accomplishment of the medical fitness examination for the Local personnel



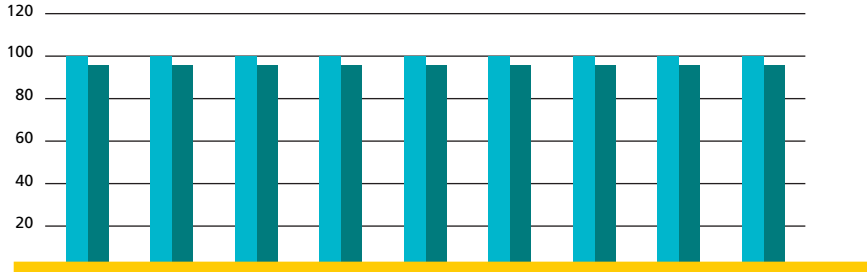
● Performance ● Target

(\*) No Local Saipem Employees.



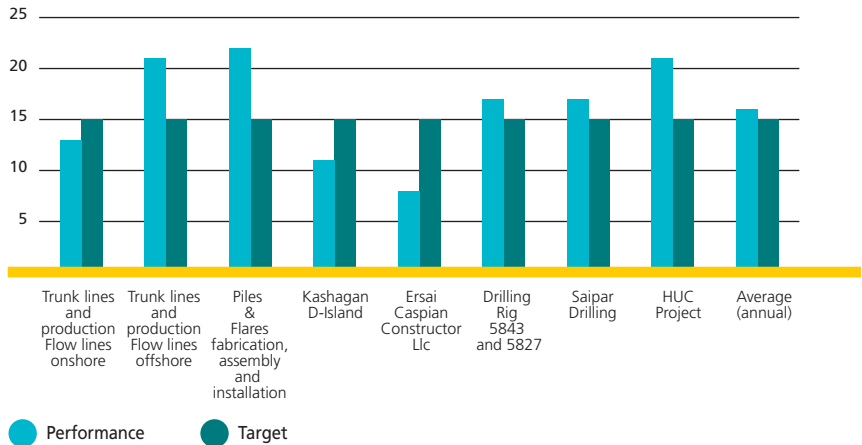
Medical evacuation Drills

(%)



First Aid Training

(%)



and equipped 3 hospital rooms, which will be utilised by Company employees. However, the Hospital can use these rooms for other residents of Mangystau Region for providing medical treatment when they are empty. As the continuation of this program, in 2009 Ersai has equipped two hospital rooms (Traumatology and Cardiology) with the medical equipment and furniture. Besides, as a result of good investment in growth of Kuryk village, complete refurbishment activities have been carried out in Kuryk Hospital, which will be a good starting point for mutual

beneficial relationship in medical treatment for Company employees.

Every year, the Companies in Kazakhstan implement a Cardio Vascular Disease Program. In 2008, 25 people have participated (8 person - high risk group calculated as score of risk; 17 persons - low risk group); 14 employees (56% of the participants to the program) maintained their score, while 11 (44%) managed to diminish it. Health Risk Assessment Program was implemented within Kazakhstan area and now trainings are ongoing.



Castoro 12  
operations in  
the Caspian Sea



A Work Place attestation process was carried out by Vostok-Ekologia, a certified organisation, in 2007 at Ersai Kuryk Base and Karabatan premises. One part of the attestation was dedicated to the evaluation of the occupational noise level. The results showed that noise exposures are at acceptable level, not exceeding 80 dB, which might be indicative for further attention and precautions to avoid hearing losses. However, the Health Department of Ersai implements a 'hearing protection program' aimed at monitoring each year a number of employees, among those

that might be at certain risk of hearing reduction due to noisy workplace.

Ersai has received a Certificate of Compliance on Accommodation and Catering services. For the improvement of sanitary condition, dedicated hygiene function on operational sites has been established.

### **Industrial relations**

The cooperation between trade unions and Company's administration is considered essential to regulate labour

agreements and carry out activities on the principle of social partnership.

Since November 2007, a trade union 'Trade Union of JSC Saipem SpA employees' has been functioning in Saipem Kazakhstan Branch, and a collective agreement has been signed. About 24% of Saipem employees are member of the trade union.

