

2020 IPLOCA ENVIRONMENTAL AWARD

Environmental and Social Initiatives

CAITAN PROJECT

Water Conveyance System for
Spence Growth Option (SGO) Project
Region of Antofagasta, Chile
2017-2020



WHO WE ARE

GLOBAL SOLUTION PROVIDER

WE ARE AN INTERNATIONAL PLAYER IN THE ENERGY INDUSTRY AND INFRASTRUCTURES

We possess unique engineering skills with high added value for managing complex projects.

WE OFFER TAILOR-MADE SOLUTIONS

We support our clients throughout the entire project cycle - from identifying needs to decommissioning, employing all our professional expertise to operate in the most challenging contexts.

WE ANTICIPATE THE ENERGY TRANSITION

We have launched the challenge in the gas value chain and infrastructures sectors, renewable energy and the creation of hybrid and clean plants.

WE HAVE A SENSE OF RESPONSIBILITY

The health and safety of people and operations, attention to environmental impact and collaboration with local stakeholders are our priorities.

KEY HIGHLIGHTS

127

NATIONALITIES

235 MLN

WORKED MAN-HOURS

36,986

EMPLOYEES

26

AVERAGE TRAINING MAN-HOURS ATTENDED BY EMPLOYEES

3,874

WOMEN

0.22

LOST TIME INJURY FREQUENCY RATE

74%

LOCAL PERSONNEL

1,406

SCOPE 1 GHG EMISSION (KT CO₂ EQ)

23,871

ACTIVE VENDORS

€9.1 BLN

REVENUES

€1.9 BLN

TOTAL GOODS AND SERVICES ORDERED

€21.2 BLN

RECORD BACKLOG

73%

OF GOODS AND SERVICES ORDERED LOCALLY

MORE THAN

€8.7 BLN

ECONOMIC VALUE DISTRIBUTED BY SAIPEM*

€79 MLN

OVERALL INNOVATION SPENDING

71

COUNTRIES WHERE SAIPEM OPERATES

* Calculated by summing operating costs, employee wages and benefits, payments to providers of capital, payments to government by country, and community investments.

ACKNOWLEDGEMENTS

MEMBER OF
Dow Jones Sustainability Indices



In collaboration with
Confirmed as the sector's leader in DJSI World and Europe indices.



Confirmed for the 10th year in FTSE4Good Index Series.



"B" rating confirmed.



*Data updated at 2019



2019 Sunset in Chile

OUR PILLARS – ENVIRONMENTAL CULTURE

Enhancing the efficiency of its operations and becoming a key partner for our clients in their energy transition is part of Saipem’s business objectives.

Our commitment towards climate change is also reflected in its Quadrennial Green House Gas Strategic Plan whose identified actions will result in a significant reduction in Saipem’s GHG emissions in the coming years.



2020 – Commissioning Works Pumping Station

OUR PILLARS – SUSTAINABLE BUSINESS

The Company's sustainable business strategy aims to meet the needs and the expectations of its stakeholders, tackling the challenges posed by the evolution of global scenarios and improving the standards of living and the socio-economic development of the communities in which Saipem operates. The creation of employment opportunities, a robust capacity-building effort in the local socio-economic context and the transfer of know-how to local workers are the most important legacies Saipem leaves in the countries in which it operates.

THE CAITAN PROJECT TO BRING DESALINATED WATER TO SPENCE MINE

In 2017, the Minera Spence S.A., entered into an agreement with Caitan (a Consortium in between Mitsui & Co. Ltd and Técnicas de Desalinización de Aguas, S.A) to Build, Own, Operate and Transfer a desalinated water supply system for the Spence Growth Options (SGO) Project, whose new process plant requires an additional flow of 1000l/s of desalinated seawater to increase its copper production. The development of the new water source involves the construction of a Seawater Reverse Osmosis (SWRO) Desalinization Plant located in Mejillones, approximately 70 km north of Antofagasta, in the Atacama Desert region. The desalinated water is conveyed from the desalination plant to Spence mine, at approximately 1650m above the sea level at 155 km of distance from the Desalination Plant.

