



TOTAL IN QATAR  
**SUSTAINABILITY**  
REPORT

**2019**



# SUSTAINABILITY REPORT

2019



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# About this Report

Total Qatar is proud to present its annual Sustainability Review for 2019

This 2019 report demonstrates our reinforced and sustainable engagement through human, social, operational, and environmental excellence. It showcases our performance and key activities involving our stakeholders and community.



**OPERATIONAL | HUMAN | SOCIAL | ENVIRONMENTAL**

excellence

## Foreword from Management



**Laurent Wolffsheim,**  
Managing Director at Total E&P Qatar, and  
Country Chair

At Total, sustainable development is fully integrated into our strategy, our business model and our day-to-day operations.

“ In 2019, our corporate social responsibility pillars were based on road safety, forest and climate, education and youth inclusion, as well as culture and heritage. As a responsible energy major, our ambition is to perform our operational activities while reducing our environmental impact.

We also work closely with our stakeholders to contribute to human and social development in the State of Qatar. Enriching our workforce and the community through education is one of our biggest commitments to the country.

All of our achievements throughout the year wouldn't have been possible without the efforts of our employees and stakeholders, who are all fully dedicated to our “One Total Values”, which fosters a culture of excellence.”



**Dekhil Abu Salaa,**  
Deputy Group Representative, and  
Vice President HR, Communications  
& CSR at Total E&P Qatar

With over 83 years of presence in Qatar, we take pride in our close relations with local communities, thus supporting Qatar National Vision 2030.

“ Working with government entities, industrial partners, and academia has contributed to various viable programs and initiatives, cementing the long and successful partnership between Total and the State of Qatar.

These fruitful collaborations have enabled us to deliver sustainable economic, social and environmental growth.”

**INTRODUCTION**



**Our Highlights for 2019**



**FEBRUARY 2019**

**Qatar Total Open**

Total Qatar proudly sponsored Qatar Total Ladies Open 2019. This tennis tournament is one of the major sporting events in Qatar.

**FEBRUARY 2019**

**Lusail Drift**

Total and Red Bull partnered to host this annual drifting competition, where drivers displayed their drifting skills within a safe, contained environment.



**FEBRUARY 2019**

**WISE (World Innovation Summit for Education)**

Total in Qatar was a sponsor of the WISE Summit organized in Paris, a collaborative and creative platform to solve challenges facing education.



## Our Highlights for 2019



**MARCH 2019**

### Women's Day

Total Qatar celebrated International Women's Day at the Sheraton Doha Hotel, and rewarded our female workforce and strengthened the team spirit.



**MARCH 2019**

### Waste-Free Environment Campaign

Gulf Petrochemicals and Chemicals Association organized a cleanup activity at Al-Wakra Beach bringing together Total and 27 other companies.

**MARCH 2019**  
**Qatar National Scratch Coding Competition**

Total Qatar sponsored a coding competition for young innovative students aged 6 to 18 years.



**MARCH 2019**

### INJAZ - The Job Work Readiness Championship

INJAZ Qatar partnered with Total, and the Embassy of France in Qatar, in a program called 'Job Champions Work Readiness Competition' for young students to develop their innovative entrepreneurial spirit and skills.



**MARCH 2019**

### Total Research Center Qatar (TRC-Q) celebrated its tenth year

TRC-Q, which focuses on technical challenges in Qatar and the region, celebrated a decade of Innovation and Research.



**APRIL 2019**

### Mangrove Preservation

Total Qatar sponsored a Mangrove educational field trip program for students to discover the distinctive characteristics of the mangroves in Qatar.

## Our Highlights for 2019



**APRIL 2019**

### World Day for Safety

Total Qatar celebrated World Day for Safety with employees, partners and contractors to promote a safer workplace.



**MAY 2019**

### Total Marketing Qatar Elite Awards Ceremony

Total Marketing Qatar (TMQ) invited over 80 customers from its construction segment to the Elite Awards Ceremony. This event commemorates the solid partnerships that TMQ shares with its customers – relationships that are between 5 to 15 years.

**APRIL 2019**

### Seminar on Polymers at TRC-Q

Total Qatar organized a seminar led by Dr. Robert Pelletier, for QAPCO, Muntajat, and researchers from local universities.



