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Sonatrach Raffineria Italiana S.r.l.

SUSTAINABILITY REPORT 2022



Sonatrach Raffineria Italiana S.r.l.
SUSTAINABILITY REPORT 2022
 (relating to the years 2020 / 2021)

*“Setting goals
 is the first step in turning
 the invisible into the visible”*

A. Robbins



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LETTER TO STAKEHOLDERS

The complexity of the situations in which Sonatrach Raffineria Italiana S.r.l. operates, the challenges of sustainable development, the need to take into account the interests of all stakeholders in the company's business, reinforce the importance of clearly defining the values and responsibilities that the company shares and assumes.

We continued to measure the degree of sustainability of our activities with the Sustainability Impact Rating (SI Rating™), increasing from a rating of 77% in 2020 to 86% in 2021.

Two billion three hundred million turnover in 2020, four billion three hundred million in 2021, around eight million tons of refined product at Augusta in each of the two years, and around one million six hundred thousand (in 2020) and two million (in 2021) tons of fuel handled by the Naples Augusta and Palermo depots. These are some of the results achieved by Sonatrach Raffineria Italiana S.r.l. during 2020 and 2021. Numbers that continue to paint a picture of the company's presence in Italy as a strategic player successfully established after the start of 2019 despite the pandemic in 2020 and its subsequent waves in 2021 with the consequent complicated economic situation for the entire sector.

In this context, aware that the process towards sustainable development shall be now considered irreversible, we continued to measure the degree of sustainability of our activities with the Sustainability Impact Rating (SI Rating™), rising from a rating of 77% in 2020 to 86% in 2021. We are particularly proud that a third party is measuring our path towards a more sustainable future; a path that combines **development and health, well-being and safety, progress and environmental protection.**

Acquiring sustainability as a core element of business means unifying all aspects of business organisation in an open and moving vision, and this applies, all the more so, to refineries, whose role remains central within the energy transition, and will remain so for many years to come.

An even greater challenge in light of the evolution in 2020 of an unprecedented health emergency, COVID-19, which has changed the way we live, work and interact with the outside world. The historical period we have gone through, characterised precisely by the pandemic emergency, has confirmed, for the umpteenth time, the strategic nature of a sector that has made and must do of social responsibility and ESG sustainability the cornerstones of its activity, and in relation to this Sonatrach Raffineria Italiana S.r.l. intends to continue representing an essential support to the growth process of the Sicilian and international oil industry. The complexity of the situations in which Sonatrach Raffineria Italiana S.r.l. is operating, the challenges of sustainable development, as well as the need to consider the interests of all stakeholders in the Company's business, reinforce the importance of clearly defining the values and responsibilities that the Company recognizes, accepts, shares and assumes, helping to build a better future for all.

The Sustainability Committee
Sonatrach Raffineria Italiana S.r.l.





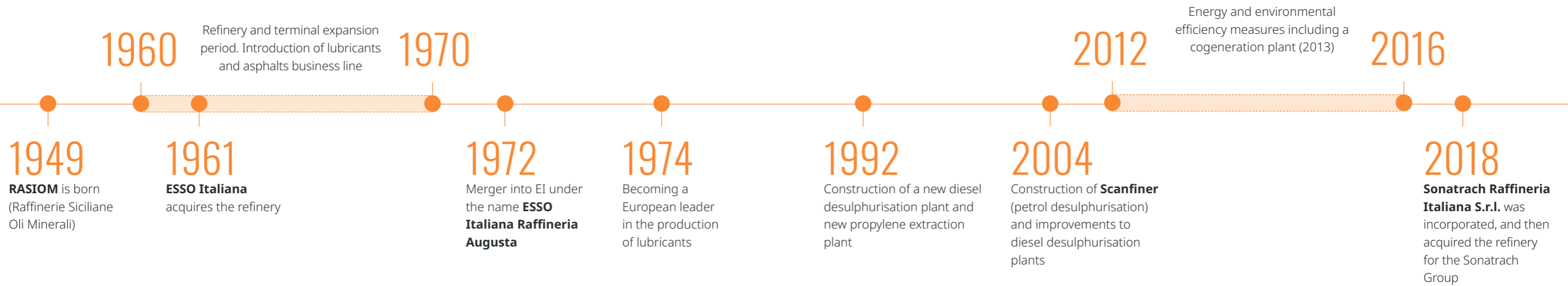
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ABOUT SONATRACH RAFFINERIA ITALIANA

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TIMELINE (Augusta Refinery)



ABOUT SONATRACH RAFFINERIA ITALIANA

Sonatrach Raffineria Italiana S.r.l. is a Company under Italian law belonging to the Algerian group Sonatrach whose share capital is wholly owned by its sole shareholder Sonatrach Petroleum Investment Corporation B.V. The Company, with more than **700 employees**, operates in the crude **oil refining sector, the storage and distribution of petroleum products** through its refinery in Augusta (Siracusa) and its three depots located in southern Italy, in Augusta (Siracusa), Naples and Palermo. The Company is also the European leader in the production of bases for lubricants, bitumen and paraffins.

The Company owns both primary refining plants and conversion plants for the transformation of semi-finished products into finished products, as well as approximately **280 tanks** with a total storage capacity of around **3 million cubic metres** to which the total storage capacity of approximately **140,000 cubic metres** at the three oil depots shall be added. The depots serve as a logistical support to sales activities and, indeed, they are operational for the storage of finished products, mainly petrol and diesel. There is also a Jet Fuel depot located in Naples. The supply of products to the depots is mainly by sea or by pipeline. Sonatrach Raffineria Italiana S.r.l. operates within the Sonatrach group by providing both additional crude refining capacity and the production of final refined products. Intra-group relations

started as early as 2019 with the use of the Algerian Saharan Blend crude oil permanently included in the blend of crude oils processed by the Augusta Refinery.

Lastly, the constant growth of Algeria's domestic needs, with the consequent expansion and modernisation of the road network and infrastructure, was facilitated through **significant imports of bitumen from the Augusta Refinery.**

The Board of Directors of Sonatrach Raffineria Italiana S.r.l. confirmed that the investment made by Sonatrach in Italy is proceeding according to the business plan, whose cornerstones are: continuing the sustainability path undertaken while maintaining **the highest safety and environmental protection standards**, improving asset profitability through appropriate commercial and management strategies, further developing intra-group relations, and maintaining a focus on the energy transition process.



THE SONATRACH GROUP

The Sonatrach group (acronym for "National Company for Research, Production, Transport, Transformation and Commercialisation of Hydrocarbons") is an Algerian state-owned company founded on 31 December 1963. **Today, it is one of the world's leading oil companies and the largest African company by turnover.** A virtuous example in the Algerian economy for research excellence and talent development, focusing on the entire value creation chain for national economic and energy development.

Sonatrach is one of the largest gas exporters: it covers more than **10 per cent of the European market**, contributing around **31 per cent of Italy's demand** through the Transmed pipeline, active since 1983. It is a Company integrated with over 100 national and international companies operating both upstream and downstream, as well as being one of the world's largest suppliers of LPG, natural gas and LNG. Trade relations with our country have recently been strengthened with the recent commitments signed between Algeria and Italy. In detail, Algeria will supply another 4 billion cubic metres of gas to Italy this year through Sonatrach, in addition to the 21 billion cubic metres already in place and anticipating even greater supplies in the coming years. All this with a view to Italy's progressive independence from gas from the Russian Federation.

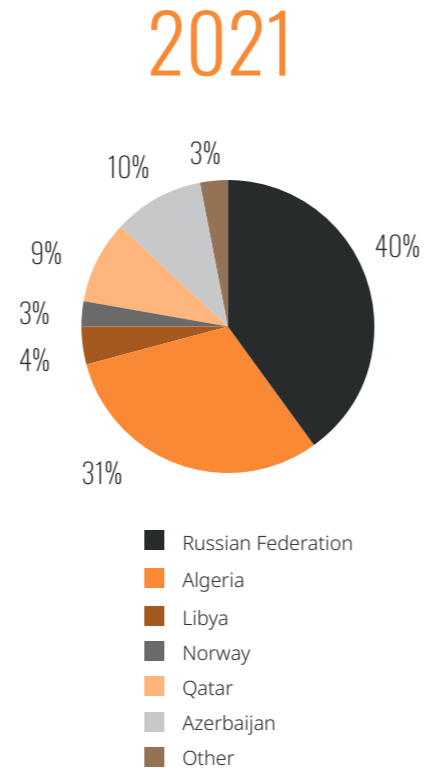
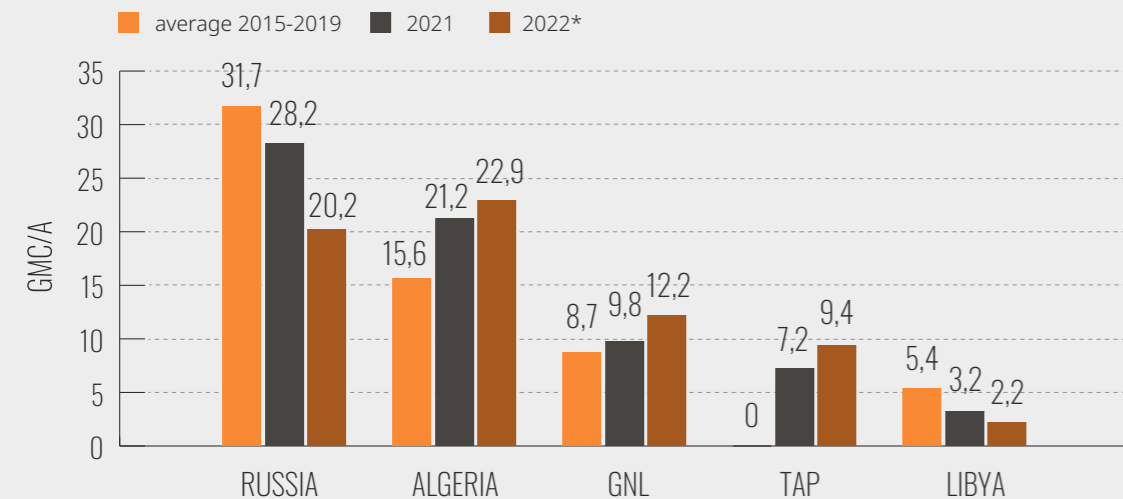


FIGURE 1
Italian natural gas imports by country of origin.
Source: Ministry of Ecological Transition - Department of Energy - DGIS - Division II

THE NEW GAS AGREEMENT BETWEEN ITALY AND ALGERIA

Italy's imports of natural gas



*projections on data 1 Jan - 10 Apr 2022
SOURCE: ISPI analysis on SNAM data

9 BILLION of cubic metres (3 billion each year) → **THE ADDITIONAL GAS**
Italy will receive from Algeria by 2024

FIGURE 2
Italy's natural gas imports

THE OPERATIONAL ASSETS OF SONATRACH RAFFINERIA ITALIANA

The sale of products such as Propane, Propylene, Light Virgin Naphtha, Petrol, Alkylate, Diesel, Kerosene, TF1A, Light Cycle Oil, Slurry, RSFO, LSFO, Bitumen and Lubricating Oil bases is mainly by ship and by tanker through the loading bays of the Refinery and the three depots.

The company's target markets are mainly the **Italian market** and those of countries bordering the Mediterranean including Algeria, Spain, France, Turkey and Egypt. The main industrial sectors are **energy and fuels, manufacturing, industry and maritime.**

The company's major customers are the world's largest oil and oil trading companies including: BP, Naftal, Vitol, Gunvor, Lyondell Basell, Sasol, ENI Versalis, Saras, CEPSA, Shell, ExxonMobil and Total.

Features

The Augusta Refinery has an extremely flexible configuration:

- Large conversion capacity for the production of fuels (such as Petrol, Kerosene, Diesel).
- Lubes of global significance.
- Leader in bitumen export.
- Centralised, modern control room.
- Excellent positioning in the Mediterranean due to its proximity to several crude oil sources (North Africa and the Caspian Sea) and the possibility of serving the emerging markets of Africa and Asia.
- Corporate culture markedly oriented towards strong safety, environmental, quality and energy management systems.
- Crude oil processing capacity of 206,000 barrels per day.
- Area of 220 hectares with a perimeter of 16 kilometres.
- About 280 tanks and a capacity of about 3 million cubic metres.
- Up to 550 T/H steam production.
- Up to 52 MW of electricity from cogeneration.
- Connection to the regional methane grid and to the electricity grid.
- Internal pre-treatment of waste water and subsequent treatment through the plant located in Priolo Gragallo (Syracuse) publicly owned and managed by Industria Acqua Siracusana S.p.A.
- 2 terminals at sea.
- 85% of production by sea.
- Pipelines: external hydrogen supply; shipping of LPG, Naphtha, Jet Fuel, Sulphur, Diesel, Petrol and Propylene.
- Land loading terminal for LPG, Jet Fuel and Bitumen.



THE DEPOTS three depots have a total storage capacity of **140,000 cubic metres**. These serve as a logistical support to sales activities as they are essentially operational for the storage of finished products, mainly **petrol and diesel**, and, in the case of Naples, also **Jet Fuel**.

Napoli

Operational 24 hours a day, 6 days a week.

The storage capacity is approximately **100,000 m³**.

9 automated loading/unloading bays.

Ordinary operation 150 vehicles per day, with a record 310 vehicles on 29 April 2021.

Products are delivered by ship at the Vigliena Oil Dock connected to the depot via two 12" pipelines in co-use with Kuwait Petroleum Italia.

The depot receives on average about 80 ships per year.

Products in storage: Automotive Diesel, Petrol, Denatured Diesel and Jet Fuel.



Palermo

Operational 13 hours a day (from 5:30 am until 6:30 pm), 6 days a week.

Storage capacity of about **32,000 m³ on 7 tanks in use**.

6 automated loading/unloading bays.

Regular operation of 55 vehicles per day.

Products are delivered by sea, about 50 ships per year.

Products in storage: Automotive Diesel, Petrol and Denatured Diesel.

Offshore Equipment: 3 buoys and 2 submarine lines.



Augusta

Operational 16 hours a day (from 4:30 am until 8:30 pm) 6 days a week.

The storage capacity is approximately **8,000 m³**.

5 automated loading/unloading bays.













The products are supplied from the Augusta Refinery via two dedicated 6" and 8" pipelines 2.5 km and 0.5 km long, respectively.

Products in storage: Automotive Diesel and Petrol.

Regular operation of 80 vehicles per day.



THE SRI MODEL

SAFETY, ENVIRONMENT AND ENERGY MANAGEMENT SYSTEM		
 LPS (Loss Prevention System)	 Safety, Environment and Energy Management System	 Reliability Management System
 Corporate Policies	 Code of Ethics	 Model 231
 Controls Management	 ISO 9001 certification	 ISO 14001 certification
 ATIEL Lubricants Certification	 CE Certification Bitumen	 ISO 50001 Certification

The Code of Ethics and Policies on Business Conduct

The company's Board of Directors has adopted a **code of ethics** and a set of **corporate conduct policies** that outline the principles and values underpinning the company and its business. These principles and values must be respected by all the company's directors, employees and contingent workers while carrying out their work activities both internally within the company and externally in relations with authorities and institutions, in business relations with suppliers, customers and consultants and, more generally, in relations with any stakeholder.

The principles and values set out in the code of ethics adopted by the company are inspired by the principles contained in the code of ethics of the parent company Sonatrach (Société Nationale pour la Recherche, la Production, le Transport, la Transformation, et la Commercialisation des Hydrocarbures) and are set out in the business conduct policies adopted by the company's Board of Directors, which must therefore be read in conjunction with the code of ethics.

The company is constantly committed to disseminating the principles and values contained in the code of ethics and corporate conduct policies to all employees, contractors, suppliers, customers and all those who do business with the company, in order to disseminate a corporate culture marked by principles of legality, transparency and fairness.

The code of ethics and business conduct policies are available on the company's website at www.sonatrachitalia.it.

Considering the importance of the **principles** and **values** set out in the code of ethics and company conduct policies, the company has also appointed an Ethics Committee, composed of company employees appointed by the Board of Directors, with the duty, inter alia, of overseeing compliance with the code of ethics and company conduct policies.

Organisation, Management and Control Model pursuant to Italian Legislative Decree no. 231/2001

The company has adopted an **organisation, management and control model pursuant to Italian Legislative Decree no. 231/2001**, consisting of a general section and a special section, which describes the measures adopted by the company to prevent the commission of criminal offences (predicate offences) by persons who hold positions of representatives, directors or [general] managers of the company, as well as by other persons part of top management subject to management and supervision by the persons who hold positions of representatives, directors or [general] managers.

The aforementioned organisation, management and control model is constantly updated by the company in the light of the legislative changes introduced in Legislative Decree 231/2001 also aimed at expanding the list of predicate offences, and is implemented by the company through the adoption and updating of internal procedures aimed at implementing the principles and rules contained in the special section of the organisation, management and control model.

The company has also adopted the “**Whistleblowing**” procedure for the reporting of offences and irregularities pursuant to Legislative Decree No. 231/2001.

Lastly, the company periodically organises internal training and updating meetings on the provisions of the code of ethics, the company conduct policies and the organisation, management and control model adopted pursuant to Legislative Decree No. 231/2001 with the aim of emphasising the importance of the principles and values guiding the company and that all company activities are carried out in compliance with applicable law. The training activity is completed with self-learning trainings and the dissemination of bulletins to the entire company population.

Personal data protection

The company ensures the **protection of personal data** (pursuant to EU Regulation 679/2016, Legislative Decree 196/2003 as amended by Legislative Decree 101/2018 and respective primary or secondary regulations integrating, amending or reforming such laws, in force from time to time) of employees and their family members and all visitors, suppliers, customers or third parties with whom it comes into contact for work or collaboration relationships.