As for Ersai, in June 2004 the first collective agreement has been signed for a period of three years. The trade union that represents the interests of Ersai employees is the 'Public organisation Independent Trade Union Aktau', which was founded in 1992 and is the member of Association of Independent Trade Union of Kazakhstan (Karaganda). There are 235 (12.91%) employees-members of this trade union.

In 2009, another Trade Union was founded, the 'Public organisation Independent Trade Union Karakia', which comprises 83 (4.56%) employees-members. The last Collective agreement was signed in July 2009.

One strike has been carried in 2008 at the Ersai Base, as a result of which the Company, in collaboration with the selected representatives of labour collective, has organised a voting concerning the working schedule. The voting brought to a change in the work schedule, and now 5/2 work regime is applied to all Kazakh employees of Kuryk Base.

In 2009, despite of the difficult financial and economic situation all over the world, Saipem Companies in Kazakhstan have made decision to maintain an annual salary increase of 5%, as it is reflected in the revision of new Collective Agreement for all Companies' Kazakh employees.

## ENVIRONMENT

Saipem Companies in Kazakhstan have in place an Environmental Management System. The Management System was developed in light with specifications

from the international standard ISO 14000:2004, being designed to allow continuous updating, amendment and improvement, resulting from analysis of incidents, reports and changed circumstances within the management system and allocated scope of work.

In 2008, Ersai Environmental Management System has been certified by BV Certification according to ISO 14001:2004.

## Protection of the Environment

From the beginning of Saipem Companies' operations in Kazakhstan, a series of environmental and social-related issues were identified, such as a low environmental perception and sustainable use of resources among the local population, an environmental legislation package still being under development and implementation; a low dissemination on schools of environmental programmes that would help in implementing a wealthy environmental awareness among the young generations.

Besides, the Caspian Sea characteristics, such as shallow, closed waters, surrounded by large marshlands as transition zones to the mainland, together with the enormous semi-arid steppe that is surrounding it, make it to be a very sensitive locations where to deploy and undergo large industrial activities. The sensitivity of the area constitutes a technological challenge for Saipem to minimise the ecological footprint of its activities.

For marine operations, the main factor to be considered is the non-discharge policy, applied for the entire Caspian Sea, along with the restrictions and limitation on types of materials that are to be used. On the transition zone, the area formed mostly of marshlands and swamps, the ecological limitations come mostly from the sensitiveness of locations that represents the nesting area for migratory and local avian species and also for the local biota. These, combined with the limited



## MODULAR SYSTEM FOR POST TRENCHING AND BACK FILLING IN EXTREMELY SHALLOW WATERS

*The biodiversity found in the Caspian Sea and on its coasts makes the region one of the most precious ecosystems in the world, with a very high degree of biological endemism. In particular, the transition zone of the North Caspian Sea is an area approximately 10-kilometre long, where the water depth increases from approximately 0.5 metres to approximately 1.5 metres.*

*Because of the physical and environmental characteristics of the Sea, the design and construction of safe vessels and technologies with a low environmental impact has become a primary technological*

*objective for the entire Kashagan project.*

*The Asset Technologies Function of Saipem SpA was involved in the development of a system of small ultra-light vessels called 'Mondine' (rice weeders), designed for operations in the transition zone, where no other craft can operate. The system enables the excavation of a trench of the desired depth and burying of the pipe at the same time using the material removed during excavation for backfill without contaminating the surrounding environment.*

*In this way, the pipes, previously laid by the Castoro 12 and towed*

*afloat into the transition zone by the small pontoon 'Storione', are buried in excess of two metres below seabed by the Mondine and covered by the excavated soil to protect the pipe from ice, leaving the seabed as flat as possible and minimising the environmental impact.*

*This new system allowed avoiding the dredging of a wide canal to enable the access to 'standard' vessels, which would have required the excavation of huge amount of soil with serious physical and biological effects especially on the seabed sediments and the benthic community.*



*The Caspian Sea  
and its sensitive  
environment*

accessibility of the area and the extreme climate conditions, made this particular area difficult to approach. Operations performed on the main land of Kazakhstan, range from pipelines and communication optical cables, to plant construction and drilling rigs. These activities are influenced by the rough and new surrounding environment with large range of temperature scaling from -40 °C to +40 °C, to landscape diversity ranging from coastal ecosystems to steppe and mountain areas.