**MAY 2019**

### 3C Recognition Awards Ceremony

3C Program (Consolidation, Cost, Culture) builds a sustainable cost culture mindset through employee involvement. Six winners representing three different initiatives were commemorated for their contribution to the program.



**MAY 2019**

### Celebrating Garangao at Al Wakra Hospital

Volunteers from Total Qatar visited the Children's Ward at Al Wakra Hospital, on the occasion of Garangao.



**JUNE 2019**

### World Environment Day

On the occasion of World Environment Day, Total Qatar raised awareness on current biodiversity issues.

## Our Highlights for 2019



**SEPTEMBER 2019**

### Blood donation

Total Qatar joined forces with Hamad Medical Corporation and Alfardan Towers, for its annual blood donation campaign.



**OCTOBER 2019**

### New Integrity Coordination Committee

Total Qatar formed a new Integrity Coordination Committee to strictly enforce an anti-corruption policy within the organization.

**OCTOBER 2019**

### Catalyzing The Future: QSTP marks 10-year journey

TRC-Q participated in QSTP's tenth anniversary gala event, 'Catalyzing the Future,' which was attended by H.H. Sheikha Moza bint Nasser, Chairperson of Qatar Foundation.



**NOVEMBER 2019**

### Algae-Based Research Collaboration

Total and Qatar University initiated two research projects for the investigation of microalgae from Qatar to produce biofuels as well as Carbon Capture, Utilization, and Storage (CCUS).



**OCTOBER 2019**

### Digital Workshop

Total Qatar commenced its digital journey with a workshop that gathered 22 of Total's digital leaders together to contribute to ideas on digital trends in the Oil and Gas industry.



**NOVEMBER 2019**

### Al-Reyada Total Energy Seminar

Total Qatar launched the Al Reyada Total Energy Seminar in November 2019 to create a platform that links the industry to academia.

## Our Highlights for 2019



**NOVEMBER 2019**

### IMS Training

Total Qatar employees participated in an exercise on 'How to command and control in response to a major oil spill' during the Incident Management System (IMS) training.



**DECEMBER 2019**

### Qatar National Day Celebrations

Every year we celebrate Qatar National Day with a variety of events instilling the national spirit among all employees.

**NOVEMBER 2019**  
**HSE Contractors' Forum**

HSE Contractors' Forum was a platform of exchange between Total and its contractors on how to be active in safety issues and optimize best practices.



**DECEMBER 2019**

### Total Energy Playground at NMoQ

Total Qatar became the official sponsor of the energy playground at the National Museum of Qatar (NMoQ) which will provide a unique experience for families to explore and discover the story and contribution of energy.



**DECEMBER 2019**

### Business Ethics Day

Business Ethics Day is an annual event, bringing together Total Qatar employees in discussions on ethical, human rights, and corruption issues in the workplace. In 2019, the theme was 'Move Forward, Speak Up'.



**DECEMBER 2019**

### International Sustainability Conference

Total sponsored and participated in the first International Conference on Sustainable Energy-Water-Environment NEXUS in desert climate organized by the Qatar Environment and Energy Research Institute (QEERI).

## Qatar National Vision 2030 and our Sustainability Framework

### Qatar National Vision 2030

The State of Qatar has a national vision which consists of:

	Human Development
	Social Development
	Economic Development
	Environmental Development



### Total Global Societal Priorities

Total Societal Committee's role is to provide advice and approve the strategy to ensure a clear approach and action plan.

### Total Group Stakeholder Relationship Management Tool (SRM+)

It is a tool to measure stakeholder expectations, identify areas of focus, and ensure the alignment of Total's Societal Strategy and country vision.

	Youth Inclusion & Education
	Forest and Climate
	Road Safety
	Culture & Heritage



CHAPTER 1

**Human Development** 

Human development plays a major part in the sustainable growth of our company. While ensuring strong business ethics, Total Qatar is committed to developing employee talent through professional and soft skill training. Enriching our workforce and the community, through education, helps us forge a knowledge-based society.

## OUR PEOPLE

Inspiring our employees through strong business ethics, diversity awareness, talent management, and training is part of our employee engagement policy.