SGSAE

The **Safety, Environment and Energy Management System** is a system that allows all activities to be carried out in an environmentally friendly manner, safeguarding the safety and health of the company's employees, contractors working at the Augusta Refinery and the company's 3 oil products depots, and the external community. The Energy Management System integrated into the “skeleton” of the SGSAE is the set of strategies, procedures and work processes,

formalised and implemented with the aim of managing all operations (from the development of new projects to their implementation, from the procurement of materials and services to employee training/information, from the management of production processes to plant maintenance) while ensuring energy savings. Saving energy does not only mean consuming less, but above all using the available resources **effectively and efficiently**.

RMS

The company has also adopted a **Reliability Management System (RMS)**, with the aim of defining the best working practices, the virtuous behaviour of key people, the standard of expected results with regard to reliability. All elements of the system concern aspects such as risk assessment, proper design, long-term plans and strategies, operational parameters, process and maintenance operations, and so on.

LPS

LPS is the acronym in English of **Loss Prevention System**™. It is a modern management system useful for preventing personal injury, environmental accidents and guaranteeing the quality of products by encouraging behavior positive and discouraging the questionable ones not through mere repression but through a structured system of *coaching*.

ISO 9001

The ISO 9001:2015 certification “**Quality Management Systems**” is a reference standard for quality management for all types of organisations. ISO 9001 is a reliable control tool to constantly monitor the quality of crude oil refining activities and the production of finished petroleum products in order to identify areas for improvement and respond appropriately to market and customer demands.

ISO 14001

ISO 14001:2015 is a certification that attests that the requirements of the **environmental control and management system** have been met. This certification is an

effective control tool that allows the company to achieve greater control over compliance with environmental regulations and standards, improve the efficiency of various processes, meet the demands of stakeholders sensitive to certain topics, or simply adopt ethical and responsible conduct of business.

ISO 50001

During December 2021, as culmination of a path undertaken to certify its **energy management system**, the Augusta Refinery received from the Certifying Body the certificate of full compliance of the system with the ISO 50001:2018 standard, thus introducing an additional ISO certified management system in his own integrated SGSAE.

ISO 45001

In line with the policy objectives for the **continuous improvement of the SGSAE Management System**, the company has made what is envisaged by the international standard ISO 45001:2018 and, therefore, a complete cycle of internal ISO45001 audits has been completed and by 2022 the finalisation of SRI's ISO45001 certification pathway will be carried out through the performance of the stage-2 certification by the certifying body RINA.

CE Marking Bitumen

The CE marking of Bitumen provides a **guarantee of the product's quality** and compliance with the requirements of European legislation.

Atiel

The company is a member of the **Technical Association of the European Lubricants Industry (ATIEL)**, which aims to promote the highest standards for the industry by creating a network of the various manufacturers and favouring exchanging experiences on new technologies and best practices.

VISION OF SUSTAINABLE DEVELOPMENT

The concept of sustainable development was first introduced in the report **“Our Common Future”** or Brundtland Report, published in 1987 by the World Commission on Environment and Development; it expresses the adoption of an approach that is able to “meet the needs and aspirations of the present without compromising the ability to meet those of the future”. Meeting these needs, both present and future, draws attention to the close connection between the **development of economic activities, the development of the social system and the protection of the environment**. Three aspects that, according to the sustainable approach, must be considered inseparable within a development concept that takes into account the impacts produced by each individual company with respect to the environmental, social and economic pillars.

In order to meet the sustainable development needs, companies can initiate strategies based on sustainability, to be implemented also through Corporate Social Responsibility tools.

These tools enable the balance between environmental, social and economic values in the conduct of business. Sonatrach, in the medium term, wants to establish itself as one of the major national oil companies in the world, and SRI is fully integrated in this project by participating in the company’s international economic development with sustainable, and partly alternative, energy supply models, involving the territory, institutions and stakeholders.

In August 2015, the United Nations General Assembly, attended by more than 150 leaders from around the world, adopted the 2030 Agenda for Sustainable Development. The **2030 Agenda** contains **17 Sustainable Development Goals (SDGs)** with a total of **169 targets**.

The SDGs and targets set global priorities for 2030 and define an integrated action plan for people, the planet, prosperity and Peace; consequently an integrated approach to sustainability, taking into account ESG aspects, i.e. both environmental, social and economic aspects, is needed.



The Development Goals are addressed to different types of parties who can make a decisive contribution to the creation of a sustainable and virtuous economic, social and environmental system for all: from international organisations and non-governmental organisations to legal institutions, market players and private initiative.

This is an approach that, especially for the **Oil & Gas sector**, must take into account the stimulation and strengthening of **innovation**; the adoption of **new technologies** in the field of **safety**, with the aim of improving **efficiency**; the **attraction of talent**; and the involvement of the territory in which it operates. With regard to this last aspect, it should be emphasised that the integration and measurement of Social Responsibility performance is a very valid tool to corroborate the adoption of a sustainable development strategy, especially in sectors that are particularly sensitive to socio-environmental factors.

At Sonatrach Raffineria Italiana, sustainable development and social responsibility translate into an ongoing commitment to improve the quality of **life of the community** in which we live through a proactive approach to ethical behaviour, social and economic development and environmental principles, involving the company’s employees, customers, the supply chain and the community at large. The company therefore intends to play a leading role in those strategic aspects that take into account factors such as employment, economic and social welfare and environmental protection. The company is constantly striving to foster virtuous ethical, social and environmental behaviour through the continuous improvement of its activities, not only by integrating ESG aspects into business management, but also by contributing to the achievement of the Agenda 2030 sustainable development goals.

The challenges posed by the SDGs are, to date, ambitious for most companies individually. Therefore, the pursuit of these goals requires both a **multi-sectoral** and a **multi-disciplinary approach**. The greatest possible contribution can be thus achieved by embracing a strategy based on a **multi-stakeholder** framework, understood as dialogue between local and national parties to identify which SDGs are priorities and to provide a coordinated and collective response to them.

Within the oil industry, the following stakeholders can be identified as key to establishing a level of collaboration that is functional to sustainable development:

- governments and state authorities (e.g. the Ministry of Ecological Transition);
- oil companies;
- contractors and suppliers;
- civil society organisations;
- local communities;
- institutional investors
- insurers.

The oil and gas industry plays a central role in the global economy and is, today, the more accessible industry for many developing countries. Oil and gas still represent the backbone of the entire energy system, thus having an important position

in the social and economic development of any country. From the above it is therefore clear that the sector within which SRI operates has the potential to contribute to all sustainable development goals in various ways, both by enhancing its positive impacts and by taking action to reduce negative ones.

In order to integrate the Sustainable Development Goals (SDGs) into business, the action should not be limited to investments, but should also, and above all, include defining a strong leadership capable of starting a path that is beneficial to all, in the long term. For companies such as Sonatrach Raffineria Italiana, the integration of the Sustainable Development Goals (SDGs) is necessary in order to show the commitment to maintain the so-called **“social licence to operate”**, which is essential to enable an increasingly close and integrated relationship with the external community.

Sonatrach Raffineria Italiana intends to align itself with the Sustainable Development Goals (SDGs), pledging to intensify its contribution to the achievement of those goals most closely related to the company's business essential features.

The very drafting of a Sustainability Report in line with internationally recognised standards and KPIs, as well as its publication and sharing with all stakeholders, represents a further step for SRI towards achieving the SDGs.



MISSION AND SUSTAINABILITY COMMITTEE

Sonatrach Raffineria Italiana's mission is to combine all its core business activities with a constant focus on **environmental aspects** and a **lively participation in the territory**, without neglecting the organisational and strategic aspects capable of guaranteeing the solidity of operations and **business continuity**.

The creation of an internal Sustainability Committee in 2019 stems from the idea of consolidating the sustainability path undertaken. In 2020 and 2021, the Sustainability Committee continued its stewardship and improvement activities in the areas recognised as important for achieving an effective sustainability governance process.

The Sustainability Committee was composed in 2020 and 2021 by the company's Managing Director and the following managers: Project & Planning Manager, Business Service Manager, Technical Manager, HR & Compliance Manager and Sustainability Public & Government Affairs Manager, ensures that the achievement of sustainability targets is always a motivating force for the organisation towards **necessary and conscious improvement**.

“

The main activities of the Sustainability Committee are the reporting and monitoring of the impacts of SRI according to ESG (Environment, Social, Governance) criteria and the SDGs (Sustainable Development Goals) so that the achievement of goals in these areas is not a mere end point, but an ever increasing motivational drive for the organisation towards necessary and continuous improvement.

”

from the role statement of the Sustainability Committee

Sustainability Impact Rating (SI Rating)

At the completion of one year of operations, in the second half of 2019, Sonatrach Raffineria Italiana decided to assess the overall status of its sustainability strategy and resulting activities. The intention was to see where good work had been done and thus maintain the line adopted, but above all where it was necessary to intensify efforts to improve.

To obtain the rating, Sonatrach Raffineria Italiana decided to rely on the **Sustainability Impact (SI) Rating** solution developed by ARB S.B.p.A. It is an analysis created to properly measure, monitor and communicate the sustainability of an organisation through the assessment of tools and practices related to the three ESG spheres of sustainability (Environmental, Social,

Governance), so that the company can understand which sustainability topics are most relevant in its business sector and the level of sustainability achieved.

The tool is developed on the basis of the **SASB (Sustainability Accounting Standards Board)** materiality map and is validated by the international certification body **RINA**: according to this model, each area of sustainability is in turn subdivided into topics covering different aspects, according to the subdivision shown below:

ENVIRONMENTAL	SOCIAL	GOVERNANCE
<ul style="list-style-type: none"> Greenhouse gas emissions Impacts on air quality Energy Management Water resources management Waste and Hazardous Substances Management Ecological and environmental impact 	<ul style="list-style-type: none"> Human rights and community relations Privacy and processing of sensitive data Security and data protection Accessibility of products/services Safety and quality of products/ services Consumer/user protection Good sales practices and product labelling Working conditions and company benefits Health and safety in the workplace Diversity and inclusion 	<ul style="list-style-type: none"> Sustainable product/service life cycle management Resilient business/enterprise Supply chain management and efficiency External supply chain risk management Adaptation to climate change Ethical conduct of activities Competitive strategy Correlation with the legal and regulatory environment Critical Incident Risk Management Systemic Risk Management

Depending on the type of company analysed, the SASB materiality map identifies which topics are most important in the business sector in which the company operates and which are less so. The algorithm was developed on a user-friendly platform for companies that want to assess the impact of running their business with respect to ESG sustainability principles.

The analysis of the tools and best practices adopted by the company makes it possible to obtain a result that indicates on a scale of 1 to 100 the degree of sustainability of the company both at a general level and in relation to each individual topic. The tool therefore allows Sonatrach Raffineria Italiana to

understand the sustainability topics most relevant to its business, to assess the effectiveness of its management strategy and to highlight which sustainable development goals (SDGs) can also be supported and achieved through the company's contribution.

The company's choice is in line with the logic of strengthening its sustainable development strategy, implemented through significant investments in environmental sustainability and interventions aimed at further improving the reliability of its plants and infrastructure.

The training on sustainability topics, which involved employees at all levels, from top management to supervisors and middle managers, continued in 2020 and 2021. It became clear that in an international economic environment characterised by high price volatility and geopolitical uncertainty, ESG sustainability principles are key elements for the management and evolution of the Oil & Gas sector. Monitoring them through a tool such as SI Rating allows the identification of risks and opportunities, an increasingly crucial strategic aspect for the industrial sector, where factors such as geopolitics, price volatility, energy efficiency, new technologies, climate change policies and global crises will have to be properly managed in the medium and long term.

The idea of involving all stakeholders prompted Sonatrach Raffineria Italiana to entrust each business unit with the collection of the tools used and best practices followed in their specific areas of competence.

The decision to decentralise the collection of documentation and information proved successful. In fact, on the one hand, this facilitated the continuous flow of information with the SI Rating team, resulting in a direct involvement of the different business units and a consequent diffusion and permeation of the concept of sustainability in all the areas that make up the organisation; on the other hand, dialogue and transparency between the different business units was strengthened.

The business units were divided as follows:

- Environment & Compliance
- Health and safety (of workers and citizens)
- External relations (and community)
- Technical assistance
- Human resources
- Controls, Information Technology, Procurement
- Plant maintenance
- Customers and quality (control)

From the outset, the active participation of the various managers allowed for a constructive discussion on the 26 topics analysed within the SI Rating, enabling the company's priorities to be discussed and working in accordance with and in parallel to the first phase of stakeholder engagement.

OVERVIEW

THE COMPANY

This assessment carried out through SI Rating and referred to Sonatrach Raffineria Italiana S.r.l. (SRI), a company belonging to the Algerian Sonatrach group whose share capital is fully owned by its sole shareholder Sonatrach Petroleum Investment Corporation B.V. The company is active in crude oil refining at the Augusta refinery and in the storage and distribution of finished products with its two coastal depots in Naples and Palermo and the Augusta depot adjacent to the refinery.

ASSESSMENT OBJECTIVES

The objective of the assessment is to outline a continuous improvement plan in the sustainability management system in Sonatrach Raffineria Italiana, starting from data and the analysis of implemented actions. This compares the results of SI RATING 2021 (based on data collected in 2020) and SI RATING 2020 (based on data from 2019).

ASSESSMENT PERIMETER

The assessment perimeter considered is Sonatrach Raffineria Italiana's Augusta (SR) refinery. According to the adopted SASB standards. As far as company size is concerned, Sonatrach Raffineria Italiana falls within the "large enterprise" type; while for the type of activity carried out, it falls within the definition of "Refining and distribution of oil and gas" by SASB standards (ed.2018). These categorisations provide the benchmark for defining the maximum achievable result for this type of industry during the assessment phase.

SI RATING

The SASB materiality matrix algorithm for measuring, monitoring and communicating sustainability and the alignment of its activities with the UN Sustainable Development Goals (SDGs).

The company is a European leader in the production of bases for lubricants, bitumen and paraffins

THE FIRST OIL & GAS COMPANY TO ADOPT SI RATING

Sonatrach has an integrated and proactive accident prevention system: it is the Loss Prevention System (LPS)

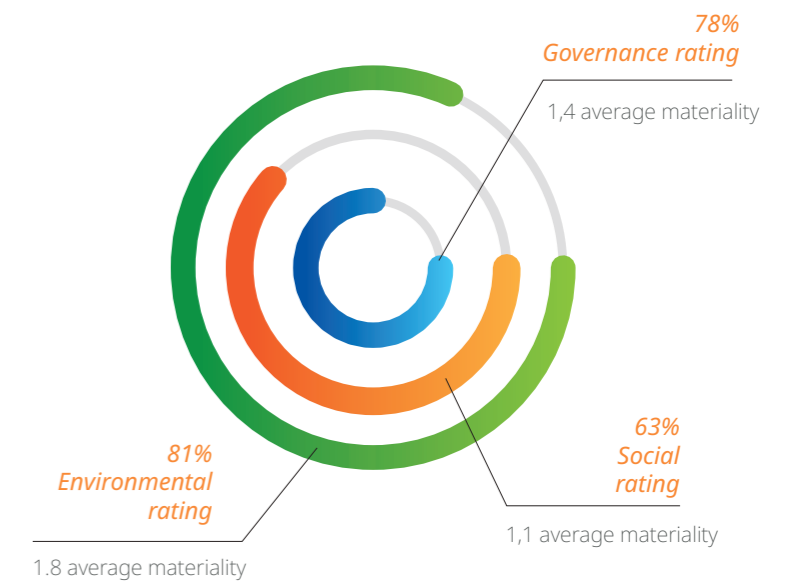
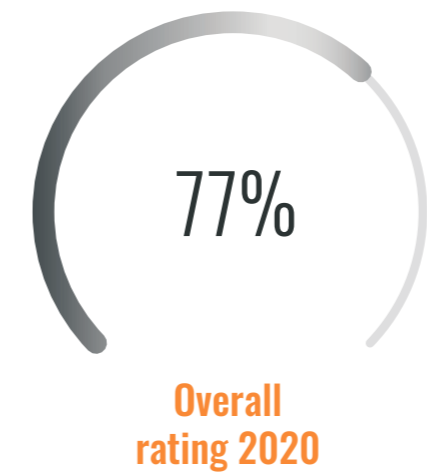
Performance on the most influential topics, defined as material topics, within the three macro-areas: environmental, social and governance, is reported. The materiality (relevance) of a topic is defined according to the SASB, Sustainability Accounting Standard Board's Materiality Map®.

All reported scores, both those for individual topics and those for criteria, follow the rating scale in which the range 0-30% equals "insufficient", 31%-55% equals "sufficient", 56%-70%

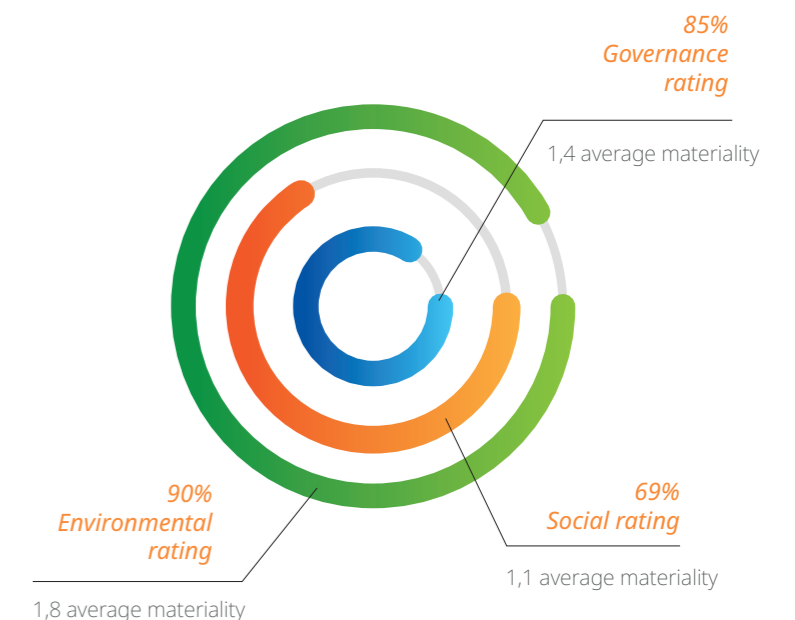
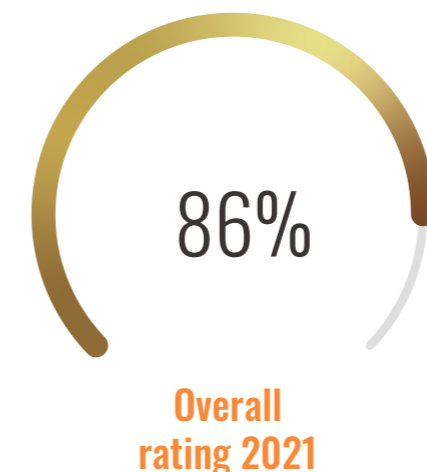
equals "good", 71%-85% equals "very good" and 86%-100% equals "excellent".