OUR PROJECT

29

Months from Contract Award to complete Commissioning

155

km of 36" Carbon Steel Pipeline Internally Lined

3

Intermediate HP Pumping Stations

11

Drain and Vent Stations

More than **1200**

resources at peak for the construction of the Conveyance System

90%

of local content

22%

of personnel recruited in the Region of the Project

7%

Female resources in construction

2019 – Desfilling activities Caitan Project

APPROACH TO THE IMPLEMENTED CAMPAIGNS

The different campaigns realized on the Project (some of them in cooperation with the Client Caitan) were selected based on a previous analysis of the environmental and social frame, the requirements of the Environmental Impact Assessment and Saipem's Sustainability Priorities for the year. This presentation resumes the most important campaigns only, its implementation and tangible achievements.



SAIPEM is contributing to achieving the 17 Sustainable Development Goals (SDGs), societal goals at the heart of the 2030 Agenda for Sustainable Development adopted in 2015 and aimed at ending extreme poverty, fighting inequality and injustice, and protecting the planet by 2030.



2019 Ship Graveyard in Mejillones – Chile
Most of trawlers have been progressively abandoned in the last thirty years

FRAMING

The Project has been developed in Mejillones, in the desartic region of Antofagasta, one of the re-dubbed “Sacrifice Zones” of Chile, given the high concentration of polluting activities, especially coal-fired power stations. The economy of Mejillones is mainly dependent from those power plants built in the recent past, which heavily impacted in the last years the small-scale fishermen activities. The social context is thoroughly poor and often characterized by social conflict, due to the high rates of poverty and unemployment. Most of the social initiatives pursued during the Project aimed to improve the standards of living and the socio-economic development of the town.

RECYCLING PROGRAMS - "RECICLA UCN" CAMPAIGN

In January 2019 Saipem adhered to the recycling campaign "Recicla UCN", launched by the **Catholic University of the North** in Antofagasta, starting a recycling program throughout the Project, installing Green Points to recycle bottles, cans and paper generated in the Construction activities



RECYCLING PROGRAMS - "RECICLA UCN" CAMPAIGN

The campaign



Thanks to recycling paper through SOREPA there are donations sent to "Residential home for girls **"Bárbara Kast"** of Maria Ayuda foundation, who were neglected in their rights and due to legal decisions were separated from their families. This home is located in Antofagasta.

Office Paper



Plastic Bottles



Through Norteplast Saipem supported the employability of vulnerable people and recycling workers at the city dump in Antofagasta, delivering PET bottles and aluminium cans. Declaring all the delivered materials will be used as primary resources for the elaboration of new products and will not be thrown away in any dump or landfill.

Soda Cans



Bottle Caps

Through the voluntary services from the Ladies in Brown ("Damas de Café"), who are recycling bottle caps to generate HDPE, Saipem supported the Oncological "Hans Pollmann" Foster Home in Santiago which works with children and their mothers who come from other cities, providing accomodation, food, transportation and psychological support for them to continue their fight against cancer.

Recycling Points



Collecting points outside the canteens throughout all pipeline construction activities



Recycling campaign dissemination in office areas and construction workplaces



Collecting point outside main offices

Recycling Programs - "Recicla UCN" Campaign

Tangible Results



ADMINISTRATIVE AND FINANCIAL AFFAIRS VICE RECTORY
SERVICE DIRECTION

Removal Certificate

Hereby, **RECICLA UCN** certifies having received on behalf of **SAIPEM Company**, the amount of **20.1 kg. of PET Bottles, 44.1 kg. of white paper** and **3.2 kg. of cans** for the recycling campaign.

We appreciate your efforts and contribution to the recycling culture in the city of Antofagasta, and we declare that the **PET and cans** will be delivered to **NortePlast**, the **paper** will be delivered to **Sorepa**, generating resources for the **Residential Home for Girls "Bárbara Kast"**, handled by the **María Ayuda Foundation**.

Therefore, these resources will not be thrown away in any city dump or landfilling.

Aporte Acumulado en KG	Unidad de Medida	2019	Total
	Kilos de botellas PET	40	40
	Kilos de tapitas plásticas	2.4	2.4
	Kilos de papel blanco	48	48

Bio-equivalencia	Unidad de Medida	Total
	Barril de Petróleo	0.60
	Toneladas de Emisiones de CO ₂	0.38
	Ejemplares no talados	0.82
	Litros de agua	15.552



Antofagasta, March 8th, 2019

Cristian Bello Vázquez
Director de Servicios
UCN

Antofagasta, 8 de marzo de 2019.