### Our Workforce

We are proud of our diverse, dynamic, and committed workforce. Number of employees:



## Ensuring Ethics

*"Compliance is the cornerstone of our sustainability and the continuity of our business,"*

**Laurent Wolffsheim**  
Managing Director of Total E&P Golfe & Country Chair.

At Total Qatar, we follow a strict Anti-Corruption and Compliance Program to ensure the right of employees to work in an ethical environment, as well as their responsibility in maintaining integrity at work. We encourage them to speak up in any situation where ethics and compliance principles are at risk. In 2019, we formed a new Integrity Coordination Committee for Total in Qatar to strictly enforce an anti-corruption policy within the organization.

### Programs and missions of the Integrity Coordination Committee in 2019





## Talent Management

### Qatarization

Qatarization is a key driver for Total, with a continuous focus on supporting the development of Qatar's future generation. Being an international organization, our strategy is to have a robust understanding and positive contribution to the societies we operate in.

Total's Qatarization Strategy is in support of Qatar National Vision 2030, by retaining qualified and talented Qatari citizens in key positions within the company; through offering various internship programs in technical and support functions, and through continuous development of our Qatari workforce. Currently, we are sponsoring two employees in pursuit of their higher studies in the United States and the United Kingdom as part of their development plan. Upon completion, they will undertake new roles with more senior responsibilities linked to their fields of study. Starting in 2019, Total Qatar has also created exclusive recruitment opportunities for Qatari Nationals in Technical Disciplines.

### Better Together Project

We launched the Better Together project in 2019 as part of our ambition to become the responsible energy major. In order to align our ambition with the development of our employees, three main areas were identified:

#### 1. Developing Talents

We introduced a new Job Posting Platform to ensure equal opportunities for all Total employees worldwide. It presents employees with a transparent career path and drives them to be more proactive by taking charge of their career objectives.

#### 2. Promoting the Manager/Coach

This program guides managers to become better leaders, by evaluating and training their leadership skills. They are required to pursue general and personalized trainings based on their seniority and needs (Executive Manager, Senior Manager, Team Lead & Transverse Managers), thus arming them with all the tools to become successful managers. A 360 degree evaluation is conducted for each manager, and a development plan is then outlined during their individual coaching sessions. They are then assigned a co-coach or partner to help implement the plan. Managers are also empowered to participate in the selection process of their team members through the Job Posting Program.

#### 3. Building a Good Place to Work

To ensure employee well-being, we launched a listening and support service which helps with stress management and assesses psychosocial risk factors in the workplace, while maintaining full employee confidentiality. This service is accessible via call or through a digital platform. Another step towards improved efficiency, is enabling employees to work remotely and helping them in maintaining a healthy work-life balance.





## TRAINING COURSES

### Total Training for Muntajat Managers

To reinforce the partnership between Muntajat and Total, we shaped the 'Development Program for Muntajat Young Qatari Professionals.' Six managers from Muntajat attended this intensive training on Polymers and their application.



### Digital Workshop

We kick-started our digital journey with a workshop that gathered 22 of Total's digital leaders together to contribute ideas on digital trends in the Oil and Gas industry. Following this, employee representatives were then engaged in a brainstorming session about how to address their challenges using the digital trends. The level of engagement of employees has widely contributed to making our digital transformation a success.



### Compliance Trainings and Communication

Various training, awareness and practice sessions were organized throughout the year to emphasize the importance of Compliance.

## Incident Management System (IMS) Training

In November 2019, we organized an IMS training to follow a more systematic approach across all Total affiliates worldwide in response to any incident. This IMS system is a modular organization that has pre-identified roles, responsibilities, reporting relationships, and authorities necessary, which has proven successful in managing any situation.

### Training at a glance:

**4,370**  
hours of  
technical and  
soft training

**3,021**  
hours of  
technical  
training

**4 days**  
training  
per  
employee

**22**  
in-house  
training  
programs

More than  
**10**  
training sessions  
for the OPCOS  
Total's operating  
partners

**3 days**  
of in-house  
training for HR  
departments

At QP, NOC, Dolphin Energy,  
and Total Qatar.



## EDUCATION

Supporting education is a part of our strategy to help build a strong team spirit and strengthen leadership skills.



### Internships

Every year, we organize an internship program for senior students of Lycée Bonaparte where they can learn and understand the activities of the energy industry and their potential career path.