In 2020 as in 2021, the actions carried out, the tools adopted and the best practices, embodying Sonatrach's effort to implement sustainability principles that go beyond strict adherence to current legislation, were analysed and assessed.

2020



2021



ENVIRONMENTAL RATING 2020: 81% 2021: 90%

Greenhouse gas emissions

2020: 79% — 2021: 88%

The Company improved the management of direct greenhouse gas emissions from its operations in 2021 compared to the previous year

Impacts on air quality

2020: 92% — 2021: 97%

The management of impacts on the air matrix, resulting from industrial emissions from the Company's mobile plants, saw an improvement in the year 2021 compared to the year 2020

SOCIAL RATING 2020: 63% 2021: 69%

Health and safety in the workplace

2020: 85% — 2021: 90%

This topic is essential to the social side of the assessment and the improvement is due to the protection and safeguarding of the people working in the company

Water resources management

2020: 79% — 2021: 89%

The company scored higher in 2021 than in the previous year due to improved water resource management and in particular decreased water consumption, and improved impacts on water resources

Waste and hazardous substances management

2020: 72% — 2021: 83%

The company, following an implementation in waste management, scored higher in 2021 than in 2020

GOVERNANCE RATING 2020: 78% 2021: 85%

Competitive strategy

2020: 59% — 2021: 86%

The net increase is the result of the improvement of tools such as the code of ethics and the orientation training for all new employees on company policies

Critical incident risk management

2020: 92% — 2021: 95%

The company performed excellently and maintained the same score level as the previous year

Ecological and environmental impact

2020: 81% — 2021: 90%

The 2021 result is due to improved management of its impacts in terms of care for ecosystems and biodiversity

Sustainable product/service life cycle management

2020: 87% — 2021: 87%

The topic is of great relevance to the industry sector to which [the company] belongs

Correlation with the legal and regulatory environment

2020: 77% — 2021: 77%

The topic is of great relevance to the industry sector to which [the company] belongs

ALIGNMENT WITH THE GOALS OF THE UN 2030 AGENDA

The 2030 Agenda for Sustainable Development is an action programme signed in September 2015 by the governments of 193 UN member states.

It incorporates 17 Sustainable Development Goals (SDGs) into a comprehensive action programme with a total of 169 sub-objectives (Targets).

By signing it, countries have committed themselves to achieving them by 2030.

They bring together a series of globally shared topics that span the three areas: environmental, social and economic.

For Sonatrach Raffineria Italiana, the following objectives were identified as most relevant in relation to its sector: 6 - Clean water and sanitation, 7 - Affordable and clean energy, 8 - Decent work and economic growth, 9 - Industry, innovation and infrastructure, 13 - Climate action, 15 - Life on land, 17 - Partnership for the goals.

The percentages describe the alignment of the topic with the SDGs goals.



Certificate



IMPROVEMENT STRATEGIES

In light of Sonatrach Raffineria Italiana's decision to commit to a path that aims to the sustainable management of its business, the Sustainability Committee identified a number of targets to be achieved during the 2022 financial year. These targets, set out below, represent the guidelines for the company's plans for the current financial year and will be periodically checked and updated also in light of the company's business performance.

AREA	TARGET
Our People	Training - Focus on the demand for new skills Recruitment - Continue to encourage the employment of local people - Continue the work towards gender equality by increasing the percentage of women
The integrity of our operations	SGSAE - Conducting assessments aimed at continuous improvement - Obtain ISO 45001 certification RMS - Conducting assessments aimed at continuous improvement LPS - Focus on personnel safety and security of processes
Safety	Zero disabling injuries
Environment and Energy	Surveillance audits - Maintenance of ISO 14001 and ISO certification 50001 Water - Continue operational optimisation processes for decrease in groundwater abstraction and waste water improvement Waste - Maximising the share of waste to be recovered Industrial Cluster Topics - Leader in Confindustria and unem for discussing and the in-depth examination of common environmental topics and matters related to energy transition
Quality	Surveillance audits - Maintenance of ISO9001, ATIEL certifications CE Marking Bitumen
CSR (Corporate Social Responsibility)	- Continue with the activity of structuring a sustainability governance - Monitor demands and expectations of the main external stakeholders (Mayors of the area, political and economic representatives)



02

GRI 102

STAKEHOLDER ENGAGEMENT

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STAKEHOLDER ENGAGEMENT

Sonatrach Raffineria Italia's stakeholder engagement activity was characterised by the company's will to continue the process of engaging those stakeholder groups that are influenced by, and who influence, the company's activities.

This process was characterised by specific objectives such as:

- the definition of commitments with stakeholders;
- involvement of, and discussion with, the above-mentioned stakeholder groups to verify their expectations and to set or review sustainable development policies and strategies.

The stakeholder engagement process is key to the implementation of an organisation's sustainability practices. It is the first step in the inclusive drafting of the corporate sustainability report and the path is guided by international standards that set objectives and methods. Two authoritative references have been adopted in Sonatrach Raffineria Italiana's journey: the **Global Reporting Initiative (GRI) standard and the Accountability 1000SES standard (AA 1000SES)**.

The stakeholder engagement process initiated by the company is aimed at the creation of the **materiality matrix**, required by the GRI101 disclosure guiding principles, as a fundamental element to define the topics, targets and priorities to be

discussed, improved and pursued, which have been included in this **Sustainability Report 2020/2021**, together with the description of the process followed to choose them.

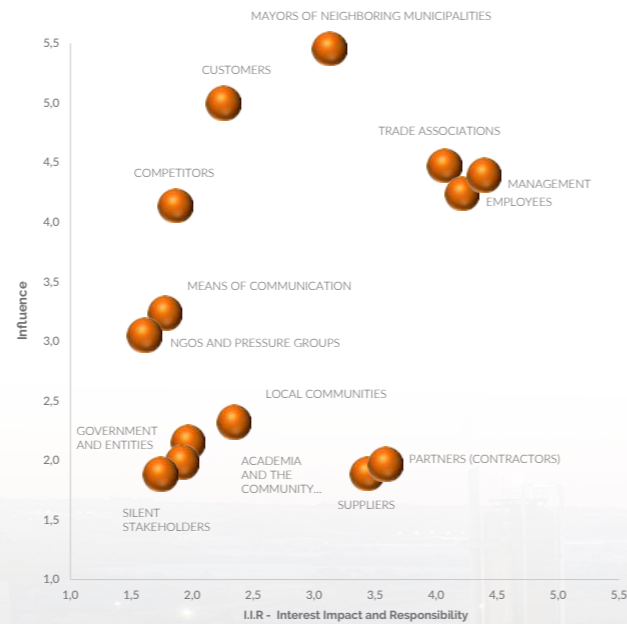
The company's needs in terms of sustainability goals and timeframes, together with the company's characteristics and long-term targets, led to the choice of an approach that was inclusive from the outset with regard to stakeholders, their expectations, needs and perceptions. For this reason, the use of a questionnaire to be filled in anonymously was chosen as the main consultation tool, allowing information from a large number of stakeholders to be collected in a systematic and standardised manner, without the risk of influencing their answers. The distribution of the anonymous questionnaires was supplemented by direct interviews with the category of mayors of the municipalities of the industrial area (for more details see the section Preparation and Execution of Questionnaires and Interviews). The stakeholder engagement process was thus started through a transparent, dynamic process characterised by an ongoing relationship between the Sustainability Committee and the company's stakeholders. In the following paragraphs, the main steps of the stakeholder consultation process are outlined.

Acquisition and valorisation of stakeholder mapping

Stakeholders were classified according to their categories and each was assigned a value in terms of interest, influence, impact, responsibility, degree of influence of the stakeholder on the company and vice versa.

The data obtained from the mapping of a total of **815 stakeholders** were analysed and, based on the result, the stakeholder categories analysed were positioned within the influence matrix (ordinates - Y) and interest, impact and responsibility (I.I.R.) (abscissae - X) (Figure 3).

FIGURE 3
Matrix of influence and I.I.R. (Interest, Impact and Responsibility)



The mapping process and the result summarised in the matrix (Figure X) led to the direct involvement of thirteen specific stakeholder categories, divided into internal and external stakeholders.

Below (Table 1) we define the stakeholder categories, the involvement method used for each stakeholder (which will be explored in more detail in the following paragraphs) and the type of stakeholder (internal or external).

TABLE 1
Stakeholders by category and modality of involvement

MODALITY OF INVOLVEMENT	CATEGORY	TYPE OF STAKEHOLDER
Questionnaire	Employees	Internal
	Management	
	Customers	External
	Suppliers (including insurance companies and banks)	
	Partners (contractors)	
	Competitors	
	Government, local authorities and trade unions	
	Local communities (associations)	
	Trade Associations	
	Academia and the scientific community	
Media and Communication		
NGOs and pressure groups		
Interviews	Mayors	
Training	Silent stakeholders (new generations)	

SRI at the Master in Energy Management of the 240re Business School

ARB S.B.P.A. held 2 days of face-to-face teaching at the **Master in Energy Management of the 240re Business School** on 1 and 2 September 2021, which was then followed by an online session to return the students' work on 6 September 2021. The two days of lectures focused on the presentation and analysis of the Sonatrach Raffineria Italiana case study.

Master's students were guided through a **simulation** of the corporate stakeholder management process, which involved the analysis, both theoretical and practical through an exercise, of the stages of stakeholder mapping, materiality analysis and stakeholder engagement. Following the identification of the company's main stakeholders, the class was divided into four groups, each representing a stakeholder category.

The stakeholder categories represented by the students were: suppliers, institutions, local communities and employees. Each group respected

the following stages of stakeholder engagement: 1. identification of the sub-categories of the chosen category; 2. association of each sub-category with a score, from 1 to 5, relative to the influence and dependence of the stakeholder on the company; 3. inserting the sub-categories within the influence and dependence matrix; 4. identification of the material topics for the category and assignment of two values: one relative to the relevance (low, medium or high) of the topic for that category and one, from 1 to 5, relative to the priority that the category attributes to the topic. On 6 September 2021, the groups presented their work, in the presence of Mr. Rosario Pistorio, Eng., Managing Director and Refinery Manager of Sonatrach Raffineria Italiana, who concluded the cycle of meetings through intense discussion and interaction with the students.

Through this experience, Sonatrach Raffineria Italiana gave the students a voice, involving them directly, and promoted their education in the field of sustainability. In addition, Mr. Pistorio demonstrated the company's strong willingness to get involved first-hand, as well as its propensity to open up with respect to sharing guidance and the significant experience that the Oil & Gas sector is going through on the path to energy transition.

In this sense, the importance of the involvement of "silent stakeholders" - in this case represented by the future generations - is reiterated, which Sonatrach Raffineria Italiana followed up by welcoming one of the students into the company, as part of an internship.

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Preparation and Execution of Questionnaires and Interviews

Given the specificities of each category, in order to involve stakeholders in the most effective way it was decided to adopt a tailor-made approach. The "mayors" category, considered as the institutional stakeholders of the needs of local communities, was involved through face-to-face interviews conducted by Sonatrach Raffineria Italiana, while a written questionnaire was addressed to the remaining categories. In order to identify the topics of greatest relevance to the company's stakeholders and request their assessment, reference was made to the GRI (Global Reporting Initiative) standard, presented at the beginning of the document, and to the SASB (Sustainability Accounting Standards Board) standard. The latter is an internationally recognised body that develops ESG-specific standards to facilitate the communication

to companies and investors of information that are financially relevant and useful for decision-making on sustainability. More specifically, the topics considered material for the SASB business sector to which Sonatrach Raffineria Italiana belongs, namely Oil & Gas - Refining & Marketing, were identified and included in the questionnaires. The relevant topics, defined by the standard and on which an opinion was requested, were: GHG Emissions, Air Quality, Water & Wastewater Management, Waste & Hazardous Materials Management, Employee Health & Safety, Product Design & Lifecycle Management, Competitive Behavior, Management of the Legal & Regulatory Environment and Critical Incident Risk Management, the same topics also used in the SI Rating process carried out in 2021.

INTERVIEWS

In February 2022, the Sustainability and Institutional Relations Office interviewed the category of **mayors**, consisting of:

- the Mayor of Augusta Giuseppe Di Mare;
- the Mayor of Melilli Giuseppe Carta;
- the Mayor of Priolo Giuseppe Gianni;
- the Mayor of Siracusa Francesco Italia.

The interviews covered 19 topics divided according to environmental, social and governance macro-areas (Table 2), to which the mayors were asked to assign a value between 1 (irrelevant) and 6 (fundamental), as well as to express an opinion, if they deemed it necessary.

TABLE 2
Topics addressed in interviews with mayors

ENVIRONMENTAL TOPICS	SOCIAL TOPICS	GOVERNANCE TOPICS
Energy management for the optimised utilisation of energy resources by the refinery	Attention to the interests of the community , to strengthen the roots respecting the territory	SRI's strategic industrial planning for the next five years that responds to society's impulses on sustainability
Management of water resources as a valuable resource for the local environment and with a key role for human health and the tourism and agriculture sectors	Promoting talent attraction and search measures	Business ethics and integrity with respect to topics of legality and territory management
Air quality protection	Training and continuous learning of employees in terms of skills and internal growth prospects	Promoting investments to make the refinery more sustainable and open to structural change
Focus on the progressive reduction of climate-changing gas emissions from refinery plants, starting with CO2	Transparent and timely communication about events that may affect citizens' well-being	Clear and transparent selection and quality criteria for contractors and maintenance companies
Attention to odours with a census of sources but also study of winds and maintenance of monitoring systems and collection of citizens' reports	Collaboration within community-based social projects to combat poverty and tackle educational poverty	Technological Innovation

	Training of young people from local high schools and universities with involvement in work-related learning projects	
	Skills being equal, give priority to people from local communities close to Sonatrach Raffineria Italiana's plants.	
	Health of the inhabitants of the areas surrounding the refinery (e.g. epidemiological health surveys. Information and prevention campaigns)	
	Education initiatives on sustainability and sustainable mobility to the school-age population and with public events	

THE QUESTIONNAIRE

The anonymous questionnaire ensures a greater willingness on the part of the stakeholder to express themselves in a transparent manner. The question type is a **closed-ended question with a linear scale**: you are asked to associate a value, **from 1 (irrelevant) to 6 (fundamental)**, with each topic addressed within the questionnaire, in relation to the company's activities.

This type of question allows for greater instinctiveness and immediacy of response, as well as a short filling-in time for the convenience of the stakeholders asked to respond. Moreover, in this way, a numerical value is assigned to each topic submitted for stakeholder assessment, which will be useful in the development phase of the materiality matrix.

The questionnaire was addressed to the following categories of **internal stakeholders**:

- employees (middle-managers, white collar, blue collar) of Sonatrach Raffineria Italiana;
- management of Sonatrach Raffineria Italiana.

and **external stakeholders**:

- customers;
- suppliers (including insurance companies and banks);
- partners (contractors);
- competitors;
- government, local authorities and trade unions;
- local communities (associations);
- trade associations;
- academia and the scientific community;
- media and communication;
- NGOs and pressure groups.

The questionnaire is divided into two main blocks of topics: within the first block, the following topics, relating to the company's activities, were investigated (Table 3):

TABLE 3
Topics addressed within the first part of the questionnaire

TOPICS ADDRESSED WITHIN THE FIRST BLOCK OF THE QUESTIONNAIRE
<ul style="list-style-type: none"> • Implementation of Management Systems and Certifications • Continuity and reliability of operations • Air quality protection • Soil Protection • Water resource management • Energy Management • Reducing CO2 emissions • Business ethics and integrity • Attention to the interests of the community and strengthening the roots respecting the territory • Talent attraction and search measures • Employee training and continuous learning • Transparent and timely communication • Competitiveness towards the market • Establishing strategic planning by favouring investment to ensure that the refinery is open to structural change • Contractors' selection criteria and quality • Collaboration with the territory on shared projects/objectives • Technological Innovation

The second part of the questionnaire was dedicated to the Sustainable Development Goals of the United Nations 2030 Agenda. Respondents expressed the extent to which, in their opinion, the company's business activities reflect the Sustainable Development Goals, listed at Table 4.

TABLE 4
Agenda 2030 Sustainable Development Goals investigated in the questionnaire

SUSTAINABLE DEVELOPMENT GOALS OF THE 2030 AGENDA INVESTIGATED IN THE QUESTIONNAIRE
<ul style="list-style-type: none"> • SDG 1: End all forms of poverty in the world • SDG 2: End hunger, achieving food security, improving nutrition and promoting sustainable agriculture • SDG 3: Ensuring health and well-being for all and for all ages • SDG 4: Quality education • SDG 5: Achieving gender equality and empowering all women and girls • SDG 6: Ensuring the availability and sustainable management of water and sanitation for all • SDG 7: Ensuring access to affordable, reliable, sustainable and modern energy systems for all. • SDG 8: Promoting lasting, inclusive and sustainable economic growth, full and productive employment and decent work for all • SDG 9: Building resilient infrastructure and promoting innovation and fair, responsible and sustainable industrialisation • SDG 10: Reducing inequality within and between nations • SDG 11: Making cities and human settlements inclusive, safe, durable and sustainable • SDG 12: Ensuring sustainable patterns of production and consumption • SDG 13: Take urgent measures to combat climate change and its consequences • SDG 14: Conservation and sustainable use of the oceans, seas and marine resources for sustainable development • SDG 15: Protect, restore and promote sustainable use of the earth's ecosystem, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt the loss of biological diversity • SDG 16: Promoting peaceful and more inclusive societies for sustainable development; providing access to justice for all and creating efficient, accountable and inclusive bodies at all levels • SDG 17: Strengthening the means of implementation and renewing the Global Partnership for Sustainable Development



Results of stakeholder engagement

ANALYSIS OF INTERVIEWS (MAYORS)

All respondents rated high or medium-high (>4) with respect to the ESG topics investigated. This trend is reflected in the strong support and sharing of the sustainability path Sonatrach Raffineria Italiana is taking.