### **Improvement Activities**

Saipem Companies have defined and implemented an Action Plan together with a monitoring program, to monitor quarterly the environmental performance and measures to control and reduce the environmental impacts from construction activities. Besides, the Plan includes measures such as environmental monitoring of air basin, sea and ground water, soil and radio-ecological control; waste removal; purchasing of oil spills prevention equipments and training

of related personnel for spill response management. In order to decrease air emission from painting shelters activities special filters were provided. In 2009 Sewage Treatment Plant was modified and expanded, which improved the treatment process and permitted to reuse treated water for dust-suppression on the roads of the Yard.

In 2008 Kazakhstan ratified the Kyoto protocol, regarding the control of the greenhouse gases emissions. Saipem Companies have endorsed fully compliance and support to local authorities, for the collection, process and reporting of all data in a timely and proper manner. Trained and experienced personnel have been allocated for these activities.

To improve the environmental awareness of employees, training courses are carried out by Environmental personnel on topics like Environmental Legislation in the Republic of Kazakhstan, ISO 14001 standard requirements, the waste management system, oil spill response, etc.



## Oil Spills Prevention and Mitigation Measures

Considering the environmental sensitiveness of the areas where Saipem Companies are operating, and the paramount importance of protecting the natural resources as water and land, Saipem Companies internal target is zero spills.

To reach this goal special attention was put in assessing all potential sources of spillages and specific plans were implemented to avoid, mitigate and control such an unwanted event.

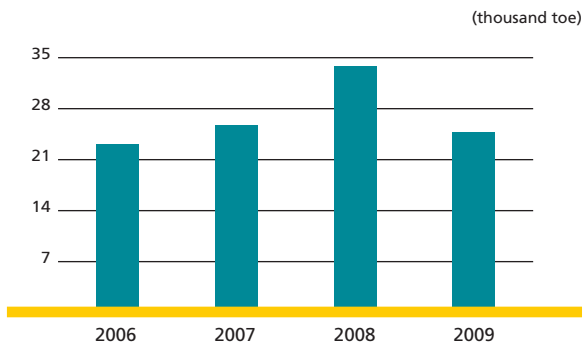
Thus, Spill Prevention and Response Plans were developed and implemented in all sites and projects, in collaboration with the Projects' Clients and local Authorities.

All facilities, where activities are carried out which could result in potential spills, were supplied with sufficient spill response kits that are permanently renewed. All personnel have been trained for spill responding: in case of spill, offshore or onshore, to evaluate the risk and issue warning, eliminate the source of spill and clean-up contaminated territory with applicable absorbent materials. Also, regular drills are being performed, so that to ensure that the spill response teams are permanently aware and duly trained to respond in case of emergency. Besides, a series of technological improvements has been made. All vessels are powered with low sulphur content fuels. Besides, the TRB, main Saipem's drainage barge operating on Caspian Sea, was upgraded in its hydraulic system, and the regular hydraulic oil was completely substituted by Panoline®, an ultimate high-end hydraulic fluid which has a very low toxicity and a very fast and total bio-degradability on the marine environment.