## Total Professeurs Associés (TPA)

TPA is an association of working or retired Total Group employees who conduct lectures in their field of expertise. Together, they cover all the technical and non-technical areas that encompass large international organization. We organized a seminar in April at Total Research Centre in Qatar, led by Dr. Robert Pelletier, a TPA member and former Director Process & Technology for Plastics at Total. QAPCO, Muntajat, as well as researchers from local universities participated in the seminar which focused on the current and future trends in the Polymers business.



## Al Reyada Total Energy Seminar

We launched the Al Reyada Total Energy Seminar in November 2019 to create a platform that links the industry to academia. This platform gave young professionals who possess a passion and drive for energy-related topics an opportunity to engage in dialogue with experienced professors. During the event, Total's experts provided insights and interesting perspectives to participants on topics ranging from oil and gas challenges, renewables, petrochemicals to innovation and leadership. Students and professors from Qatar University, Texas A&M University at Qatar, Hamad Bin Khalifa University, College of the North Atlantic, Qatar, as well as young professionals and engineers from Qatari Oil and Gas companies were invited.



## World Innovation Summit for Education (WISE)

Total Qatar was a sponsor of the WISE Summit organized in Paris in February 2019. The WISE community is a network of education stakeholders – from students to decision-makers - from about 200 countries, who share ideas, collaborate and seek creative solutions to solve challenges facing education. It was formed as a response to the necessity of revitalizing education and providing a global platform for the development of new ideas and solutions.



## Qatar National Scratch Coding Competition

We sponsored a coding competition for students aged 6 to 18 years to reinforce an interest in information technology. The event targeted the young innovators by tapping into their creativity and talent to inspire them. In 2019, more than 1,547 students from 102 schools submitted over 800 projects.



CHAPTER 2

**Social  
Development**



Through our commitment to Qatar National Vision 2030, we strive to cultivate meaningful community engagement, thus strengthening social and cultural development, as we believe it is our corporate and social duty.

## Women Empowerment in our Industry

Total Qatar is fully committed to promoting women empowerment and reducing the gender gap. Currently, women only represent 20% of employees. Reducing this gap through gender diversity will bring more value to our industry.

### Women's Day

We celebrated International Women's Day at the Sheraton Doha Hotel, and rewarded our female workforce for the hard work that they had demonstrated throughout the year. The highlight of the day was the Dragon Boat competition which strengthened the team spirit, and the bond within the women's community at Total.



### Women and Diversity Lunch Talks

In March 2019, Total organized a seminar on equality and gender diversity. It was a great opportunity for all attendees to express their views, discuss women's empowerment and contribute to ideas on how to break the glass ceiling in our society.



**Local Artist for Qatar Total Open**

Total collaborated with Assil Diab, a talented graphic designer and graffiti artist based in Qatar. She was chosen by Total to create a visual representation of women empowerment to serve as an illustration for the 2019 and 2020 editions of Qatar Total Open.

**CULTURE AND HERITAGE**

Qatari culture and heritage are strongly valued and celebrated at Total. During these festivities, we organize gatherings in order to reinforce the national sentiment within employees.

**National Celebrations**

Every year we celebrate Qatar National Day with a variety of events instilling the national spirit among all employees. We take great pride in our involvement with the community, which is integral in the way we conduct our work. Celebrating National Day and Ramadan festivities, including Garangao, are a great way to promote a sense of unity, belonging and togetherness.





## Inspiring the Young Generation through Qatar Total Open

Our partnership with Qatar Tennis Federation (QTF) for the ladies' tournament helps us achieve our mission to support local social initiatives. Over the years, we have been a part of the tournament's journey to becoming one of Qatar's major professional sporting events.

During the 2019 tournament, we collaborated with QTF and Women's Tennis Association (WTA) in organizing a visit by former world no. 1, Caroline Wozniacki, to Qatar Academy located in Qatar Foundation. Wozniacki shared her journey towards becoming a professional tennis player, which inspired and motivated the 7-year old students, who were coincidentally the same age as Caroline when she began her career.