Table 5 shows, in detail, the values attributed by each representative of the “mayors” category with respect to the ESG topics investigated

TABLE 5

Values expressed by each representative of the “mayors” category (municipalities of Melilli, Siracusa, Priolo and Augusta) with respect to ESG topics

TOPIC	Municipality of Melilli	Municipality of Siracusa	Municipality of Priolo	Municipality of Augusta
Energy management for the optimised utilisation of energy resources by the refinery	5	6	6	4
Management of water resources as a valuable resource for the local environment and with a key role for human health and the tourism and agriculture sectors	6	6	6	6
Air quality protection	6	6	6	6
Focus on the progressive reduction of climate-changing gas emissions from refinery plants, starting with CO2	6	6	6	6
Attention to odours with a census of sources but also study of winds and maintenance of monitoring systems and collection of citizens' reports	6	6	6	6
Attention to the interests of the community , to strengthen the roots respecting the territory	4	3	5	6
Promoting talent attraction and search measures	6	6	6	5
Training and continuous learning of employees in terms of skills and internal growth prospects	4	4	6	5
Transparent and timely communication about events that may affect citizens' well-being	6	6	6	5
Collaboration within community-based social projects to combat poverty and tackle educational poverty	6	6	6	6
Training of young people from local high schools and universities with involvement in work-related learning projects	6	6	6	6
Skills being equal, give priority to people from local communities close to Sonatrach Raffineria Italiana's plants.	6	6	6	6
Health of the inhabitants of the areas surrounding the refinery (e.g. epidemiological health surveys, information and prevention campaigns)	6	6	6	6
Education initiatives on sustainability and sustainable mobility to the school-age population and with public events	4	6	6	6

SRI's strategic industrial planning for the next five years that responds to society's impulses on sustainability	6	6	6	6
Business ethics and integrity with respect to topics of legality and territory management	5	6	6	6
Promoting investments to make the refinery more sustainable and open to structural change	6	6	6	6
Clear and transparent selection and quality criteria for contractors and maintenance companies	5	6	6	6
Technological Innovation	5	6	6	6

Analysis of questionnaire results and materiality matrix

In terms of quantity, a total of **252 stakeholders** responded, including:

- 198 stakeholders belonging to the “SRI employees” category (middle managers, white-collar and blue-collar);
- 5 stakeholders belonging to the “SRI Management” category;
- 1 stakeholder belonging to the category “Customers”;
- 15 stakeholders belonging to the category “Suppliers (including insurance companies and banks)”;
- 4 stakeholders belonging to the category “Partners (contractors)”;
- 1 stakeholder belonging to the “Competitors” category;
- 8 stakeholders belonging to the category “Government, local authorities and trade unions”;
- 0 stakeholders belonging to the category “Local communities (associations)”;
- 6 stakeholders belonging to the category “Trade Associations”;
- 3 stakeholders belonging to the category “Academia and the scientific community”;
- 3 stakeholders belonging to the “Media and Communication” category;
- 0 stakeholders belonging to the category “NGOs and pressure groups”.

The remaining 8 stakeholders who participated in the survey did not choose, within the question in which they were asked to identify themselves, the pre-set categories within the questionnaire, but selected the option “other” (this response option involved manual and not guided entry of the answer). It was therefore necessary to reconcile the category in which they self-identified with the pre-set categories. Table 6 shows, within the first column, how each of these 8 respondents self-identified.

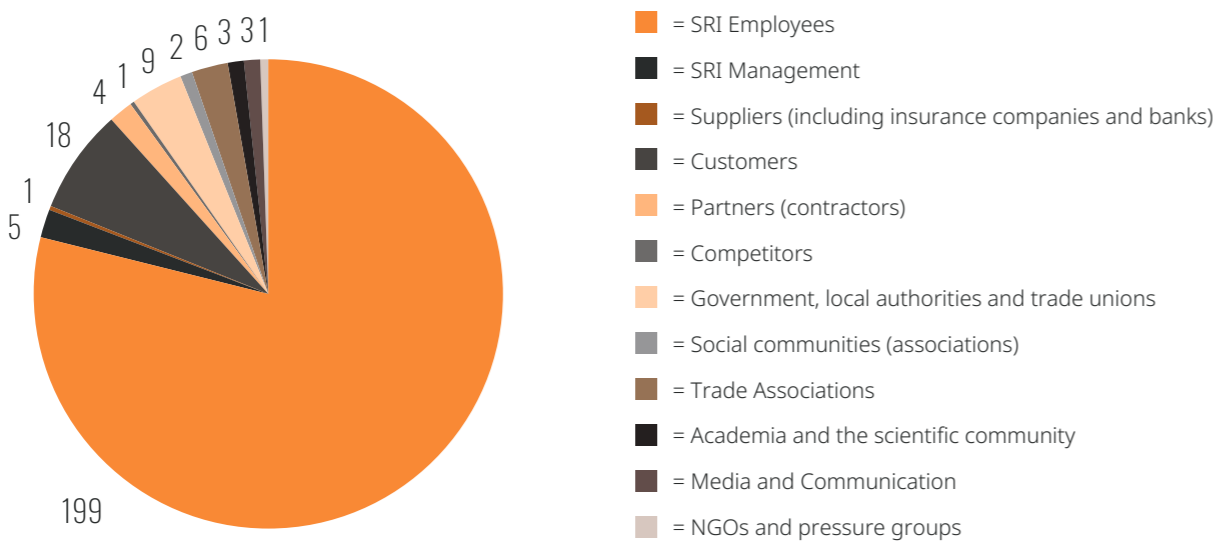
The second column shows the category to which each of the latter respondents has been grouped for statistical purposes:

TABLE 6

Category into which the stakeholder has self-identified (left column) and category into which the stakeholder has been grouped (right column)

SELF-IDENTIFICATION CATEGORY	ASSIGNED CATEGORY
“School”	Local communities
“Control body”	Suppliers
“ONLUS”	NGOs and pressure groups
“Company external auditor”	Suppliers
“Retired”	Local communities
“Power generation company operating in the SR industrial cluster”	Suppliers
“Intern”	Employees
“Elected Member of Parliament”	Government, local authorities and trade unions

FIGURE 4
Number of questionnaire respondents by type



MATERIALITY MATRIX

In order to achieve a return that also included the category of mayors, a match was created, where possible, between the questions within the questionnaire and the questions made to the mayors during the interview.

The topics to which the mayors' answers were added during data processing can be seen at Table 7. On this basis, a materiality matrix was created that also takes into account the values attributed by the category "mayors".

TABLE 7
Common topics of the questionnaire and interview to which mayors' answers were added during the elaboration of the matrix.

COMMON TOPICS FROM THE QUESTIONNAIRE AND THE INTERVIEW TO WHICH THE MAYORS' ANSWERS WERE ADDED DURING THE ELABORATION OF THE MATRIX
<ul style="list-style-type: none"> • Energy Management • Water resource management • Air quality protection • CO2 reduction • Community relations • Talent attraction • Development and protection of human capital* • External Communication • Territory development • Sustainability investments • Ethics and integrity • Contractor selection criteria • Technological Innovation

*The topic "Health and safety of workers" was considered within the topic "Development and protection of human capital". The positioning of the topic on the matrix is the result of the assessments expressed by internal and external stakeholders with respect to the item "Employee training and continuous learning". This intrinsic link between safety and training is motivated by the fact that the development of human capital is directly linked to the training of employees whose focus, within the company, is continuous training on safety topics.

The **materiality matrix** (Figure 5) shows the intersection of topics considered highly relevant by internal stakeholders on the abscissa and those assessed as highly relevant by external stakeholders on the ordinates.

The material topics, inclusively chosen and assessed through stakeholder engagement, form the basis of the Sustainability Report 2022.

FIGURE 5
Materiality matrix

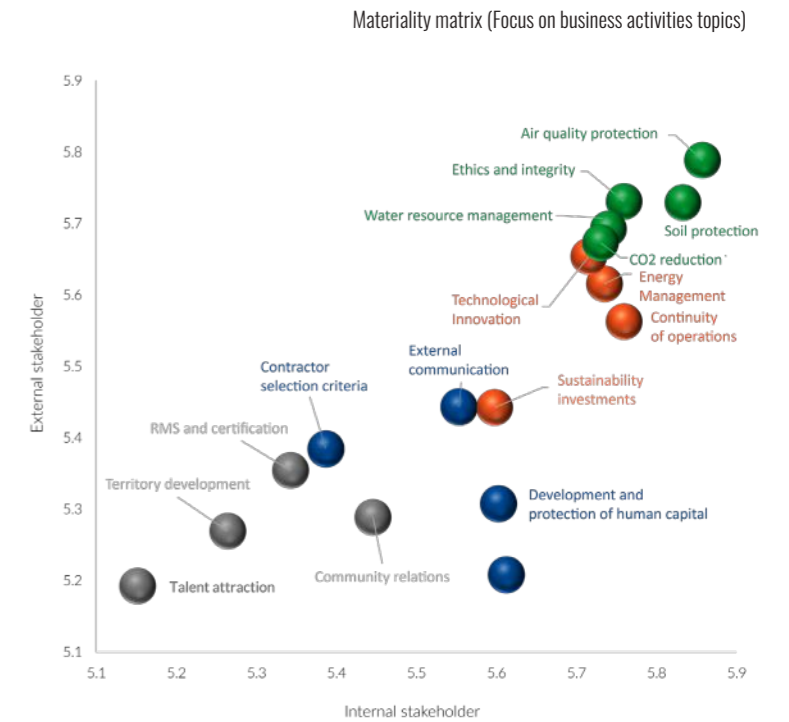


TABLE 8
Coordinates for the topics investigated (excluding the SDGs), in descending order of priority and broken down by quartile of the matrix

TOPIC	Internal stakeholders	External Stakeholders	Quartile
Air quality protection	5,86	5,79	1
Soil protection	5,83	5,73	1
Ethics and integrity	5,76	5,73	1
Water resource management	5,74	5,69	1
CO ₂ reduction	5,73	5,67	1
Technological Innovation	5,72	5,65	2
Energy Management	5,74	5,62	2
Continuity of operations	5,76	5,56	2
Sustainability investments	5,60	5,44	2
External Communication	5,55	5,44	3
Development and protection of human capital	5,60	5,31	3
Competitiveness	5,61	5,21	3
Contractor selection criteria	5,39	5,38	3
Community relations	5,45	5,29	4
RMS and certifications	5,34	5,35	4
Territory development	5,26	5,27	4
Talent attraction	5,15	5,19	4

Figure 6 shows the priority and alignment with the Sustainable Development Goals, the coordinates of which are shown in Table 9.

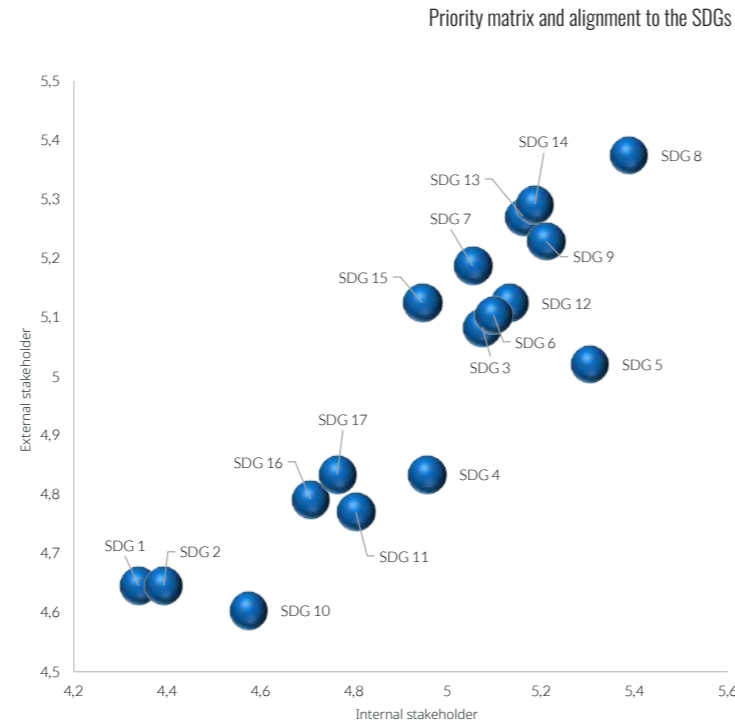


FIGURE 6
Priority matrix and alignment to the SDGs

TABLE 9

Sustainable Development Goals coordinates, in descending order of priority and broken down by quartiles of the matrix

TOPIC	Internal stakeholders	External Stakeholders	Quartile
SDG 8: Promoting lasting, inclusive and sustainable economic growth, full and productive employment and decent work for all	5,39	5,38	1
SDG 14: Conservation and sustainable use of the oceans, seas and marine resources for sustainable development	5,19	5,29	1
SDG 9: Building resilient infrastructure and promoting innovation and fair, responsible and sustainable industrialisation	5,21	5,23	1
SDG 13: Take urgent measures to combat climate change and its consequences	5,16	5,27	1
SDG 5: Achieving gender equality and empowering all women and girls	5,30	5,02	1
SDG 12: Ensuring sustainable patterns of production and consumption	5,13	5,13	2
SDG 7: Ensuring access to affordable, reliable, sustainable and modern energy systems for all.	5,05	5,19	2
SDG 6: Ensuring the availability and sustainable management of water and sanitation for all	5,10	5,10	2
SDG 3: Ensuring health and well-being for all and for all ages	5,07	5,08	2
SDG 15: Protect, restore and promote sustainable use of the earth's ecosystem, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt the loss of biological diversity	4,95	5,13	3
SDG 4: Quality education	4,96	4,83	3
SDG 17: Strengthening the means of implementation and renewing the Global Partnership for Sustainable Development	4,76	4,83	3
SDG 11: Making cities and human settlements inclusive, safe, durable and sustainable	4,80	4,77	3
SDG 16: Promoting peaceful and more inclusive societies for sustainable development; providing access to justice for all and creating efficient, accountable and inclusive bodies at all levels	4,71	4,79	4
SDG 10: Reducing inequality within and between nations	4,57	4,60	4
SDG 2: End hunger, achieving food security, improving nutrition and promoting sustainable agriculture	4,39	4,65	4
SDG 1: End all forms of poverty in the world	4,34	4,65	4



The materiality analysis represents the guideline for the material topics, hence relevant, as well as being the knowledge base shared with the stakeholder community for the planning of Sonatrach Raffineria Italiana's activities for the near future.

It is, in fact, a benchmark for defining the elements, actions, policies and priorities for action in the company's ESG criteria action plan.



03

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VALUE GENERATED AND DISTRIBUTED

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VALUE GENERATED AND DISTRIBUTED

Sonatrach Raffineria Italiana in numbers

INVESTMENTS AND MAINTENANCE	2020	2021
Investments in Reliability, Safety, Environmental Sustainability	17 mln €	19.7 mln €
Maintenance and services contracts awarded to Sicilian companies (in 2020 122 mln € and in 2021 99 mln € to enterprises in the province of Siracusa)	134 mln €	112 mln €

VALUE CREATED

2,381 mln € turnover in 2020

Taxes and duties generated 1,123 mln € (*)

4,328 mln € turnover in 2021

Taxes and duties generated 1,889 mln € (*)

(*) referring to the business conducted at the site regardless of the party liable to pay them

OUR CORPORATE WORKFORCE	2020	2021
Total work force	694	724
of which from the province of Siracusa	590	601
of which from territory (Prov. SR + Sicily)	660	688
Hours worked by contractors	1,687,570	1,837,460
Accidents (according to OSHA - Occupational Safety and Health Administration)	0	0
Personnel Training (number of days)	15	12
New hires Training (number of days)	73	10

ECONOMIC VALUE GENERATED AND DISTRIBUTED

The **economic value distributed to stakeholders** is an indicator of the social impact generated by the company in both qualitative and quantitative economic terms. It represents the extent of the **social responsibility** assumed by the company towards its stakeholders. Sonatrach Raffineria Italiana in 2021 and in 2022 **generated wealth** to support business continuity and the high quality of services offered to all the various stakeholders and to fuel the economic sustainability of the system.

The added value generated and distributed is determined by the value generated in the reporting period and the value redistributed, in various forms, to the company's stakeholders. Part of the economic value is retained by the company.

This value was realised on the items in the income statement format used in the financial statements of Sonatrach Raffineria Italiana as at 31 December 2020 and 31 December 2021.