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Accumulated Amount in Kg	Unit of Measure	2019	Total
	PET Bottles (Kg)	56.5	56.5
	Plastic Caps (Kg)	3.3	3.3
	White Paper (Kg)	80	80
	Aluminium Cans (Kg)	3.7	3.7

Bio-equivalence	Unit of Measure	Total
	Oil Barrel	1.01
	CO ₂ Emission Tons	0.60
	Not felled Trees	1.36
	Litres of Water	25.920



Antofagasta, April 16th, 2019



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Accumulated Amount in KG	Unit of Measure	2019	Total
	PET Bottles (Kg)	76.6	76.6
	Plastic Caps (Kg)	3.3	3.3
	White Paper (Kg)	124.1	124.1
	Aluminium Cans (Kg)	6.9	6.9

Bio-equivalence	Unit of Measure	Total
	Oil Barrel	1.46
	CO ₂ Emission Tons	0.84
	Not Felled Trees	2.11
	Litres of Water	40.208



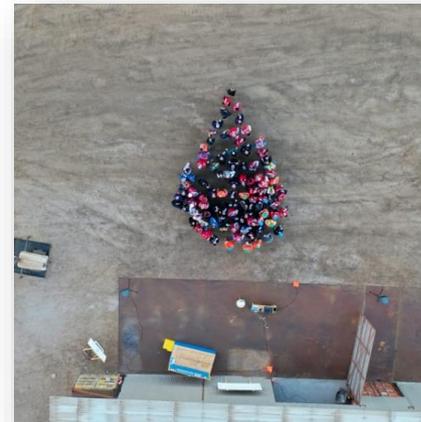
Cristian Bello Vázquez
Director de Servicios
UCN

Antofagasta, May 8th, 2019



World Water Day 2019

The purpose of this campaign was to draw worker's attention about the importance of this vital resource, putting emphasis on the specific conditions of our environment and the actions that can be carried out in the project as well as in everyday life, establishing personal commitments in terms of safeguarding this scarce resource. The topic of that year was: "Not leaving anyone behind"



Saipem's employees forming a drop

RECYCLING PROGRAMS - RECYCLING CIGARETTE ENDS



70%

of the cigarettes daily smoked in the world are discarded into the environment.

80%

of the cigarette end is made of non-biodegradable plastic, very harmful to the environment.

5600

Billions of cigarette ends are disposed of into the environment each year in the world

7000

Toxic chemical compounds (heavy metals, nicotine, carcinogenic compounds) on each end.

The Chilean Company **IMEKO** developed a technology that allows cigarette butts to be converted into a recyclable waste. Through a sustainable chemical process, all the toxic substances present in the butts are removed and the resulting material is used as a new sustainable raw material, for the development of new products and solutions.

Green collection points were installed at SAIPEM facilities at site to recycle the cigarette ends, which were weekly collected by IMEKO.

More than 100.000 cigarette ends were collected in 2019

PRODUCTS AND INITIATIVES

All the plastic recovered from the cigarette ends is molded into new sustainable products, such as flowerpots, coasters, sunglasses, etc.





FUNDACIÓN PARA
LA SUSTENTABILIDAD
DEL GAVIOTÍN CHICO



15

LIFE ON LAND



LIFE ON LAND – PROTECTION OF THE “GAVIOTIN CHICO”

2017-2020 - Together with the Client Caitan, Saipem supported during the entire duration of the project the “Fundación para la Sustentabilidad del Gaviotín Chico”, who aims to contribute to the conservation and protection of a bird in danger of extinction, the Little Tern (Gaviotín Chico). Among other things, the foundation deals with dissemination of information for the protection of the Little Tern. It also controls access and circulation by means of a perimeter fence/physical protection of the work fronts located in the Gaviotín Chico nesting areas – one of which is adjacent to Pipeline routing - disposal of nets and relocation of traps on work front structures in nesting areas of the Little Tern

ENERGY EFFICIENCY – INSTALLATION PV TOWERS

As part of the contribution to the reduction of the carbon footprint, the use of LEDs and outdoor photovoltaic lighting towers has been implemented in all project temporary facilities.