## Social Engagement

### Total Energy Playground at NMoQ

*"We highly cherish our newfound partnership with Qatar Museums, and with Her Excellency Sheikha Al Mayassa, and this reflects Total's vision for youth inclusion and education, which is aligned with our ambition and values. Total, a committed energy partner of Qatar for over 80 years, is proud to play a role in ensuring that families understand our energy's past and the path it is headed."*

**Patrick Pouyanné**  
Chairman and CEO of Total.

In December 2019, Total Qatar became the official sponsor of the energy playground at the National Museum of Qatar (NMoQ).

The energy playground will provide a unique experience for families to explore and discover the story of energy.



### Garangao at Al Wakra Hospital

*"It was such a rewarding experience to celebrate Garangao with children at Wakra Hospital, preserving the joyful spirit of giving during Ramadan."*

**Wafaa Al-Saffar**  
Corporate Social Responsibility Lead at Total Qatar.

In May 2019, volunteers from Total Qatar visited the Children's Ward at Al Wakra Hospital, sharing the festivities of the holy month of Ramadan. Employees brought along a mascot and goodies to cheer the kids team aged 2-months to 13 years old. This yearly social activity is a significantly positive and inspirational experience for all involved.

### Blood Donation Drive

On September 2019, Total, joined forces with Hamad Medical Corporation and Alfardan Towers, for its annual blood donation campaign. Employees and other tenants of Alfardan Towers participated in this event. This annual event helps spread awareness among our community on the importance of blood donation and its impact on the lives of others.



**CHAPTER 3**

**Economic Development** 

Total is very proud of its longstanding partnership with the State of Qatar which spans over 83 years. Our collaboration with our key stakeholders such as Qatar Petroleum, Qatargas, Dolphin Energy, North Oil Company, QAPCO and Qatofin, have led to the development of world-class projects in the oil, gas, LNG, refining and petrochemical domain.

# Our Activities: Upstream Activities



## Al Khalij field

Total is the operator and shareholder of Al-Khalij, a complex and challenging offshore oilfield discovered in 1991 on Block 6 in Halul, 120 km northeast of Doha. Production from this field started in 1997.

## Facts and figures



**18,500**  
barrels of oil  
produced per day  
in 2019



**8**  
platforms



**227,841,171**  
barrels of oil  
produced (until end  
of 2019)



**8**  
drilling and well  
operations for 2019



**250**  
personnel on board  
(130 in Halul and  
120 in rig)



**69 WELLS**,  
56 wells active (51  
oil producer and 5  
water injector)

## Qatargas

Total is one of the founding partner of Qatargas, the world's largest LNG producer, which was established in 1984. Qatargas supplies LNG to consumers in Asia, Europe, and the Americas.

### Facts and figures

**20%**  
interest in the  
upstream of  
Qatargas 1

**10%**  
interest in the  
downstream of  
Qatargas 1

**17.7%**  
interest  
in Train 5 of  
Qatargas 2

## Dolphin Energy

Total is one of the founding member and a leading partner of Dolphin Energy, the Gulf's first and largest gas grid, linking several countries in the region. Production started in 2007 and has generated 2 billion cubic feet per day of dry gas from the North Field.

## Facts and figures

Dolphin Energy supplies  
**30%**  
of UAE's natural gas requirements

Dolphin Energy supplies  
**5%**  
of Oman's gas needs

End of 2019, Dolphin Energy achieved around  
**9th** trillion scf net gas milestone

End of 2019, Dolphin Energy achieved cumulative production of  
**2,2**  
billion barrels of oil equivalent (all products)

## North Oil Company

North Oil Company (NOC) was established as a partnership between Total (30%) and Qatar Petroleum (70%). In July 2017, North Oil Company took over the operatorship of Al-Shaheen offshore oil field for a period of 25 years.

### Facts and figures

**7**  
reservoirs

**2 OUT OF 4**  
of the world's  
biggest FSO (Ultra  
Large Crude Carrier  
category)

**850,000**  
bbl injected per day.  
One of the largest  
waterfloods in the  
world

**1,363**  
employees

# Our Activities: Downstream Activities



## QAPCO

QAPCO (Qatar Petroleum Company) operates a petrochemical complex manufacturing ethylene and low-density polyethylene (LDPE) and exports it worldwide. LDPE is the most commonly used type of plastic, used for food packaging, agricultural films, etc.