TABLE 10

Added value (M€ Euro) - 2019/2020/2021

ADDED VALUE (M€ EURO)	SRI		
	2019	2020	2021
GLOBAL ADDED VALUE			
A) Value of production (1)	4,648.3	2,380.7	4,328.2
B) Intermediate production costs (2)	-4,833.6	-2,611.4	-3,965.1
GROSS CHARACTERISTIC ADDED VALUE (A-B)	-185.3	-230.8	363.0
C) Extraord. management balance and financial adjustments (3) (4) (5)	-1.2	84.5	-88.8
GLOBAL GROSS ADDED VALUE (A-B+C)	-186.5	-146.3	274.2
divided between:	2019	2020	2021
EMPLOYEES (wages, social security contributions, severance pay, benefits) (6)	75.8	70.2	66.8
Equity and credit providers (Interest expenses, dividends and distributed profits)	29.7	30.9	33.6
Public administration (Taxes and levies to state, region, municipalities, donations) (8)	15.5	18.1	58.3
GLOBAL GROSS ADDED VALUE DISTRIBUTED	121.0	119.2	158.7
ENTERPRISE SYSTEM (Profits allocated to reserves, provisions and depreciation) (7)	51.5	73.8	53.1
ENTERPRISE SYSTEM Profit/(Loss) for the Year After Tax - Shareholder Remuneration	-359.0	-339.3	62.4
GLOBAL GROSS ADDED VALUE RETAINED	-307.4	-265.4	115.5



NOTES

Global Added Value is obtained by subtracting from the total value of production (1) the cost of raw materials and their changes, the cost of services and the use of third party assets, other operating costs (2) and financial management (3):

The Added Value was distributed to employees (6), lenders, the public administration (7) and the community (8).

Retained Added Value includes depreciation, amortisation, provisions and write-downs (7) and profit/(loss) for the year.

As can be seen in the table, the financial year 2021 shows a **recovery** compared to the year 2020, which had been severely affected by the Covid-19 pandemic. revenues from the sale of petroleum products in 2021 show a significant increase compared to the previous year, as a result of higher prices for distillates and lubricants, and also due to higher quantities produced and sold. The costs of oil raw materials and services also increased; refining margins also showed a recovery compared to the previous period.

An analysis of the various items that make up the **Economic Value Distributed** shows that in the year 2021:

- EUR 58.3 million was paid for taxes and duties to the public administration, for excise duties, local taxes, income taxes and other taxes and donations to the territory for charitable contributions and social utility charges
- EUR 66,8 million was paid to employees for wages, social security costs, provisions for severance pay and other personnel costs;
- 33,6 million were paid to the lenders, for the remuneration of the loans received;

The **Economic Value Retained** by the company is approximately EUR 115 million. Of this, EUR 53 million is depreciation and amortisation, while the remainder, EUR 62 million, is profit after taxes, reinvested in the company.

INVESTMENTS

Company policy on investments in safety, health, environment and technological innovation

Combining the exercise of production activities in perfect compatibility with the environmental and economic needs of the communities in which it operates: this is the main goal of the investments that the company makes in the continuous and sustainable pursuit of **safety, health, environmental and energy efficiency objectives**.

TABLE 11

Realized investments (2020-2021)

REALIZED INVESTMENTS (MILLION €)	YEAR	
	2020	2021
ENVIRONMENT, HEALTH AND SAFETY (HSE)	7.1	7.3
TECHNOLOGY (process improvement)	2.6	1.3
RELIABILITY	7.3	11.1
TOTAL	17.0	19.7

The investments made in this area have the highest priority for the company as they are considered an essential value to ensure continuous and sustainable improvement over time.

The company also works with local, regional and national authorities to support laws and regulations to ensure proper competitiveness at European and international level within the energy transition path. It promotes and supports - in partnership with universities (Catania, PoliMI and PoliTO) - research for the development of technologies and their concrete applicability. With the ultimate goal of pursuing sustainability as a cornerstone of business activity: in the growth of knowledge and skills, in the integrity and continuity of operations, in the ability to meet the needs of local stakeholders.

SUPPLIERS

Sonatrach Raffineria Italiana works with a diversified supply chain and implements a series of best practices to ensure a high level of quality in the partnerships established along the value chain. The company's supplier assessment strategy is based on the principles of fairness, equity and transparency and aims to constantly improve the standards of economic productivity through technological progress and innovation, with specific attention to the social and environmental aspects of the suppliers evaluated. The company aims to promote businesses oriented towards the creation of suitable jobs, healthy entrepreneurship, the creation of close relationships with local constructs and proper environmental management.

TABLE 12

Suppliers (2019-2020-2021)

SUPPLIERS	SRI		
	2019*	2020	2021
N° of ancillary companies	190	190	190
N° of hours worked by contractors	4,250,000	1,687,570	1,837,460
Turnover paid to contractors (€ /000)	356,000	215,600	203,340
of which local (prov. SR)	43%	57%	48.5%
of which regional	5%	5%	6.2%
of which Italian	27%	13%	34.2%
of which foreign	25%	25%	11.1%

(*) year of the general maintenance of the site's plants

Suppliers are always chosen on the basis of **objective economic assessments** and in accordance with the **principles of competition and equality**, favouring **local economic development** with an awareness of the added value that the company itself can gain. Moreover, due to the characteristics of its core business, the company collaborates with an important network of foreign suppliers.

Percentage of managers and members of top management from the local community

Sonatrach Raffineria Italiana is aware of the strategic importance of **a strong relationship with the territory** and the community, including aspects related to the development of human capital.

Considering the region of Sicily as a reference for the operational headquarters, the company considers the inclusion of members of the local community among its supervisors as a **driver to consolidate a positive market presence**. For Sonatrach Raffineria Italiana, in fact, the inclusion of managers from the surrounding geographical areas contributes to enrich human capital, increase economic benefits to the region, and improve the company's ability to understand its needs. For the year 2021, the percentage of supervisors from the local community is distributed as follows:

TABLE 13
Origin of senior figures

PERSONS WITH TOP MANAGEMENT ROLES IN SONATRACH RAFFINERIA ITALIANA		
Provenance	Value	%
Others	4	7
Province of Siracusa	37	65
Other Provinces of Sicily	16	28
Grand Total	57	100

Anti-corruption, anti-trust and anti-monopoly policies

It should be noted that throughout the period of analysis, there were no incidents of corruption or lawsuits for anti-competitive behaviour or monopolistic practices as verified by the 2020/2021 activities of the Sonatrach Raffineria Italiana Ethics Committee. The Company's policies on this matter are clear:



"The Company rejects corruption as a means of conducting its business, whether active or passive, in the public or private sphere. It is the Company's policy to prohibit its directors, employees of the Company and/or third parties acting on its behalf from offering or paying, directly or indirectly, bribes or engaging in any other act of corruption to public employees, public officials, public service officers, or government agents, employees or agents of other companies, or individuals who have business dealings with the Company". (from the "Anti-Corruption Policy")

It is the policy of the Company that all directors and employees, in the performance of their duties, shall comply with the competition protection regulations issued by the Italian State, the European Union and the regulations of any other foreign State applicable to the Company's business. Compliance with competition laws is of paramount importance to the Company's reputation. The Company and its directors and employees shall ensure that practices (such as the creation of cartels, market sharing, limitations on production or sales, conditional agreements, etc.), which constitute a violation of competition laws, are not implemented. (from "Competition Policy")



Regular training on the above topics is provided to all employees.

The activities of the Augusta, Naples and Palermo Depots

During the years 2020 and 2021, the company operated the three tax depots for oil product located in Augusta, Palermo and Naples and reporting excellent results. With regard to safety, there were no reportable accidents, with all three depots achieving multi-year accident-free targets. In the area of reliability, all three depots ensured high standards of service quality to their customers despite the continued presence of the SARS-COV-2 pandemic. In fact, there was no reduction in the operations of the depots, constantly ensuring the full application of the applicable legislation on the containment of the SARS-COV-2 pandemic (including the mandatory green pass) and the company protocols adopted from time to time.

In 2020, the volumes trend of oil products shipped from the three depots were heavily impacted by the mobility restrictions imposed by the legislative measures adopted to combat the SARS-COV-2 pandemic. However, starting in June 2020, volumes of products returned in line with the historical trend for the period, with the exception of a further reduction in November 2020, again due to mobility restrictions imposed by legislative measures adopted to combat the SARS-COV-2 pandemic. In the period from October to November 2020, the company started the eSAD (*) project at all three depots for the issuance of electronic SADs accordance with Art. 11 of Law Decree 26 October 2019, No 124 (as converted into law by Law 19 December 2019, No 157), with no interruption in service for the entire year.

During the course of the 2021, the volumes of oil products shipped from the three depots returned in line with the historical trend of the period prior to the SARS-COV-2 pandemic to values of around 2 million tons; at the Naples depot, peaks in volumes were also recorded that were much higher than the historically recorded values. In addition, in April 2021, the marketing of B0 diesel from the Naples depot was added to the management of existing fuels (Petrol, B7 diesel, Kerosene for jet aircraft). Again in 2021 there were no reports of qualitative non-compliance or complaints from customers and transporters attributable to the activities of the Depots.

No significant irregularities were found during the checks carried out by the relevant authorities (Customs Agency, Tax Police) in 2021. In addition, all three depots were subject to SMS-MAP (the safety management system for the prevention of major accidents) inspections by the commissions appointed by the relevant Regional Technical Committees (RTCs) pursuant to Art. 27 of Legislative Decree 26 June 2015, No 105 without any significant remarks

(*) The **SAD** - Simplified Accompanying Document - is a document that must be submitted to the Customs and Monopolies Agency whenever products subject to payment of the **excise duty** or other indirect taxes are released in the national territory; e-Sad is the electronic solution adopted by the Depots.



04

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ENVIRONMENT: OUR COMMON HOME

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ENVIRONMENT: OUR COMMON HOME

Vision

Environmental health is an indispensable value. No company can carry out its business without depending on the environment in some way. From nature we draw the resources necessary for the development of our society and benefit from the services that guarantee us a comfortable life.

Sonatrach Raffineria Italiana intends to increasingly integrate these concepts into its daily operations and decisions, being aware that business cannot ignore environmental sustainability. The company is aware that its operations have an impact on the planet, both locally as an individual company and globally as an industry. This awareness drives the organisation, with a great sense of responsibility, to continuously **monitor these impacts** and **to reduce them** as much as possible year after year in order to ensure the **protection of the territory and the environment**.

These improvements in the environmental macro-area are mainly due to the **strategic partnerships** established in the area of sustainability, the **numerous investments in Best Available Techniques (BAT)** and the **continuous training** that has created a strong sense of responsibility and motivation within the entire team.

The high quality of Sonatrach Raffineria Italiana's personnel is the company's greatest strength. The skills, professionalism and commitment of directors, managers and employees ensure that the company is competitive in the short term and maintaining sustainable success over time.

Authorisations, Tools and Best Practices

In the petrochemical sector, the main reference regulatory tools for the management of environmental and operational topics are Legislative Decree 152/06, Legislative Decree 105/2015 (implementing European Directive 2012/18/EU) and the Integrated Environmental Authorisation (**IEA**). The IEA issued by the **MITE** (Ministry of Ecological Transition) establishes, among other things, emission limits for pollutants in the environment, thus driving the company to pursue an optimal environmental performance.

This objective is sought and achieved through the identification and adoption of the best available technologies (BAT) according to the strictest international standards, i.e., those technologies that guarantee cutting-edge environmental performance. BAT also allows, with a view to continuous improvement of all environmental aspects connected with the company's production activities, and in synergy with the management systems adopted, the reduction of emissions, the optimisation of raw material, water and energy consumption, and finally the prevention of accidents.

THE ANNUAL IEA REPORT: THE RESULTS OF CONTINUOUS ENVIRONMENTAL IMPROVEMENT

The Augusta Refinery obtained the Integrated Environmental Authorisation (IEA) for its operations through Decree DVA-DEC-2011-000519 of 03/10/2011, which was subject to subsequent reviews, of which the measure issued with DM No. 158 of 08/05/2018 represents the IEA currently in force as of 01/06/2018. Attached to said Ministerial Decree are the Concluding Investigation Opinion (Parere Istruttorio Conclusivo, PIC), which contains all the requirements to be fulfilled, and the Monitoring and Control Plan (Piano di Monitoraggio e Controllo, PMC), which has the purpose of defining the methods and frequency of implementation of the requirements. The IEA for the operation of the refinery is made public at the following website of the Ministry of Ecological Transition <https://va.minambiente.it/it-IT/Oggetti/Info/1901>.

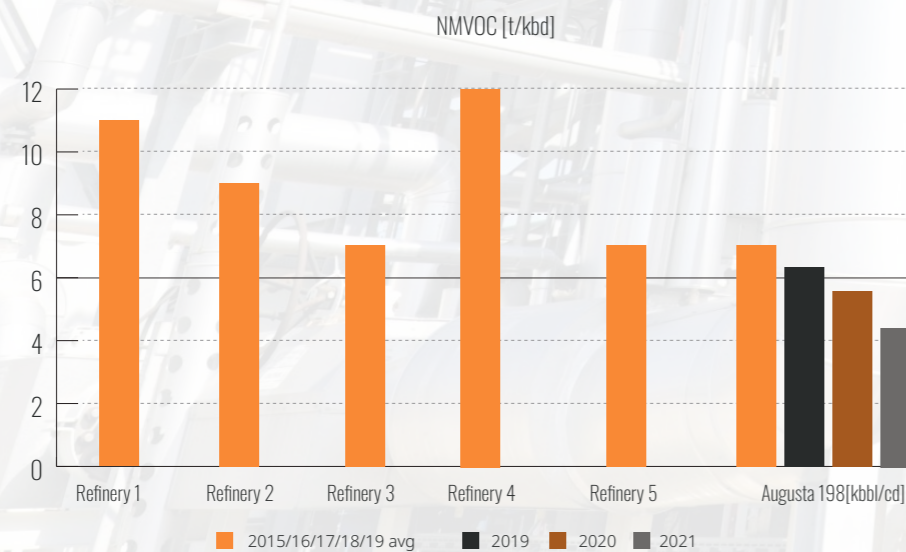
According to the provisions of the IEA PMC, by 30 April of each year the refinery is obliged to transmit to the Competent Authority (Ministry of Ecological Transition - MITE), the Control Authority (Istituto Superiore per la Protezione e la Ricerca Ambientale [Italian National Institute for Environmental Protection and Research], ISPRA), the Region, the Province, the municipalities of Melilli and Augusta, and the ARPA [Agenzia regionale per la protezione dell'ambiente (Regional Environmental Protection Agency)] of Siracusa, an Annual Report describing the plant's operations during the previous year. The refinery submitted the Annual Reports for 2020 and 2021 on the PMC's monitoring and activities on time. The purpose of each Annual Report is mainly to certify compliance with IEA requirements (e.g. required emission limits) and to provide all environmental monitoring data required by IEA requirements. This report is drawn up on the basis of the PMC and its contents are as follows:

1. General plant information (e.g. number of actual operating hours of production departments, etc.);
2. Declaration of compliance with the IEA in which the operator declares that the plant has been operated in compliance with the requirements and conditions set out in the Integrated Environmental Authorisation;
3. Refinery consumption (e.g. raw material consumption, water consumption, energy consumption, etc.);
4. Emissions for the whole plant: AIR (e.g. total annual masses of SO₂, NO_x, CO, Dust, etc.);
5. Emissions for the whole plant: WATER (e.g. water discharge monitoring results, etc.);
6. Emissions for the whole plant: WASTE (e.g. quantity of waste produced and recovered by the Refinery, etc.);
7. Emissions for the whole plant: NOISE (e.g. findings of noise impact assessment campaigns);
8. Emissions for the whole plant: ODORS (e.g. results of the olfactometric campaign carried out);
9. LDAR (Leak Detection and Repair) programme results;
10. Torch (e.g. amount of gas burned in candle, etc.);
11. Sulphur recovery units (e.g. monthly averages of % sulphur conversion);
12. Tanks, pipeways and oily sewers monitoring (e.g. results of tank inspection and maintenance programme, etc.).

All information required for the preparation of the Annual Report is collected and monitored on a monthly basis by the Environment department, with the support of the Technical, Process, Maintenance and Inspection departments within the Environmental Steering Committee (ESC). Furthermore, within the ESC, a specific "IEA Team" was set up, consisting of representatives from the Environment, Technical, Process, Maintenance and Inspection departments, which has, among other objectives, the task of coordinating activities relating to compliance with IEA requirements and periodically verifying their fulfilment. The information gathered is subsequently reviewed and validated by all the relevant departments when preparing the Annual Report, before transmission to the competent Authorities.

The Annual Report is an excellent tool that SRI uses as a means of comparison with others in the industry. For example, from an analysis of the calculated and transmitted emission data related to the NMVOC atmospheric emissions of the Augusta refinery, it is, in fact, possible to observe a significant reduction in emissions over the last few years (Figure 5), the result of numerous investments (e.g. VRU installation, API tank covering, etc.), as well as the effectiveness of the management systems that the refinery adopts and for which it is also certified ISO 14001:2015 "Environmental management systems".