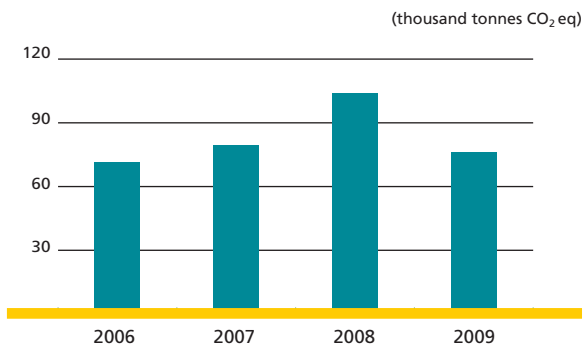
## Waste Management System

Environmental issues related to Saipem Companies' areas of operation that

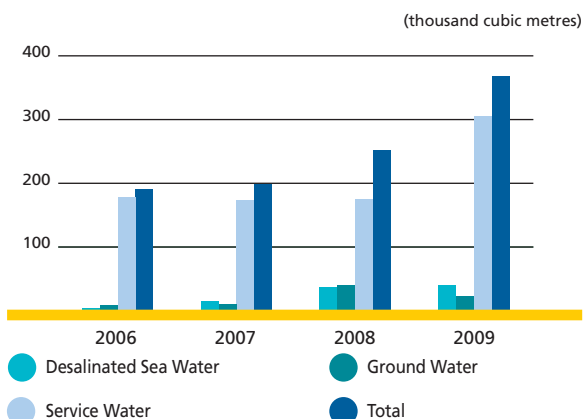
## Energy Consumption



## Greenhouse Gases



## Water Consumption

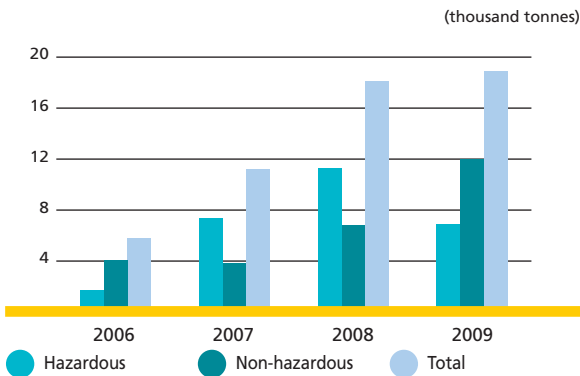




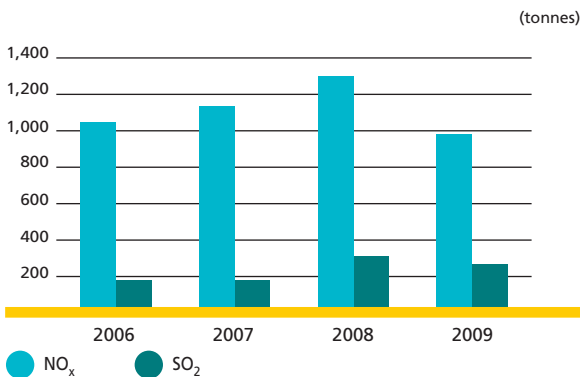


Drilling Operations Onshore

Waste



Emissions



were faced in Kazakhstan are related to waste segregation and generally related to waste management programs implementation. A limited number of certified waste handling operators was available on the local market at the beginning of operations.

Saipem Companies' policy toward the management of waste is based on the principle that the generation of waste should be limited and waste should be segregated, in a controlled manner, as much as possible close to its source of generation, for further re-use and recycling, and ultimately safe disposal to be ensured.

In this regard, Saipem Companies have established and implemented dedicated Waste Management Plans in all bases and sites to define the internal organisation for waste management, classification, segregation and storage of wastes, in accordance with the Kazakh Ecological Laws and International Codes and Regulations.

The Waste Management Plans (WMP) are defining in details the Company's vision regarding the management of waste; describe and assign the roles and all responsibilities, taking care that adequate and sufficient resources are put in place to ensure a practical implementation of the plan.

The generated waste is primarily being collected and segregated into dedicated waste containers, as per class of hazard, from the non-hazardous wastes such as bulk packages to general domestic waste, to the highly hazardous waste such as used oil, spent batteries and mercury lamps.

The waste containers are being transferred to local waste handling certified contractors, with whom Saipem Companies have ongoing services contracts. These contractors are periodically audited in order to ensure that they are up-to-date and in compliance with all the relevant Kazakh rules.

Ersai, for improvement of Waste Management System within the Kuryk Base, is planning to purchase waste

incinerator with the purpose to dispose the domestic and oily waste.

An established record and a continuous monitoring system were implemented in all bases and sites, with dedicated environmental personnel, in order to raise the overall environmental awareness, implement and continuously improve the Waste Management Plans in particular and the Environmental Management Plan in general.

**Environmental Monitoring**

According to the Environmental Code of Republic of Kazakhstan, all individuals and legal entities involved in special use of natural resources should provide industrial environmental monitoring.

Environmental monitoring of air on boundary of sanitary protection zone and directly on emission points (ventilation tubing of production shelters, exhaust pipes of diesel generators, etc.) is aimed at measuring ground layer pollutants concentration of harmful chemical substances (HCS). This allows the creation of a data bank based on the measurements essential to further identify the ways to mitigate environmental impacts by tracing and preventing the most harmful environmental factors.