## Facts and figures

**20%**  
joint venture  
located in  
Mesaieed

**840,000**  
ton-per-year of  
ethylene from ethane  
steam cracker

**780,000**  
tons per year of  
low-density  
polyethylene (LDPE)

## Qatofin

It was established as a joint venture between Qatar Petrochemical Company, Total Petrochemicals and Qatar Petroleum. Qatofin produces linear low-density polyethylene (LLDPE), mainly for export. LLDPE is usually used for plastic bags and sheets among other applications.

## Facts and figures

**49%**  
in the Qatofin joint  
venture (incl. 13%  
through QAPCO)

**22%**  
(via Qatofin) in the  
steam cracker using  
ethane of RLOC (Ras  
Laffan Olefins  
Company)

**570,000**  
tons of low-density  
polyethylene  
(LLDPE) per year in  
Mesaieed

**1,3**  
million tons of  
ethylene per year  
from ethane steam  
cracker in Ras Laffan

## Ras Laffan Refineries

Two condensate refineries of Ras Laffan produce LPG, naphtha, desulfurized kerosene and ultra-low sulfur diesel both for local consumption and for export.



### Facts and figures



OVERALL CAPACITY OF  
**300,000 BARRELS**  
 OF CONDENSATE PER DAY

## Marketing & Services

Specialized in lubricants and special fluids, Total Marketing Qatar (TMQ) has a prominent market share for lubricants in the country.

**30**

Total-branded rapid oil change / pit stops

**60**

products available at Woqod fuel stations



## OUR SUSTAINABLE PROJECTS

Total Qatar has led several initiatives in support of local businesses, and to inspire the entrepreneurship spirit within the younger generation.

### Localization with Tawteen

Total Qatar has been working closely with Qatar Petroleum for the Tawteen project, in order to build a resilient and competitive energy sector and to increase the 'in-country value' (ICV) for the Energy sector from 15% to 40%. In 2019, we implemented the Tawteen project in all our contract and procurement operations, based on the principles of transparency, confidentiality, responsibility, fairness and independence, and compliance with our core ethical values.

The project consists of three different components:

#### Investment opportunities (4CS).

Tawteen's Local Supplier Development Program is a comprehensive set of activities to help local businesses become successful suppliers to the local Energy Sector. The 4CS stand for Category scoping, Consolidation, Commitment, Contracting, and Strategy.

#### Supplier and Talent development.

This part enables Tawteen to improve capabilities and promote competitiveness.

#### Procurement transformation and ICV policy.

Starting in 2020, an 'in-country value' (ICV) formula, a new method of commercial evaluation and awarding bids, will be implemented in Total Qatar.



### Youth Entrepreneurship through INJAZ

INJAZ Qatar partnered with Total, and the Embassy of France in Qatar, in a program called 'Job Champions Work Readiness Competition' for young students to develop their innovative entrepreneurial spirit and skills. The second edition of the program challenged over 170 students in a series of competitions related to Total's operations. Each group was mentored by executives in the industry, who guided the students in presenting their business case to a panel of judges. Out of 35 shortlisted applicants, the winning team was awarded an all-expense-paid internship at Total's headquarters in France, followed by a week of training in Total Qatar's office.

*"We strongly believe in the importance of empowering our youth with the skills required to better understand current market needs and challenges in the workplace. We are aiming to inspire the future leaders of tomorrow."*

**Laurent Wolffsheim**  
Managing Director at Total E&P Qatar and Country Chair



## CHAPTER 4

# Environmental Development



As a responsible operator, we take active measures to reduce the environmental footprint of our operations. Total Research Center, Qatar (TRC-Q), helps ensure we meet the commitment to improving environmental performance and reducing the impact of our industrial activities on water quality and biodiversity.

## RAISING AWARENESS

At Total Qatar, we believe that awareness is the foundation for a sustainable environment, and by instilling a sense of responsibility we encourage all our stakeholders to adopt a waste-free lifestyle.