During the day, the PV panels converts the solar energy into electrical energy and store it in the battery. During the night with no solar irradiation, the energy is withdrawn from the battery, therefore the kWh adsorbed from the power network is zero.



Also, LEDs are installed in the Temporary Facilities, with considerable saving of CO2 compared with fluorescent lamps. From the below tables, it can be see that, 75 tons CO2 saved in 24 months of construction

Reduction of carbon footprint by using LEDs and Solar Powered Outdoor Lightings @ temporary facilities at Caitan Project in Chile (Considering that Low efficiency Lamps are out of markets since 2018, comparison have been made in between LED and Compact Fluorescent Lights, which have a lower cost and a lower efficiency, considering the same lumens per fixture).

LED Lumen (lm)	Power (W)	Service	Utilization Factor	Total Number	required kWh/year
6500	48	LED Outdoor Lightings (Area Lighting)	50%	26	5.466,2
6500	48	LED Outdoor Lighting (Prefabrication)	50%	14	2.943,4
6500	48	LED Indoor Lighting (Warehouse)	54%	20	4.541,2
6500	48	LED Indoor Lighting (Maintenance Area)	54%	14	3.178,8
2554	40	Solar-Powered LED Outdoor Lighting		6	Note 1
3800	36	LED Indoor Lightings (Embedded LED Panel 60x60cm 36w)	63%	160	31.788,3
3300	36	LED Indoor Lightings (SLIM LED 36w)	20%	209	13.182,0
Total Annual Consumption LED (kWh)					61.099,9

Fluorescent Lumen (lm)	Power (W)	Service	Utilization Factor	Total Number	required kWh/year
6500	105	Outdoor Lightings (Area Lighting)	50%	26	11.957,4
6500	105	Outdoor Lighting (Prefabrication)	50%	14	6.438,6
6500	105	Indoor Lighting (Warehouse)	54%	20	9.933,8
6500	105	Indoor Lighting (Maintenance Area)	54%	14	6.953,7
2554	42	Outdoor Lighting	50%	6	1.103,8
3800	2x21	Indoor Lightings CFL	63%	160	37.086,3
3300	2x21	Indoor Lightings CFL	20%	209	15.379,1
Total Annual Consumption CFL (kWh)					88.852,7

Note 1 Calculation has been done considering that energy is produced by temporary diesel generators having an estimated carbon footprint equal to 1,27 kg CO2/kWh



75tons

Fishermen internship experience in the Brittany Coast

2019 – Together with the Client Caitan, Saipem promoted an internship experience in the Brittany Coast of the representatives of the local Fishermen’s unions in Mejillones, with the purpose of engaging the fishermen in the process of the development of the local tourism of the area.

The leading role played by the local fishing unions is considered vital to ensuring that the strategy responded to the needs of the sector, adding value to small scale fisheries and developing coordinated management of coastal tourism activities.



Beneficiary

Family-owned Companies

10

Family Welfare Program in the village of Sierra Gorda

2019 – Saipem participated in sponsoring a welfare program, aimed to teach, advise and strengthen healthy habits in the village of Sierra Gorda, in the desert of Atacama, whose population shows a high percentage of chronic diseases due to their lifestyle.

The program covered a wide range of population, from childhood to the elderly. The program was developed by areas: Psychological, Nutritional and Physical



Beneficiary

Families

30

Revitalization of public areas in Mejillones

2018 – 2019 Saipem participated in sponsoring the requalification of a dismissed industrial area in the center of Mejillones together with the local Municipality. The project aims to promote the integration of vulnerable children and Young people in the town and provide them with space for their social development. Basket and soccer courts, stations for calisthenics and equipped spaces for kids make of this park an excellent meeting point. The Project is also considered strategic by the municipality, to increase the public green areas in Mejillones for tourism



ENGAGEMENT WITH LOCAL COMMUNITIES

Refurbishment of the kindergarten “Jardín Infantil Jesús de Praga” in Mejillones

In 2020 Saipem sponsored the refurbishment of a public kindergarten in Mejillones. The external court has been covered with a concrete paving



Before...



Now...

We don't simply build wells, offshore platforms and refineries. Without us, none of these things can be built effectively, efficiently, safely, with little impact and, above all, limited carbon emissions, improving the quality of life of billions of people around the world who have access to energy and mobility.

Stefano Cao, Saipem CEO



THANK YOU

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