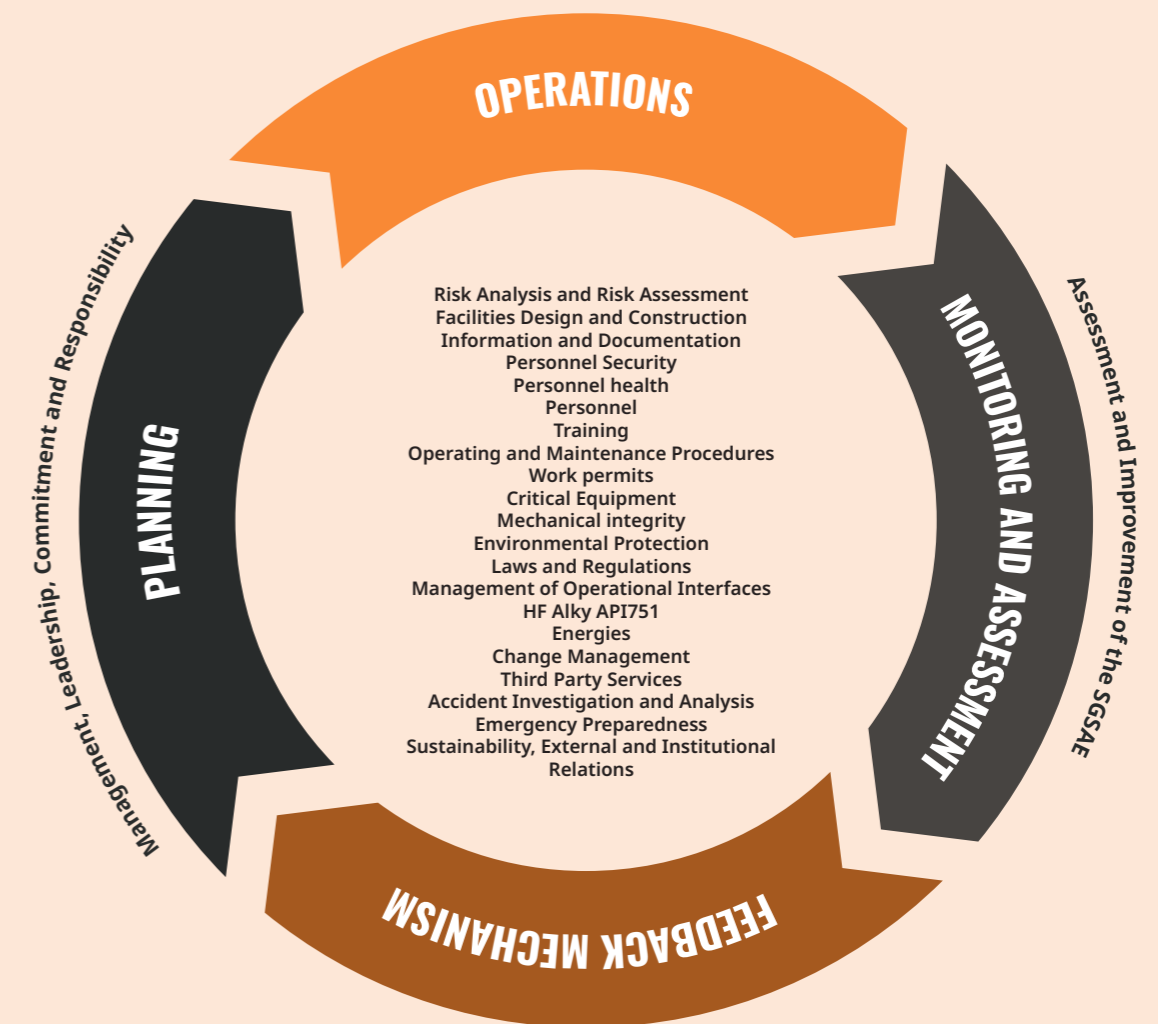
FIGURE 7
Non-methane volatile organic compounds (t/kbd)



Furthermore, in support of the IEA, the company applies **additional tools and best practices** that allow for constant control of environmental impacts including:

- Adoption of an integrated management system covering Health, Safety, Environment and Energy (SGSAE) with certification of the environmental and energy part according to international standards **ISO 14001** and **ISO 50001**;
- Procedures to minimise the risk of an accident and respond effectively to accidents through a consolidated system of investigation, search for root causes that may have caused the accident and consequent actions to prevent the same accident from happening in the future;
- Adoption of a shared communication protocol **with stakeholders and external Authorities** for reporting and managing special events;
- Participation together with other companies in the area in the **CIPA (Consorzio Industriale Protezione Ambiente, Industrial Consortium for Environmental Protection)**, which ensures widespread air quality control through a network of control units owned by the Consortium and interconnected with those of the Free Siracusa Consortium.

SAFETY, ENVIRONMENT AND ENERGY MANAGEMENT SYSTEM (SGSAE)



The quality of the air we breathe

Atmospheric emissions are a determining factor in air quality. The company manages, controls, monitors and maintains the emissions produced within the limits set by current legislation.

These actions represent one of the most significant environmental aspects concerning the activities carried out by the company, both under normal and any abnormal or emergency conditions.

The company's policy sets as one of its specific objectives the development of a plan for the **continuous improvement of environmental performance** with explicit objectives and targets for the containment of vented, fugitive and diffuse air emissions.

Strict monitoring protocols are in place at the company's operating sites in compliance with the requirements of Environmental Permits. The refinery and depots use **procedures, automated control systems and management systems** to monitor the progress of environmental parameters, verify compliance with legal requirements and current authorisations, and finally carry out reporting to Company Management and to competent and control authorities.

The sophisticated continuous monitoring system named EMS (**Emission Monitoring System**) is today's technically most suitable technological solution for this purpose.

It consists of equipment (analysers) that continuously measure emissions from refinery smokestacks (CEMS) and/or predictive monitoring systems (PEMS) that provide accurate continuous estimation of emissions from smokestacks based on the measurement of several operational parameters. These emission values are h24 transmitted to the control authorities (ARPA Sicily) on dedicated servers.

Refinery emissions are monitored both in terms of the concentrations emitted by **individual sources** (e.g. measurements at smokestacks) and at the level of the **entire refinery**, applying the concept of a "refinery bubble" as required by BAT: the refinery is considered as a whole and the emissions and flow volumes of all emission sources included in the bubble definition are then assessed. All parameters required by the IEA are monitored, including nitrogen oxides (NO_x), sulphur oxides (SO_x), particulate (PM), etc. Assessments and simulations are also carried out to estimate emissions of volatile organic compounds (VOCs).

"Vented emissions" are released from an emission point characterised by certain main parameters (location and sizing of the emission point, chemical-physical and quantitative characteristics of the emission). "Diffuse emissions" include all those dispersions into the atmosphere from non-point sources such as: tanks and containers, evaporations from free surfaces, dispersions from equipment handling products in a gaseous state, etc.

A relevant subset of this type of emission is constituted by "fugitive emissions" resulting from a gradual leakage from part of the equipment designed to contain/move a fluid (gaseous or liquid). Examples of fugitive emissions are emissions from pumps, valves, etc.

Below is an example of an EMS screen that is continuously transmitted (H24/ 365 days per year) to the ARPA Sicilia servers:

Date	Average Conc. (MG/NM3)	Mass Flow	Validity	Available Values
01-09-2022	164,703		Calculate	24
02-09-2022	171,436		Calculate	24
03-09-2022	161,096		Calculate	24
04-09-2022	167,361		Calculate	24
05-09-2022	165,406		Calculate	24
06-09-2022	168,384		Calculate	24
07-09-2022	162,521		Calculate	24
08-09-2022	149,979		Calculate	24
09-09-2022	166,085		Calculate	24
10-09-2022	162,975		Calculate	24
11-09-2022	159,378		Calculate	24
12-09-2022	166,008		Calculate	24
13-09-2022				

All environmental controls and monitoring adopted by the company are based on what is set forth in the "Monitoring and Control Plan" section of the relevant IEA. In 2020 and 2021, emissions were well below the levels envisaged by the IEA (Integrated Environmental Authorisation), as can be seen in Figure 8.

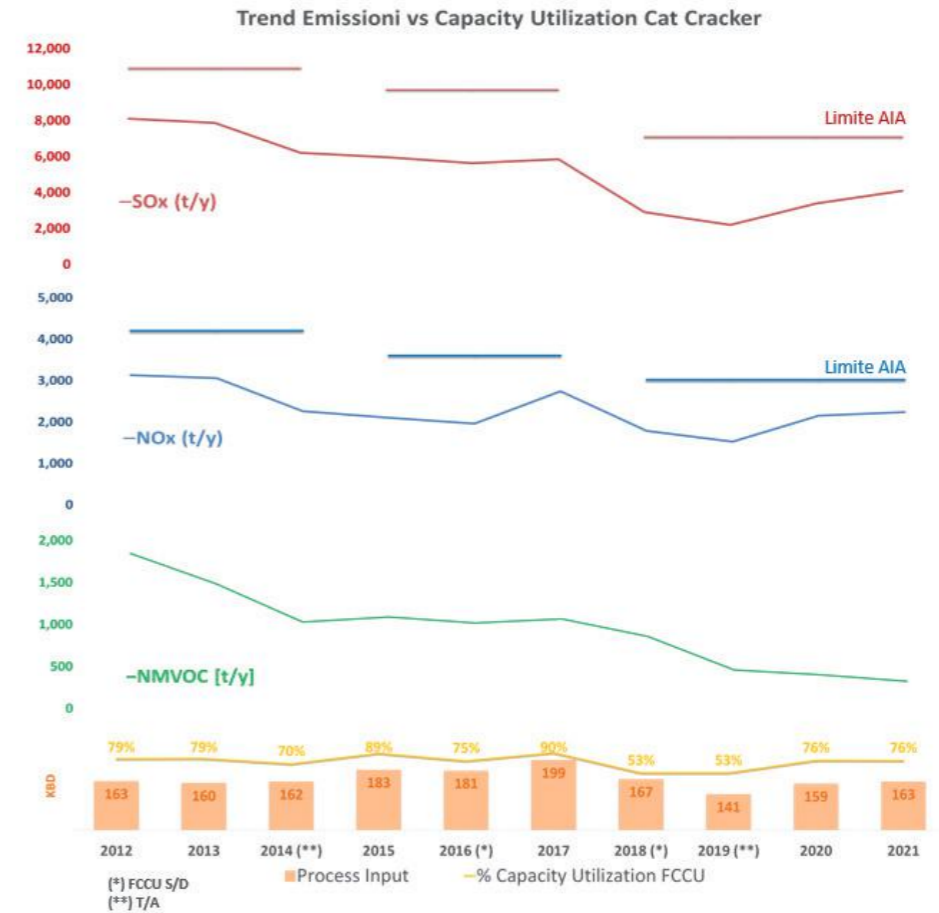


FIGURE 8
2012-2021 trend of the main emission components

The best available technologies adopted have made it possible to reduce or maintain the excellent values already achieved for emissions released into the air, as can easily be seen from the values in Table 14 and Table 15, where the values (in relation to annual processing) are compared; said values are now practically constant after decreasing since the first IEA (Integrated Environmental Authorisation) issue in 2011. The data indicate the quantities in tons emitted in absolute terms for the main atmospheric emission parameters.

Specifically, **the company's 2019 Sustainability Report** detailed the various environmental projects carried out in the previous decade with the latest ones completed in the 2019 major maintenance shutdown. Among these projects, the most important are the 52 MW cogeneration plant for the production of electricity, the use of low nitrogen oxide-producing burners (LowNOx burners), the use of a new catalyst (DeSOx catalyst) to reduce sulphur oxide emissions from the catalytic cracking plant (FCCU), the dockside vapour recovery unit (VRU) for volatile products (with RVP>4kPa), the covering of the tanks constituting the wastewater treatment plant, the installation of double seals in the floating roof tanks, and the installation of caps and socks on the stilling pipes. With regard to fugitive emissions, EU and national regulations concerning

integrated pollution prevention and control (IPPC regulations) are applied. The latter considers, among the elements for assessing the environmental performance of a production plant, the way fugitive emissions are monitored and managed using the LDAR (Leak Detection And Repair) technique, which involves the monitoring and measurement of a possible leak and subsequent timely maintenance intervention.

Furthermore, in accordance with the current IEA, the company monitors the substances present in the Refinery annually to assess their odour impact. The air samples taken are analysed and a comparison of the concentration values of the odorous substances detected and studies of their fallout outside the boundaries of the production sites show that the Refinery has no particular impact during its normal operation on the surrounding environment.

TABLE 14

Atmospheric emissions of SRI in tons

Note: The parameters in the table were selected by adhering to the IPIECA (International Petroleum Industry Environmental Conservation Association) sustainability reporting guidelines.

ATMOSPHERIC EMISSIONS OF SRI 2020 (T/YEAR)	2020	2021	2011 YEAR OF FIRST ISSUE IEA	ANNUAL MAXIMUM LIMITS UNDER THE IEA
Nitrogen oxides (NOX expressed as NO2)	2.113	2.239	2.988	3017
Sulphur oxides (SO2)	3.354	4.082	11.036	7079
Volatile Organic Compounds (VOCs)	400	322	1.566	-
CO	236	191		1200

TABLE 15

Emission concentration limits by integrated environmental autorisation (IEA)

T6 EMISSION CONCENTRATION LIMITS BY INTEGRATED ENVIRONMENTAL AUTHORISATION (IEA)				
Parameters	limits before 2012	Limits 2012	Limits 2015	Current limits
NO _x	500	350	300	196
SO ₂	1700	900	800	-460**
Particulates	80	40	30	-20***
* SO ₂ and Particulates values have been recalculated according to previous IEA methodology ('12-'15) to make them comparable				
** the new limit of 754 mg/Nm ₃ , following the change of calculation bases required by BAT-C58, is equivalent to a reduction of around 40% compared to the previous limit (800 mg/Nm ₃ ; 754 mg/Nm ₃ would in fact be worth around 460 mg/Nm ₃ according to the 2012-2015 calculation bases.				
*** The current IEA provides for individual limits that combined according to the 2012-2015 calculation bases would equate to a bubble limit of approximately 20 mg/Nm ₃				

Odour monitoring is another important aspect that is considered by the company even though there is currently no specific reference legislation. The monitoring programmes carried out in 2020 and 2021 included **two olfactometric campaign conducted by the Milan Politecnico's Olfactometric Laboratory**, aimed at updating the refinery's general emission scenario. Monitoring was carried out in accordance with the Italian and European standard UNI EN 13725:2004. The analysis of the results carried out by the Politecnico showed that the odours resulting from the most critical sources (smokestacks, fixed roof tanks and water treatment area) are negligible in terms of odour impact on the surrounding area. In addition, the Olfactometric Laboratory of the Politecnico di Milano conducted and updated the odour impact assessment through atmospheric dispersion modelling with new data for 2020 and 2021. In this way, it is possible to quantify

in detail the emission parameters of each individual source and assess its potential odour impact. The analysis of the results of the above-mentioned assessment does not reveal any criticality towards receptors outside the plant. Finally, the study made it possible to improve the operational practices to be implemented when dealing with abnormal events such as, for example, particular weather situations.

Obviously, all this is the result of the **investments in the environmental area** made by the company over the years to adapt its processes to the best available technologies (BAT) required by the Integrated Environmental Authorisations (IEA) as of 2011. Investments that have already begun in periods before the IEA was first issued.

Odour emission monitoring

The state of the art of olfactometric campaigns in refineries

As required by the Monitoring and Control Plan (PMC), which is an integral part of the Integrated Environmental Authorisation, the company carries out **annual monitoring campaigns on odour emissions attributable to its activities**. The analyses are aimed at identifying, analysing, estimating and controlling the odour impacts of production processes.

It must be made clear that when we speak of **"odour impact"** we are referring to a phenomenon that is inevitably linked to human perception. Therefore, it is very difficult to assess the odour impact of any source of emission without taking into account the effect on the receptor.

Furthermore, it is very difficult to predict a direct correlation between the hazardousness of a compound and its odour threshold, i.e. the sense of smell cannot be an alert sensor for a substance. For example, compounds used in different spheres (industrial and domestic) can cause odour discomfort without

being dangerous per se. Other compounds, which are basically odourless, are deliberately mixed with harmless odour-causing substances (as is the case with methane) in order to allow for their possible presence in the air.

Unlike macro-parameters that are measured on atmospheric emissions, odour emissions consist of a complex set of very different molecules. These are not easily characterised by chemical analysis, and they also show antagonistic or synergistic effects on the overall odour. For this reason, odour emission analyses normally involve the use of a sensory approach, based on the dynamic olfactometry method (EN 13725 standard), which allows the objective and repeatable determination of the odour concentration of an aeriform sample.

FIGURE 9

Sampling bags from Tank

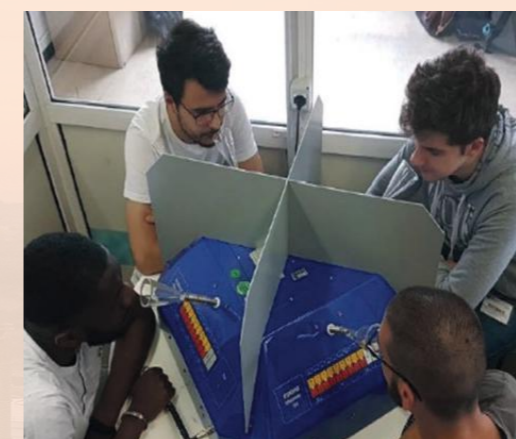


The technique is used for the determination of odour concentration from point (smokestacks), areal (tanks) and diffuse (reservoirs) sources.

Since 2017, the refinery has been supported for this purpose by the Olfactometric Laboratory of the Politecnico di Milano, which has state-of-the-art equipment and technology in the sector that enables it to perform olfactometric sampling in accordance with the requirements of EN 13725.

FIGURE 10

Olfactometric chamber of the Politecnico di Milano laboratory



The method is based on the identification, by the test group, of the odour detection threshold of the sample, i.e. the boundary at which the sample, after being diluted, tends to be perceived by 50% of the examiners taking part in the measurement. During a measurement, the odour sample is presented to the test group according to a series of decreasing dilutions: each examiner must signal, by pressing a button, when he/she perceives an odour and when he/she perceives none. The answers of the test group are recorded and processed.

FIGURE 11
Olfactometric Campaign Working Group - SRI/POLIMI



The result of the olfactometric test is **the odour concentration value**, expressed in European odorimetric units per cubic metre of air (ouE/m³), which expresses the number of dilutions with neutral air required for the odorous air sample to reach its odour perception threshold.

In July 2021, the **Olfactometric Campaign related to that year** was conducted, which allowed the existing odour dispersion model for the refinery to be updated. The air sampling required for this purpose was carried out over the course of an entire week by PoliMI technicians, thanks to the careful planning and synergetic action of all refinery departments involved (PTA, Process Onsite, Process Offsite, ENV Tech, SGSAE, RefCO).

As in previous campaigns, points deemed interesting for odours were selected between tanks, chimneys smokestacks and other areas of the refinery.

For the sampling of odorous air, nalophan bags are used, which are filled via vacuum pumps using the "lung principle". This avoids cross-contamination problems as might occur with classical gas sampling pumps. For odour emissions from liquid surfaces, a hood system called "wind tunnel" is used. Through these enclosures, the convective action of the wind on the surface of the liquid's free surface is simulated. In order to obtain a quantitative analysis of exposure to an odour at the receptors of interest, it is essential to use an atmospheric dispersion model. This calculation tool is capable of considering a complex set of input data, such as weather data, flows conveyed to the smokestacks, movements from tanks, temperatures of stored and treated liquids, to provide a quantification of the potential odour impact on the areas surrounding the refinery. The output of the modelling exercise leads to the return of an impact map reproducing the simulated peak odour concentration in the ground air outside and inside the refinery. The model in place and today's results make it possible to say that there are no particular odour impacts both in and around the refinery, demonstrating that the efforts made over the years have achieved the continuous improvement objectives that the company had set.