### Green Office

We launched a Green Office initiative, to increase employee awareness by promoting environment-friendly solutions and alternatives, focusing on five key areas:

#### Waste Management

- Segregating waste bins
- Recycling boxes and cardboard
- Reducing single-use plastic with personalized bottles and coffee cups

#### Green & Paperless IT

- Recycling paper through collection boxes
- E-signature for internal documents

#### Food & Beverage

- Removing cans and plastic bottles
- Reusing bottles and cups in meeting rooms
- Removing packaged food items from the pantry

#### Stationery & Furniture

- Donating office furniture
- Reusing printed paper
- Redistributing office materials such as whiteboards for reuse

#### Water & Electricity

- Switching off AC and lights when not in use
- Implementing water-saving flush systems

## Mangrove Preservation

We sponsored a Mangrove educational field trip program for students to discover the distinctive characteristics of the mangroves in Qatar. The trip helped students understand how mangrove seeds, known as propagules, germinate while still on the tree.



## World Environment Day

The theme for 2019 World Environment Day was «Working Together for Biodiversity.» Employees discussed biodiversity that is currently under threat, and how Total aims to preserve sensitive ecosystems through multiple efforts, including forest preservation programs, avoiding natural sites, and raising employee awareness.



## Waste-Free Environment Campaign

Gulf Petrochemicals and Chemicals Association (GPCA) organized a cleanup activity at Al-Wakra Beach bringing together Total and 27 other companies. This activity titled «Be Part of the Change» encouraged a more responsible attitude toward waste disposal and emphasized the need for local communities to respond to environmental issues.





## RESEARCH & INNOVATION

Research and Development are the cornerstone of Total's strategy to improve the way environmental and operational challenges are continuously addressed.

### A Decade of Excellence and Innovation

Founded in 2009, Total Research Center - Qatar (TRC-Q), focuses on technical challenges in Qatar and the region. In 2019, we celebrated 10 years of Innovation and Research owing to the fruitful collaboration and partnerships established with key stakeholders. Our commitment to sharing expertise is fueled by our aim to develop homegrown solutions and support Qatar's vision of developing a knowledge-based economy.

We currently have programs in the field of Acid Stimulation, Organic Geochemistry, Sustainable Development, such as; solar energy, biomonitoring of sea water (valvometry), restoration of marine habitats (corals reefs), biodiversity, CCUS and Gas conversion.

TRC-Q also acts as a bridge between industry and academia to bring innovative solutions to our operations, and hosts R&D projects that belong to other branches of Total Group, Refining & Chemicals (RC), as well as Gas, Renewables, and Power (GRP).





### Biomonitoring

Valvometry studies the health of the marine environment by using pearl oysters as biological sensors. By attaching micro-electromagnets to the oysters, we can send a large amount of data to the surface without disturbing them. This data is then analyzed in a laboratory to monitor seawater quality. This program is conducted in partnership with the University of Bordeaux and Qatar University, and is part of National Priorities Research Program (NPRP) under Qatar National Research Fund (QNRF). Tests are undertaken in partnership with Centre National de la Recherche Scientifique (CNRS) in France.



### Coral Reef Restoration

The Coral Reef Restoration project (QataReef) was launched in 2019 in collaboration with Qatar University and SeaBoost. Coral reefs represent one of the most biologically and socio-economically important natural assets in Qatar, and they are currently depleting. We are conducting research on the efficiency of using artificial reefs, to compensate for the degradation of their natural habitats. Thus, an artificial coral reef will be deployed in several locations to allow the growth of new coral larvae.

## Geochemistry

Geochemistry aims to deploy and develop state-of-the-art techniques to analyze the composition of hydrocarbon fluids and rocks found in reservoirs. Our geochemical lab in TRC-Q performs molecular and stable isotopic analyses of all kinds of reservoir fluids such as crude oils and gas/condensates. These data are used to assess distinct reservoir-related topics, including:

- Production Allocation by Chemical Fingerprinting
- Reservoir Compartmentalization (Vertical and Lateral Fluid Connectivity)
- Well Integrity / HSE Studies
- Reservoir Fluid Mapping based on core/cutting analysis

## Acid Stimulation in Carbonate Reservoirs

Acid Stimulation in Carbonate Reservoirs intends to better control fluid-rock interactions that occur during acid injection in carbonates.

Through research at TRC-Q, we are developing novel and robust technologies that will ultimately help to improve the injectivity and productivity of carbonate reservoirs through matrix acidization. These acids dissolve a portion of the rock and create highly conducting channels which provide the least resistance to hydrocarbon flow and enhance production.