During the period of ecological monitoring of air-shed of the territory, the following results emerged:

- for all components, fixed normal maximum concentration limit on border of a sanitary-protective zone;
- for all components, fixed normal maximum concentration limit on emission points of construction site;
- the comparative analysis of a second stage monitoring in 2008 showed a stability of average concentration of the majority of measured components.

In general, it emerged that on the boundary of protection zone and on the territory of industrial site an ecological situation in air-shed meets environmental legislation requirements.

Ersai is also conducting monitoring activities on sea water, focusing on water quality, bottom sediment, marine flora and fauna. In 2009, to improve the monitoring, two additional points of monitoring were added. As result, it was observed that all environmental components of marine environment meet the requirements of the national legislation for the Caspian Sea.

Besides, Ersai has introduced a monitoring plan for controlling the





Operations during winter season on Caspian Sea

overall soil condition in the Kuryk Base area with the aim to:

- conduct systematic observations of the soil condition, determine the main sources of pollution, and define the areas with the highest soil pollution rate;
- evaluate the soil condition of the studied territory, forecast and elaborate measures aimed at rational usage of the soil and its preservation, and decrease the negative effects of the production processes;
- to uncover and control in time both the changes within the soil structure and condition of the top-soil and the production activities.

For the entire life-time of functionality of the Karabatan project, a full-scale monitoring program was put in place, with a local specialised subcontractor. Aspects monitored during this project were the underground water using dedicated perimeter drilled water-wells; air emissions, the quality of the soil and

subsoil and the conservation of fertile top-soil that was stripped out before the beginning of the construction works.

## CUSTOMERS

As highlighted in the mission, all Saipem Companies pursue the satisfaction of their Clients through developing effective innovative and top quality solutions, with full respect of the legal requirements on safety, quality, health, sustainability and environment of the Republic of Kazakhstan.

Saipem Companies are working in Kazakhstan for several companies in the oil and gas industry, such as Agip KCO, ExxonMobil, etc.

In general, the Kashagan Field Developers request a strong focus on Kazakh content and require all potential subcontractors to do the same. It is important to ensure that Kazakh



design, engineering, project management, manufacturing and construction capabilities are considered when planning development work scopes, in order to provide full and fair opportunity for the Kazakh industry (including consultants, suppliers and contractors) to pre-qualify for work. For all companies working in the Kashagan Full Field Development Project, a series of standards in term of local content are required. Such standards, outlined in every contract in a part called 'Schedule G', are a minimal percentage of invoicing that remains in the Republic of Kazakhstan, and which is divided by local employee expenditure, local supplier and subcontractors and taxes locally paid. For the projects considered, the Project Operator asks a percentage of around 35% divided as follows: around 16% payments to national personnel; around 17% payments for national materials and services; around 2% payments to RoK Budget (taxes).

Saipem Kazakhstan Branch fully complies with the Kazakhstan Content target defined by the Clients. Local content performance is not instead requested for Ersai Caspian Contractor Llc because it is considered a local subcontractor, despite that, the Company complies with the requests of

local content involvement contained in 'Schedule G'.

In line with the approach of a direct relationship with stakeholders, Ersai hosts in its Yard some Client's representatives that oversee daily activities. There are also some scheduled audits from the Client's side in order to ensure compliance with all standards. These audits analyse all activities, processes, operations as well as the QHSE management system. In November 2009, the final handover to Agip of as-built data books for Onshore and Offshore Main Trunk lines was completed. This involves all the as-built documentation relevant to the installation of the Onshore and Offshore Trunk lines from Onshore Processing Facility (OPF) at Karabatan to complex Island D.

The task of maintaining the Onshore Trunk lines ready for their intended purpose was accomplished at the end of December 2009.