The air samples taken annually are used to update the odour concentrations of the map itself. In addition, they allow for annual updates and constant and fruitful discussions with specialists from the academic world in order to further refine the model itself and to ensure that it is fully in line with reality.

The European and Italian panorama of volatile organic compound (VOC) emissions from refineries

Emissions of **volatile organic compounds** (VOCs) from refineries have recently been studied by the scientific community.

For an overview of VOC emissions from refineries, reference can be made to the article "Definition of an Emission Factor for VOC Emitted from Italian and European Refineries" by authors Luca Roveda, Elisa Polvara, Marzio Invernizzi, Laura Capelli and Selena Sironi published in the international journal Atmosphere in 2020.

In this paper, the authors aim to provide an **Emission Factor (EF)** for VOCs emitted by refineries located in Europe and in Italy specifically.

In general, an emission factor is a representative value that relates the amount of volatile substances emitted into the atmosphere with a given associated activity. As far as Italian emission inventories are concerned, the database published by the Italian National Institute for Environmental Protection and Research (ISPRA) includes an annual emission value for VOCs from industrial plants. However, it is not possible to isolate emission values related to individual refineries. Not even in the Italian greenhouse gas inventory were VOC reference values collected for the refining sector. The aforementioned scientific

work is therefore interesting as it involves a comparison of the total emission values collected for different refineries with their operating capacities in order to highlight characteristic and repeatable trends, which are necessary to generalise statements and to relate the emission levels and capacity of an individual plant through a general trend.

Knowledge of a global EF makes it possible to obtain a **preliminary assessment of emissions for a plant that has yet to be studied**. Knowing only the operational capacity of the refinery in question, the total VOC emissions can be estimated simply as a product of EF from operational capacity. Once the relationship between these two quantities was verified, the authors were able to determine an overall Emission Factor for refineries.

From the authors' conclusions, it is possible to extrapolate an Emission Factor value for VOCs emitted by European refineries of 180 g per tonne of crude oil processed. This value is consistent with the much wider range of 50-1000 g/ton in the BAT Ref published by the European IPPC Bureau.

Current emission situation of VOCs produced by the Augusta Refinery

Through the actions described in the previous sections, the refinery achieved a significant reduction in VOCs. This result is also demonstrated by the (progressively more accurate) estimates made over the years and already provided to the Ministry of Ecological Transition and ISPRA in the Annual Reports.

TABLE 16
Tons of total VOCs emitted by SRI from 2015 to 2021

	2015	2016	2017	2018	2019	2020	2021
TOTAL VOCs (tons/year)	1089	1016	1066	858	457	400	322

Sonatrach Raffineria Italiana achieved a **reduction of over 70% in VOC emissions compared to 2015** (Table 12) thanks to actions aimed at curbing its emissions.

oil/year (2019), VOC emissions from the refinery should be in the range of between 1700 tons VOC/year and 1200 tons VOC/year.

Sonatrach Raffineria Italiana's current VOC emissions are **far below the average** of European and Italian refineries. More specifically, using the emission factor identified in the scientific article by Roveda et al., with respect to the plant capacity (understood as crude oil processed capacity) of between 9 million tons crude oil/year (2017) and 6.5 million tons crude

As previously reported, the Augusta refinery emitted 322 tons/year of VOCs in 2021. It can therefore be argued that to date, **the refinery emits around 20-25% of the VOC emissions of similarly sized sites.**

SUMMARY

How volatile organic compounds and odour emissions were reduced

- The refinery has equipped itself with a vapour recovery unit (VRU) at the loading and unloading docks in order to reduce Volatile Organic Compound (VOC) and odour emissions. These implementations are in line with the requirements of the current IEA, which provides:
 - » a VOC concentration at the new unit smokestack chimney less than 10 g/Nm³ and benzene less than 1 mg/Nm³;
- The tank covers, which form the water pre-treatment plant (the second phase of the project was completed in 2019), allow a VOC abatement efficiency that has been calculated to be greater than 90%;
- The refinery continued its annual Leak Detection and Repair (LDAR) programme in 2020 and 2021.
- » a VOC recovery efficiency of the VRU plant greater than or equal to 95 per cent;

The E-PRTR 2020-2021, benchmarking activity

The E-PRTR (European Pollutant Release and Transfer Register) is the register that collects emission data from European production activities belonging to the main industrial sectors, according to the criteria defined by the European E-PRTR Regulation (166/2006).

The main purpose of the E-PRTR register is to foster public participation in environmental decision-making processes, thus ensuring that all European citizens have access to environmental information from industry.

Annually, each site, for each production activity, must notify the Authorities of its country of:

- emissions into the air, water or soil;
- transfers, e.g. of wastewater to a treatment plant;
- production of hazardous and non-hazardous waste, with details of quantities sent for disposal or recovery.

At the same time, the register provides an opportunity for companies to demonstrate their focus on environmental topics through the continuous monitoring of their environmental performance.

This information, following data quality verification by the competent Authorities, is forwarded to the European Commission and the European Environment Agency for subsequent publication on the E-PRTR website(<https://prtr.eea.europa.eu>).

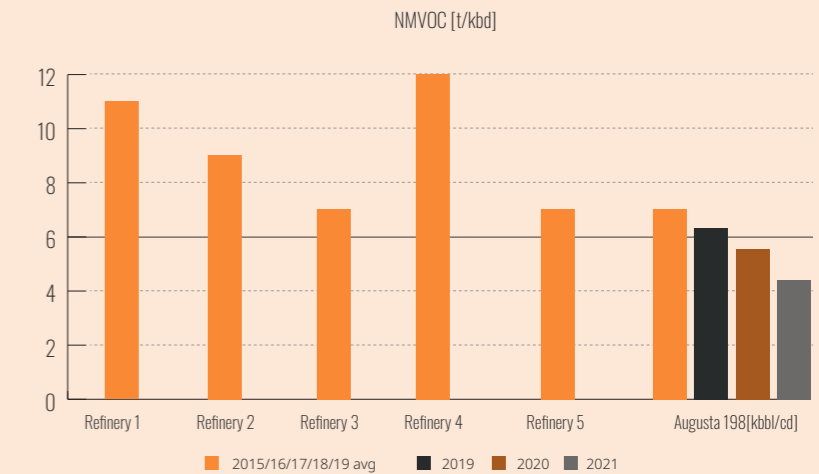
In addition, the E-PRTR provides an excellent reference for sector studies and analyses of emissions from different sites on a European scale. For example, data on atmospheric emissions of NMVOCs (Non-Methane Volatile Organic Compounds), published in the last three years, were used by Sonatrach Raffineria Italiana for a benchmarking with some Italian sites (Figure 10), which shows both the improvement over the years achieved by the Augusta refinery and an estimate of the

comparison in terms of specific emissions (i.e. tons of emissions per kbd of processing).

In Italy, pursuant to Presidential Decree 157/2011, which implements European Regulation No. 166/2006, data for the previous year must be sent to ISPRA (Italian National Institute for Environmental Protection and Research) by 30 April each year. Also in 2020 and 2021, the company completed and submitted the E-PRTR Statement on time.

FIGURE 12

Estimated normalised NMVOC emissions for some Italian sites



Water management

Water, in all its forms, is a common good and **a non-transferable right for every human being.**

condensate recovery system, feeding desalters with process water, etc.).

Water is also a fundamental resource for the performance of most of society's activities. Consequently, effective management of water resources, in terms of volume and quality, is a necessary condition for ensuring their accessibility to both the company and, above all, the community.

The main uses of water at the Augusta refinery concern **the cooling of plants** and **the production of steam**, used as an energy carrier and for heating process fluids. There are also other equally important uses such as supply the fire-fighting system, washing and sanitation.

To this end, Sonatrach Raffineria Italiana has developed **resource management strategies**, improved its understanding of the local hydrological cycle and adopted BATs that promote water reuse within the Augusta refinery (e.g. by implementing the

In 2020, a total of **9,826,000 m³** of fresh water was used, and in 2021, a total of **9,766,000 m³** as indicated in Tabella 17.

TABLE 17

Freshwater use in m³ by SRI

SRI FRESHWATER USE (M ³)	2020	2021
Industrial fresh water	9.432.000	9.348.000
Drinking water (sanitary use)	394.000	418.000
TOTAL	9.826.000	9.766.000

Use

The company's water supply is provided by several sources: **ground water, surface water and sea water**.

Sonatrach Raffineria Italiana has an authorisation for groundwater extraction on 21 wells (for a total of almost 11,000,000 m³/year).

Twelve of the seventeen **wells**, representing 70% of the total, are located within the refinery perimeter and supply on average about **65% of the volume of water abstracted annually** from the wells. The refinery area on which these twelve wells are located can be considered independent and well delimited from a hydrogeological point of view.

Furthermore, the company adopts the same standards of control, i.e. fortnightly checks on the static and dynamic levels and chloride content of individual wells, carried out on the twelve internal wells also on the five wells outside the perimeter of the Augusta refinery. Thus, on the basis of the checks that are gradually carried out, action can be taken, if necessary, by reducing the abstraction or even stopping the individual well. By doing so, the well can fall within the same acceptability parameters adopted for internal wells, both in terms of piezometric level and dissolved chloride content (from seawater).

All the wells used by the company have been equipped with instrumentation suitable for their precise control: an internal tube to measure the piezometric level (static and/or dynamic), a volumetric meter to control the instantaneous flow rate, an operating hour counter, and an opening/closing valve for the line to control the flow rate.

These instrumentations allow perfect control and alignment of the operation of the various wells.

In addition to the above-mentioned groundwater abstraction, surface water from Lake Biviere in Lentini is also used under a contract signed with the Regional Institute for the Development of Productive Activities (IRSAP). Sonatrach Raffineria Italiana's commitment is to minimise the abstraction of underground groundwater as much as possible, instead favouring the abstraction of surface water from Lake Biviere in Lentini at an extra cost compared to what can potentially be used from ordinary wells (about € 1/m³). In the years 2020 and 2021, this abstraction stood at about 26% of the total (Table 18).

TABLE 18
Freshwater abstraction in m³ by SRI

SRI FRESHWATER USE (KM ³)	2019*	2020	2021
Groundwater abstraction	7.205	7.200	7.199
Abstraction from Lake Biviere in Lentini	2.182	2.626	2.567
TOTAL	9.387	9.826	9.766

(*) general maintenance year with total plant shutdown for about 5 months

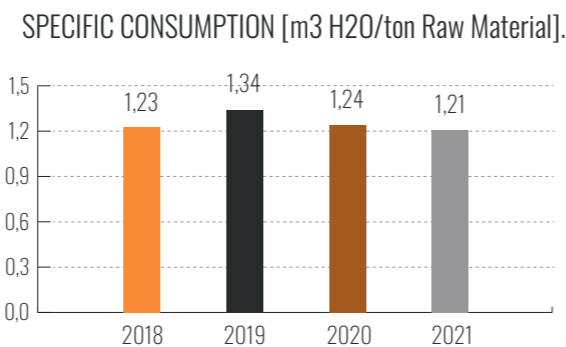
In general, the company aims to **optimise** consumption as much as possible by maximising water recovery within the production cycle. Monitoring the abstraction and proper use of water resources is the responsibility of various departments.

On a daily basis, these departments draw up systematic counts of the quantities abstracted in relation to the targets set, in compliance with current authorisations. The objectives set **a maximum limit of groundwater abstraction** to preserve its integrity and a minimum value of surface water abstraction. Any deviations from the expected values are immediately reported to the relevant business units, which activate appropriate verification and management procedures.

In addition to monitoring, the health of groundwater is also taken care of. For example, the monitoring of chlorides, to prevent contamination of groundwater with seawater, and of static and dynamic groundwater levels, makes it possible to verify that there are no impacts related to the use of water resources on the same. This type of monitoring is carried out on a fortnightly basis. For these analyses, we use a qualified external consultant to monitor trends and issue an independent report on an annual basis.

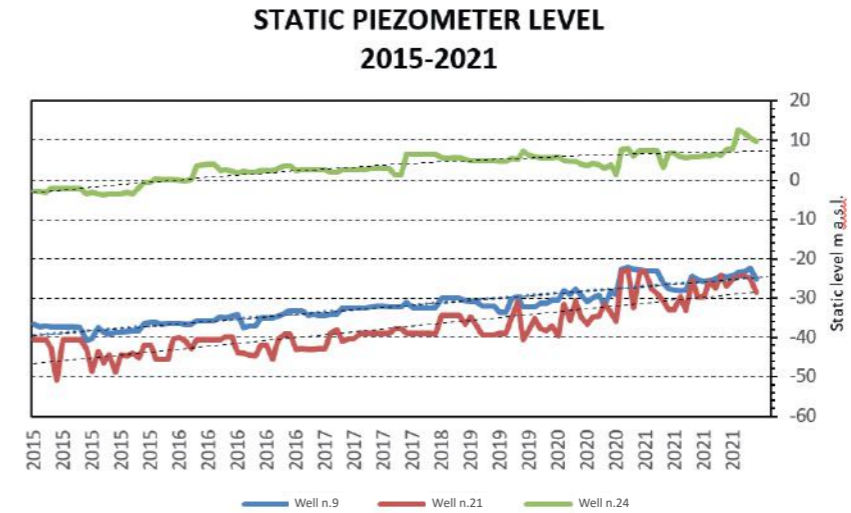
The following graphs show the **progressive improvement** over the years of **specific water consumption**, i.e. total consumption in relation to tons of crude oil processed, and the progressive improvement of static well levels.

FIGURE 13
Improvement over the years of specific water consumption (i.e. total consumption in relation to tons of crude oil processed)



(*) The amount of water resources extracted in 2019 was recalculated against the 2020 Sustainability Report as a result of periodic checks of mass balances.

FIGURE 14
Progressive improvement of static well levels from 2015 to 2021



IN DEPTH ANALYSIS: HOW DO WE MONITOR WATER ABSTRACTION?

The company uses a number of tools to get a detailed view of the state of the surface and groundwater sources from which it abstracts the necessary water. The data collected are analysed through:

- checks of static and dynamic levels, flow rates and volumes in each well recorded by the Augusta refinery operators and transmitted to an external body for independent verification on a fortnightly basis;
- results of hydrodynamic tests carried out by parties external to the company on the wells used for water supply at the

Augusta refinery on a six-monthly basis; analysis of the chloride content dissolved in the water abstracted from the wells carried out by the Augusta refinery laboratory on a fortnightly basis; monitoring of consumption optimisation actions through the Stewardship Water Conservation. Finally, a study for the structural optimisation of the water cycle to reduce consumption is currently underway.

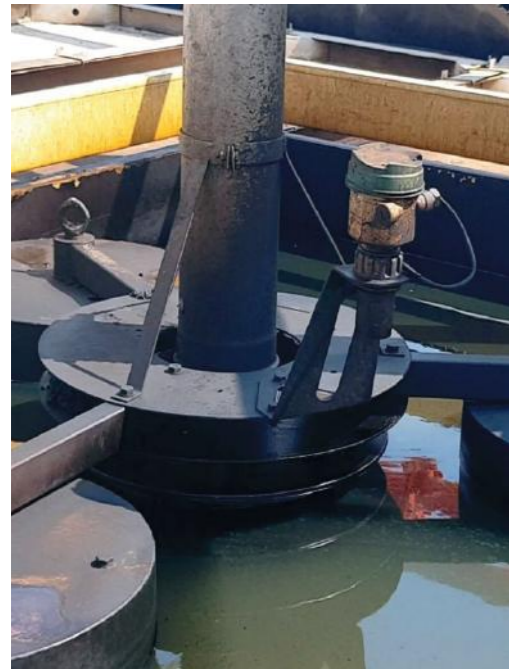
Sonatrach Raffineria Italiana adopts the best technologies to protect the quality of water resources. The Augusta refinery is in fact equipped with a wastewater pre-treatment plant that allows the **separation of supernatant hydrocarbons in the wastewater**. In the pre-treatment tank, devices (Discoil and Surfcleaner) are placed to de-oil the water before it is sent to the consortium's biological plant (impianto biologico consortile, IBC) managed by Industria Acqua Siracusana S.p.A., which then carries out the final treatment of the water.

Specifically, Surfcleaner technology enables the recovery of e.g. oil, diesel, petrol, plastic, sludge and debris. The company decided to use this solution for its API de-oiling tanks to remove traces of hydrocarbon substances, thereby further reducing emissions of volatile organic compounds.

The **self-adjusting floating system** (Figure 15) is suitable for continuous operation and is capable of recovering 100 per cent of the oil on the surface with a water content of less than 0.5 per cent. The low water content allows the oil separated from the wastewater to be recovered and reprocessed.

Discharge

FIGURE 15
Self-adjusting floating system



Surfcleaner technology combines variations in the speed and direction of inflow with gravimetric separation, thus preventing the accumulation of substances on the water surface and minimising VOC emissions.

The Augusta refinery has two IEA-authorized discharges:

- discharge at sea;
- discharge to the Biological Consortium Plant (Impianto Biologico Consortile, IBC).

Both discharges are regulated by limits that are constantly monitored according to the IEA. Discharge into the sea is regulated by the limits set out in the Consolidated Law on the Environment (Legislative Decree no. 152/2006), also reflected in the IEA. For the discharge to the Consortium Biological Plant (IBC) managed by Industria Acqua Siracusana S.p.A., the limits are instead defined in the wastewater purification services contract stipulated with Industria Acqua Siracusana S.p.A.