## Carbon Dioxide Utilization

We aim to develop new ways to use carbon dioxide as feedstock in the synthesis of value-added compounds. This way, the chemical industry can achieve their business opportunities while reducing carbon emissions. Total's relationship with Qatar University is built on a shared ambition to create sustainable solutions in line with Qatar National Vision 2030. As a result, two partnership projects were launched:

- Carbon Capture, Utilization, and Storage, to investigate the use of microalgae and produce sustainable biofuels
- Algae-Based Solutions for Sustainable Biofuel Production

## Solar Energy Research

Total has collaborated with QEERI (Qatar Energy and Environment Research Institute), for the use of its outdoor testing facility. We were able to test a dozen panel and inverter technologies and settle on bifacial solar modules, which increases performance in this type of environment. This project was followed by an in-depth analysis of the complete photovoltaic (PV) system. In the future, the testing of hybrid systems such as batteries, gas turbines, PV panels, and energy management systems is underway.



## SUSTAINABLE OPERATIONS

We drive sustainable operational excellence where safety is a core value across all three segments of our business, Exploration and Production, Refining and Petrochemicals, and Marketing and Services.

### Waste management

#### Near Zero Liquid Discharge (ZLD) at Qatargas

This wastewater processing plant removes all the liquid waste from the water economically and sustainably, and produces clean water which is suitable for reuse such as irrigation. The ZLD plant is currently used in Laffan Refinery 1&2, and in 2019, reached 88% water recovery.

#### Wastewater Treatment Plant, at QAPCO

QAPCO has deployed its state-of-the-art Wastewater Treatment Unit in Mesaieed, to reduce the discharge of industrial used water to the sea, by re-utilizing up to 90% of the treated water.



#### Optimizing Al Khalij vessels

Total uses Opsealog, a software which enables us to monitor our marine operations by providing instant insights on the movement of our vessels. This helps to track and correct fuel inefficiencies, optimize the fleet utilization, and control gas emissions and waste.



## Safety and Quality

At Total, safety is more than just a priority. It is a core value and the basis of our strategy. Our ambition is to be recognized as the benchmark for safety in our industry. To achieve this ambition, we have taken steps to ensure that safety is an integral part of our processes and guides our everyday actions. Safety is a core value that we want everyone to share, from managers and employees to partner companies and local stakeholders.

<p><b>HSE Pass</b> the HSE training management tool</p>	<p><b>HSE Plan</b> summarizing the main HSE objectives of the affiliate for the subsequent year</p>	<p><b>Total's 12 Golden Rules</b></p>
<p><b>Maestro</b> One Maestro governing the affiliate HSE management system</p>	<p><b>SYNERGI</b> to register all main anomalies, incidents, audit findings, etc... and ensure their follow up</p>	<p><b>Stop Cards &amp; Anomaly Cards</b></p>



### World Day for Safety

We celebrate World Safety Day every year with our employees, partners and contractors to promote a safer workplace. In 2019, we discussed serious and fatal accidents with the objective: Zero fatal accidents for me, for you, for all.

### ISO 14000 certification

We received our ISO 14000 certification in December 2019 by the Bureau Veritas cabinet. This proves our commitment to maintaining standards for environmental management systems.



### Perfect Day

We launched 'Perfect Day' initiative on our sites to further improve our HSE and operational performance. Our on-site personnel are required to reach key performance indicators (KPIs) daily, such as:

1. Zero events that lead to human consequence
2. Excellent environmental performance (e.g., no spill in parking, chemical product spill or improper waste segregation)
3. No parking violations
4. Leading authorization and risk assessment
5. No violation of driving rules by company drivers
6. No safety behavior anomaly reported (e.g., handrail, using phone while walking)
7. At least one observation (positive or negative) is submitted per day
8. All emergency exits are cleared of obstacles



### HSE Contractors' Forum

HSE Contractors' Forum was a platform of exchange between Total and its contractors on how to be active in safety and optimize best practices. These interactive sessions allowed attendees to share constructive feedback, which was used to build the 2020 HSE plan.

### Line of Fire

In 2019, Total implemented the Line of Fire which is a comprehensive visual pack that allows workers to quickly picture the main risks present in their work environment. The following four Line of Fire topics were selected as they covered all the main causes of incidents in the industry: Striking Hazards, Crushing Hazards, Hand Safety, and Stored Energy.

# SUSTAINABILITY REPORT

2019



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