### Customer Satisfaction Feedbacks

During 2007, the Piles and Flares Project have received feedbacks from the Client AKCO, appreciating the company's good safety performance

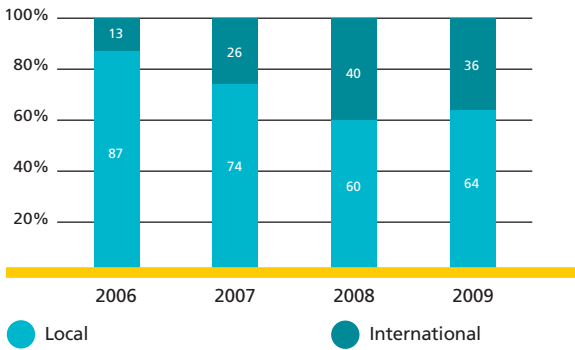


Activities at Kuryk Yard

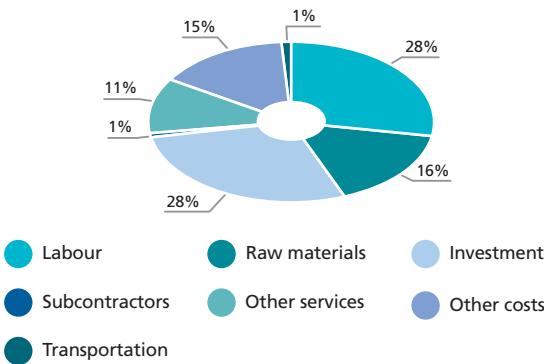
**Saipem Kazakhstan Branch  
Qualified suppliers and subcontractors**



**Ersai  
Qualified suppliers and subcontractors**



**Local Expenditures for Ersai 2009**



during the production season, and also congratulated the Piles and Flares Team for the preparation and quick execution of Module 11 installation.

Trunk lines Project as well received customer satisfaction feedback for the successful completion of 28 inch SG Tie

In at KP 43 pipe line construction. In this, it has been mentioned that safe working conditions were maintained at the higher standard level and the Client have congratulated all personnel who was involved in the completion of that scope of work for the well done job and for the tight schedule within which the job was completed with no injuries to personnel nor equipment failure.

In the implementation of Pipe Racks Project, the Client AKCO made a good remark on the performance saying that Ersai has come a long way in the last 5 years, with each year showing improvement.

**SUBCONTRACTORS & SUPPLIERS**

The relations with business partners are based on principles of long-term mutual profit, full execution of obligations, honesty, transparency and fairness, thus respecting business partners' ethical principles which are stipulated by cultural and other differences as well. Saipem Companies follow legislation regulating competition, support free competition and entrepreneurship, and carry out fair open policy with regard to competitive organisations. In order to minimise risks in relation with business partners, corporate standards have been developed.

For the diffusion of safety culture, Subcontractors personnel working on Ersai Yard are trained for first safety induction and also for Permit to Work courses.

Moreover, audits are conducted on Suppliers and Subcontractors with the purpose to assess the Suppliers' QHSE Management System against ISO 9001, OHSAS 18001, and ISO 14001 International standards and give the feedback on improvement actions to be



taken and to pre-qualify the suppliers in the Vendor Data Base.

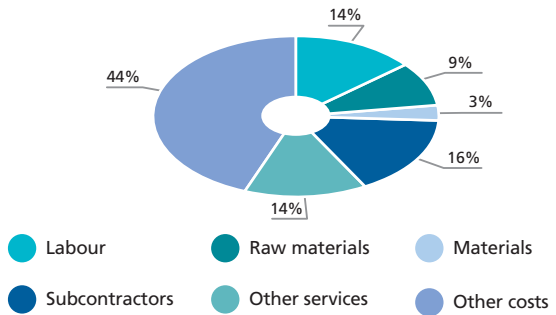
Approximately 16 audits have been conducted by Ersai Audit Team up to 2008.

Another strong element, which is involved in the evaluation of the Kazakhstan content of the project, is the economic value of goods and services purchased from local suppliers.

As a result of the commitment toward Kazakh content, most of Saipem suppliers are now locals.

In total, almost 65% of purchases of Saipem Companies in Kazakhstan are from local vendors (suppliers and subcontractors).

### Local Expenditures for Saipem Kazakhstan Branch 2009



Pipelaying  
in the  
Caspian Sea



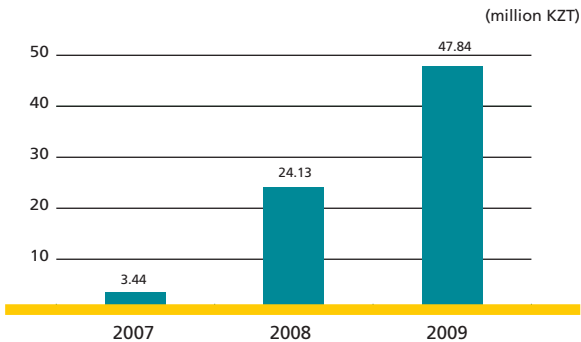
Aerial view of the Ersai Fabrication Yard in Kuryk

While the volume of local supplies was remaining stable; the percentage is diminishing due to high purchase of material (steel) from abroad for Pipe Racks project.

### LOCAL COMMUNITIES

Saipem Companies in Kazakhstan are strongly committed to working responsibly and contributing positively to the socio-economic development of the communities they operate in. Every year, the Companies establish a Sustainability Plan, based on the analysis of the needs of local community, focusing mainly on activities for health promotion, education, socio-economic development, culture and environmental protection.

#### Expenditures for Local Communities



In the past years the following activities have been carried out.

### Health Promotion

From the beginning of the Companies' activity in Kazakhstan, they strengthened its relations with medical institutions. Each year, in the frames of the Sustainability Plan, the Companies contribute to Public Health, by providing modern equipments (e.g. a defibrillator in 2006 for Atyrau Regional Hospital, an artificial support breathing apparatus in 2008 for the Kuryk village hospital, a Human Plastic Skeleton for the 'Atyrau Regional Ambulance Center 03' in 2008, medical surgery instruments and medical waste incinerator in 2009 for the Kuryk hospital, etc.), and by supporting the reparation and refurbishment of Public Health properties (e.g. provision of an ambulance car in 2007 for the 'Atyrau Regional Ambulance Center 03', reparation of 4 Kuryk Hospital Ambulance cars in 2008, refurbishment of 3 rooms of Aktau Hospital in 2008 and two others in 2009).

Besides, Ersai supported financially the training of five local cardiosurgeries specialists of the National Scientific Centre of Surgery Syzganov (Almaty) at the cardio Centre for the Diagnosis and Treatment of Congenital Heart Disease in Bergamo (Italy). This training will permit to start the practice of surgery of Kazakh kids born with heart disease

and, after surgery, the rehabilitation at home. Ersai is proud of this particular contribution in the development of children's healthcare in Kazakhstan and is intended to support in future the transportation of children of Mangystau Region, where the Company operates, to Almaty for all necessary treatments.

Saipem Kazakhstan Branch supported an AIDS Prevention Centre with provision of personal computers. This Centre is the only one in Atyrau Oblast and it plays a significant role for AIDS prevention and treatment.

**Education**

In October 2008 Ersai has signed a memorandum of mutual cooperation with the Karaganda State Technical University. Main objective was to establish a cooperation with mutual interest where a well experienced Contractor submits the most challenging requirements from the offshore industry to one of the most prestigious and reputed University in the Republic of Kazakhstan, and the latter fine-tunes its courses accordingly.

Based on this program, 15 graduated have been employed by Ersai in different disciplines (welding, QC, environmental, etc.). Training seminars and courses on Quality System Topics by Ersai QHSE Team have been delivered to University students,

together with an information support to the University in advising modern advanced technologies in order to align educational program in line with modern industry requirements and developed enterprises needs. During the visit to Karaganda State Technical University on May 14, 2009, an Agreement to create an Innovation-and-Education Consortium 'Corporate University' has been signed between the two parties.

Saipem Kazakhstan Branch supported the creation of mini-developmental centre in Secondary School for children without opportunity to attend kindergarten. This mini-centre was equipped with special furniture, essential medical equipments, teaching support, educational games and toys for Kazakh and Russian-speaking children.

Besides, a school for children with hearing losses was equipped with computers to create a class on Inclusive lessons. Inclusive education is a process of removing barriers with help of using special software as a resource for learning new skills.

Saipem Kazakhstan Branch supported a local school for orphans by providing necessary equipments for study and refurbishment for the boarding school. A summer holiday for these orphans in 'Continent' camp located in Shchuchinsk was funded by Saipem.



*Initiatives for local communities*





*The importance of preserving local culture*

## Socio-Economic Development

To enhance the level of business knowledge within local community, Ersai opened a Business Incubator in Kuryk, with the aim of supporting and nurturing the start-up of small business in the early stages, by providing office spaces and training activities.

In 2008, English and Computer Courses have been carried out for 42 unemployed people and 66 schoolchildren, and one office has been equipped with all the necessary equipments (11 new computers, printer, fax, scanner, projector and screen).

Saipem Companies also support and fund local initiatives aimed at improve local infrastructures (e.g. water infrastructures in Makat Region), or recreational infrastructures (e.g. refurbishment of the Kuryk Sport Complex).

## Environmental Protection

During school year 2008, together with school directors, Saipem Kazakhstan held talks about 'The importance of Environmental Protection' among schoolchildren of Atyrau schools. The

main purpose of these talks was to familiarise pupils with significance of environmental protection and waste recycling in modern world.

Besides, Ersai, in collaboration with NGO 'Mangystau Tabigaty', is conducting awareness campaigns addressed to Kuryk population, in the field of ecology, protection of flora and fauna.

Apart from training, landscaping activities are carried out in cooperation with regional schools, the Companies' environmental team provides practical support on these activities.

On regular basis, Ersai is organising the voluntary cleanup of Caspian beach from the debris and rubbish in cooperation with local community, where green team is providing with necessary trucks and other facilities.

## Culture

In accordance with Mangystau Region Governor's Decree No. 2238 dated December 10, 2008 'About assigning of social patronage on monuments' and in the frames of activities on protection of historical-cultural heritage, Ersai has taken under its responsibility reconstruction of the monument

'Kulbyrak' necropolis of XVIII-XIX cc. located 6 km south-east from Tigen village, to provide and install fencing services spooling up to 438 R.M. In order to increase the participation and integration of Ersai in the life and culture of the communities and the territory in which it operates, a fascinating sports initiative was held in 2008: the 'Kuryk Bike Trophy'. This singular cycling event, which involved Saipem and Ersai employees, was conducted along a spectacular 280 km route in the Mangystau region, in a wild nature of the Kazakh steppe, crossing the 'Silk Road', the path Marco Polo travelled to reach China.

Through this event, that was highly praised by the Governor of Mangystau, it was intended to strengthen Saipem's alliance with the Kazakh people and their traditions, to promote the territory of the steppe and, above all, to bring a message of friendship and respect.

### LOCAL AUTHORITIES

In 2008 Akimat of Atyrau Oblast extended its gratitude to Managers

and to entire staff of Saipem SpA Kazakhstan Branch for active participation in execution of RoK President's Edict 'About Business Social Responsibility in Solution of Social Problems of Population' and for contribution to the development of social infrastructure, providing local population with job, for professional training of nationals as well as for high-level fulfilment of social and economical programs, as well as for attending the 19<sup>th</sup> plenary meeting for foreign Investors which was presided over by His Excellency the President of the Republic of Kazakhstan on June 16, 2008.

Ersai has received letters of gratitude in the sphere of Social Development and Education of young generation from Akim of Karakian Oblast; for competency and assistance in liquidation of emergency incidents from Akim of Mangystau Region, in the contribution and support in healthy life of school children of Mangystau Region from the Chief of Regional Sport Department of Mangystau Oblast.



The Kuryk bike trophy



# FUTURE CHALLENGES

Saipem Companies in Kazakhstan aim at becoming the leader in provision of services for the onshore and offshore industry and infrastructures in the Caspian Area, by applying HSE and Quality best practices thus respecting timing and cost for project execution, and be locomotive of the development of local content and local industrial enterprisers of the area.

To do so, Saipem Companies in Kazakhstan shall:

- provide an opportunity for growth and social development for the population of the area through implementation RoK Local Content

Requirements;

- represent an example of how business and ethics can walk together, thus not recognising short-term gains by acting in unethical way;
- offer equal opportunities to all its employees, making sure that each of them receives a fair statutory and wage treatment exclusively based on merit and expertise, without discrimination of any kind;
- provide healthy and safe working environment to the employees and conditions/opportunities to have a professional growth and improve their qualification.

## GLOSSARY & ACRONYMS

### EPIC

Engineering, Procurement, Installation and Construction.

### EPC

Engineering, Procurement and Construction.

### KZT

Kazakhstan Tenge, national currency.

### 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, 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.

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

### RoK

Republic of Kazakhstan.

### TRI

Total Recordable Injury. 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 Injury Frequency Rate.

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

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**SAIPEM** Società per Azioni  
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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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