Subsoil environmental safety, a management model recognised by control Authorities as Best Practice in the industry

SOIL AND GROUNDWATER ACTIVITIES: CONTINUOUS IMPROVEMENT

The Augusta refinery is located within the Site of National Interest (SIN) of Priolo Gargallo. Always committed to **pursuing excellence in its operational and management performance**, the refinery is also characterised by a high degree of **environmental sensitivity** to the context in which it operates. With this in mind, starting in the early 2000s, it began an intensive environmental investigation of soils and groundwater, and implemented all Emergency Safety Measures (Messa in Sicurezza in Emergenza in short MISE, under Legislative Decree 152/2006), to ensure the gradual process of environmental improvement.

Since 2001, the refinery's subsoil has been characterised through the performance of **835 environmental surveys** (Figure 16) and **the chemical laboratory analysis of over 3,700 or so soil samples** taken during the various investigation campaigns. The results of the latest update of the Risk Analysis sent to the competent Authorities in 2019 (pending investigation at the Local Authorities Planning Conference) show that the CSRs (Risk Threshold Concentration) in the surface soil were exceeded in only 10 sub-areas, immediately made safe for a total extension of approximately 0.08 Km² (equal to approximately 3.6 % of the Augusta refinery area).

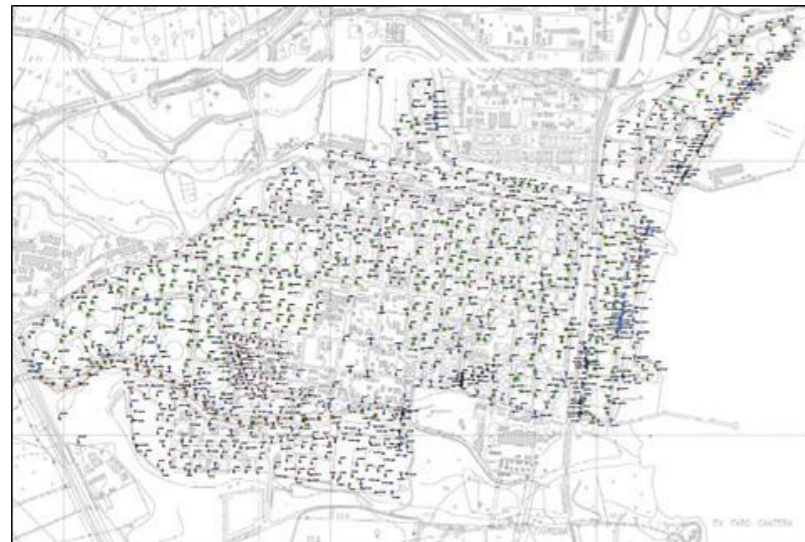
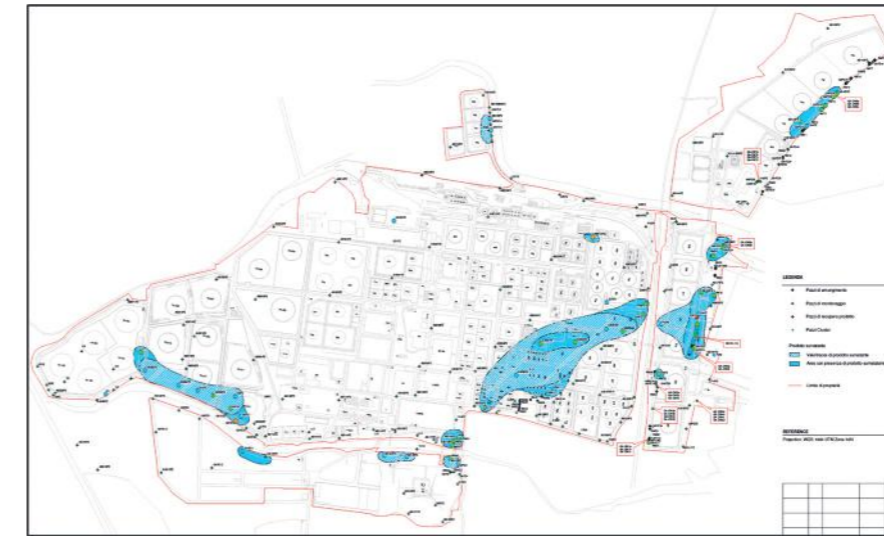


FIGURE 16
The extensive soil characterisation activities within the Augusta Refinery.

FIGURA 17
Recovery of supernatant product (in blue) by installed MISE systems

2004



Equally thorough characterisation activities of the surface groundwater, carried out first pursuant to Ministerial Decree 471/99 and afterwards pursuant to Legislative Decree 152/2006, have allowed the definition of an accurate Conceptual Site Model (CSM) from which the design and implementation of an effective **hydraulic containment system** (with over 296 wells for draining and/or monitoring) and recovery of past contamination (see FIG. 17), gradually integrated until reaching the current Emergency Safety Measures system set-up that the Augusta refinery has adopted.

Each of the environmental facilities built has been designed for 24-hour operation, guaranteeing the containment of underground water runoff according to a management model recognised by the competent Authorities as Best Practice.

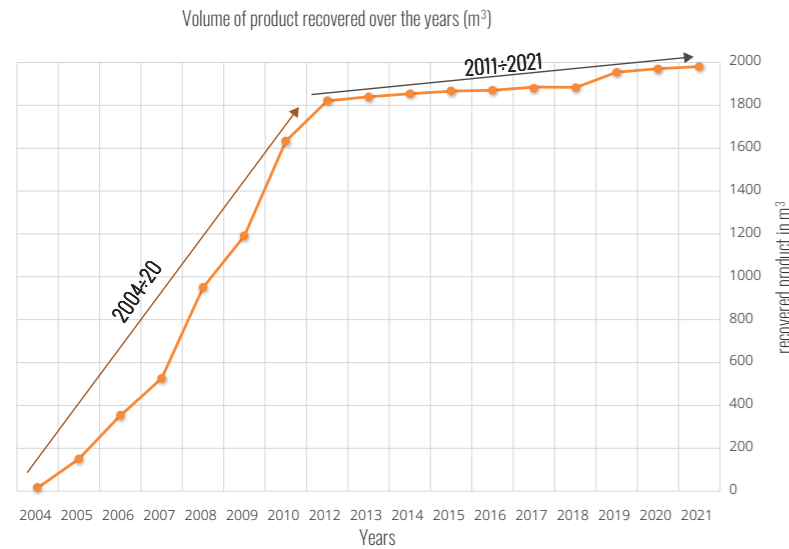
2021



The consolidation of a Hydro chemical Monitoring Protocol signed with the competent Authorities, from which their validation of the data acquired in cross-examination, highlights the improvement of the site's environmental quality status. By comparing past data with current data, it is evident that the systems adopted, together with the prompt actions aimed at eliminating sources, have allowed a constant and **effective recovery of residual contamination**, which is now in the process of **natural bio-attenuation**, as well as a decrease in the number of exceedances of the data measured in the field with respect to the Contamination Concentration Threshold (Concentrazione Soglie di Contaminazione, CSC) defined by Legislative Decree 152/2006.

From the results of the periodic monitoring of 2020 and 2021, carried out with the participation of the competent control Authorities, in order to be validated by the latter, the progressive and continuous process of environmental improvement is confirmed, evidenced by the main indicators associated with the parameters monitored.

FIGURE 18
Trend in the volume of supernatant recovered from 2004 to 2021 by MISE systems installed at the site



The results of these activities are sent to the Authorities by means of periodic update reports, as provided for in the reference protocols.

During 2020 and 2021, the following activities were carried out for each of the two reporting years:

- **two groundwater hydro chemical monitoring** campaigns and **monitoring** of MISE systems;
- preparation and submission to the competent authorities of the **"Update Report on the Environmental State of the Subsoil"**;

The Company, in addition to the timely monitoring of the environmental matrices, is also committed to the continuation of the complex investigation process with the Ministry of Ecological Transition relating to the finalization of the Operational Safety Implementation Projects (MISO – Messa In Sicurezza Operativa) of the Augusta Refinery and

the Naples Depot. The pronouncement on these documents, and those preparatory to them, by the competent authorities, will complete the process envisaged by the relevant legislation (Legislative Decree 152/2006). The Palermo Depot, on the other hand, already has an approved MISO system in place and currently in operation, where the Company applies a specific long-term monitoring program consolidated with the Authorities.

Waste management and circular economy

The several industrial activities at the Augusta refinery produce waste of various kinds. In addition to **industrial waste**, waste similar to **municipal solid waste** is generated at the site, mainly from office and canteen activities. Temporary storage, prior to the transfer of the waste produced by the activities, takes place at suitable sites identified according to the type of material and never beyond the maximum holding time required by the applicable regulations. Subsequently, the waste is sent to authorised disposal plants suitable for the type of waste.

To manage solid waste a specific management and monitoring procedure has been drawn up that defines roles and responsibilities

within the company in order to ensure compliance with the regulations in force concerning the waste management cycle from its production to its final disposal.

Aware of the change that is taking place within the European Union with the circular economy package, work is being done to **improve recycling capacity** by defining practices that will allow the **amount of waste sent for recovery** to increase in the near future. Table 19 shows the figures for 2020 and 2021 for the total waste generated by the company's activities, i.e. 17,995 tons. Waste is divided into hazardous and non-hazardous and according to its final destination.

TOTAL WASTE GENERATED BY SONATRACH RAFFINERIA ITALIANA (SRI)

2020		2021	
8.864 ton		9.131 ton	
of which			
Non-hazardous 2020		Non-hazardous 2021	
6,190 tons		8,010 tons	
Energy recovery	Destined for landfill	Energy recovery	Destined for landfill
3278	2912	6450	1560

TABLE 19
Waste generated in 2020 and 2021 by SRI

The company is committed to further improving the management of the disposal process by optimising logistics, identifying waste treatment plants that are closer to the production site (Km 0, or proximity principle) or more suitable depending on the type of waste. Choices are always made to favour the establishment of activities that tend to go beyond traditional "take, make, use, dispose" patterns.

In the waste management process, this approach translates into favouring material recovery at the expense of energy recovery and disposal activities. It is a clear and binding principle for the company that the solutions chosen must always be aimed at mitigating the environmental impact of activities, both by adopting a preventive approach to waste production and by optimising the management of waste produced.

In-depth analysis: waste for recovery

The following goods are currently sent for recovery once they have reached the end of their [useful] life:

- Non-hazardous catalysts containing precious metals such as platinum (Pt) and rhenium (Re);
- Reclaimed metal scrap with no visible traces of hydrocarbons and petroleum products;
- End-of-life batteries, electric accumulators, transformers;
- Waste oils from engines, hydraulic circuits, transformers.

THE CIRCULAR ECONOMY, A DIRECTION ALSO TAKEN WITH CREATIVITY

Sonatrach Raffineria Italiana obtained the SI RATING integrated sustainability certification for the second consecutive year, improving its performance from 77% in 2019 to 86% in 2020. Despite the pandemic caused by the SARS-COV-2 virus, the company has continued to pursue its industrial policy of convergence towards a sustainable business model, and will focus on continuous improvement of all indices for a lower environmental impact as a core principle.

Sonatrach Raffineria Italiana, in addition to a specific focus on separate waste collection and recovery activities, calling on all personnel to make optimal use of the waste collection sites located in various areas of the site, has promoted technical proposals aimed at reducing the volumes of waste produced which, combined with the best waste cycle management practices, have ensured not only significant economic savings, but also a clear increase in the site's environmental sustainability indices.

An example of "creative activity" geared towards increasing separate waste [collection] is the IBC packaging optimisation implemented in 2021

It was noticed that during 2020, the Augusta refinery produced and disposed of 331 liquid tankers (IBCs) with a total weight of 28,470 kg. Considering the mixed structure of the IBCs (part steel and part plastic), and through tests in the field, it was possible to estimate the total weight of the individual components: each IBC weighs approximately 85 kg, of which the outer steel structure is 50 kg and the inner plastic body is 35 kg.



EXTERNAL STEEL STRUCTURE 58% BY WEIGHT

PLASTIC INNER BODY 42% BY WEIGHT

Making use of the equipped area, which is currently in use for other smart collection activities, the activity implemented involved the disassembly of the two components in order to ensure a different route for the plastic that will go for recycle and for the metal that will instead be destined for recovery.

On the basis of 2020 production/disposal, an estimated scrap iron **recovery of 331 * 50 kg/cad = 16,550 kg** was estimated for 2021.

In this way, the plastic is recycled avoiding further waste of raw material generated from non-renewable sources and the iron, which is instead recovered, is reused as raw material to create a new product. In addition, this optimisation will lead to a significant reduction in transport journeys at destination plants and a consequent reduction in greenhouse gas production.

In conclusion, it can be said that the concept of the circular economy has specific objectives such as:

- Drastically **reducing the waste** of primary resources available in nature;
- **Extend the life cycle** of each product;
- **Recycle** all materials that can be recovered with real benefits;
- Drastically **reducing waste production**.

The application of these principles requires a substantial cultural change in order to disrupt the model of a linear economy such as the current one and give rise to a new and innovative model of economic development.



ISPICA - ROSOLINI MOTORWAY SECTION: SUSTAINABILITY ALSO PASSES THROUGH AN ALL-SICILIAN WORK AND ZERO KILOMETRE

The asphalt used was entirely produced by the Sonatrach refinery in Augusta, a leader in asphalt production; saving on the CO₂ that would have been produced by vehicle traffic if the asphalt had been purchased outside Sicily.

In July 2021, the inauguration of the Rosolini - Ispica Pozzallo motorway section (Lots 6 and 7 of the Siracusa-Gela motorway under construction) was an important achievement for the improvement of the road system in south-eastern Sicily, with benefits for the entire economy of the area, both for the tourism and the production sectors.

It was an achievement built entirely in Sicily because the performance of the works and the supplies are entirely Sicilian. The asphalt used by the construction company that led to the delivery of the first batch of the planned twenty kilometres to Gela was entirely produced by Sonatrach Raffineria Italiana at its Augusta plant.



Bitumen production is one of the most important specialties of the Augusta Refinery, with SRI being the leader in this production not only in the southern European market but in the entire Mediterranean quadrant. In recent years, notably, SRI has managed to significantly penetrate the North African market. It was decided to focus on this production at a time when basically many refineries had decided to exit this market; this choice, together with the high quality standards that SRI bitumen possesses, now makes the company one of the suppliers of reference in a situation that promises to be interesting for the infrastructure sector, one of the possible spins to kickstart the recovery after the very hard period of the pandemic. For this reason, having participated in the

realisation of a strategic work for the Sicilian territory becomes a reason for great satisfaction, also because the supply of SRI was a practically zero-kilometre supply, given the proximity of the Augusta refinery to the motorway construction site. This means that around 50,000 kg of CO₂ produced by the vehicular traffic needed to transport the asphalt from outside Sicily was saved if it was supplied from sites outside the region's borders.

This is therefore another demonstration of the importance of SRI's activities not only in terms of strategic procurement for Sicily and the whole of Italy, but also in terms of specialised and technological expertise. Skills and technologies to be leveraged in the coming years to drive an energy transition that will see Sicily play a leading role, also in light of its privileged position within the Mediterranean basin.



Climate change

Studies by the **Intergovernmental Panel on Climate Change (IPCC)** and all the world's leading scientific institutions have confirmed that economic and population growth, coupled with the use of fossil fuels, has led to significant increases in anthropogenic greenhouse gas (GHG) emissions, contributing to global warming.

In its latest assessment report (6AR), the IPCC concluded that the prominent cause of this warming is due to human activities.

In 2016, IPIECA, the global oil and gas industry association for the improvement of environmental and social performance, published a report discussing possible routes to transform the energy system during this century. The document highlights three common elements:

- Reducing emissions from energy production;
- Efficiency and energy saving;
- Diffusion of low-emission alternatives in end-use sectors.

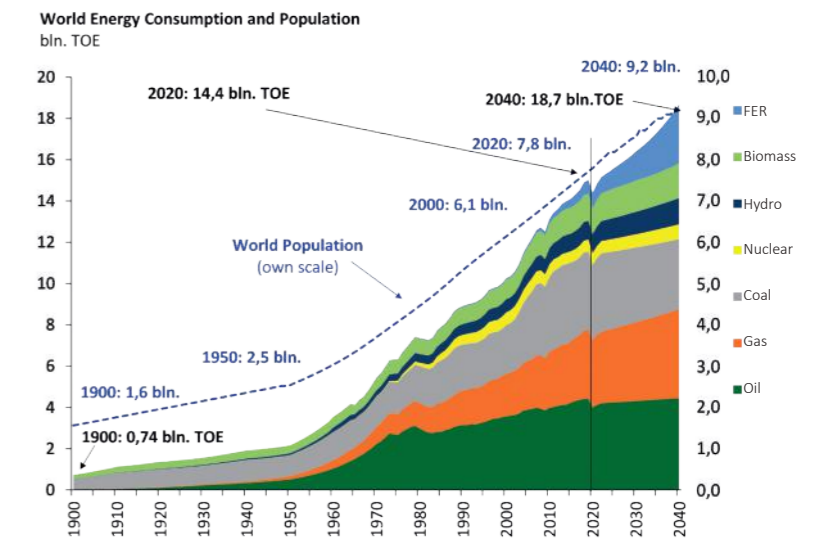
It is therefore important that the industry continues to play a global role in providing energy that is affordable in terms of cost and reliable in terms of quality and continuity. It is essential for economic development, quality of life, livelihoods and poverty eradication. At the same time, industry must commit to supporting the design and implementation of the now certain transition to a low-carbon future.

Sonatrach Raffineria Italiana has responsibly embraced these international messages and goals. For these reasons, it is gearing up to turn these challenges into opportunities to make the company better and more competitive through the adoption of technologies and the development of low-carbon business models.

Sonatrach Raffineria Italiana's vision is to reduce carbon dioxide (CO₂) emissions by converting, where technically feasible, steam-powered equipment with electric utilities, identifying alternative sources of power generation, and at a later stage

FIGURE 19

World energy consumption at 2040 (Source: Nomisma Energia)



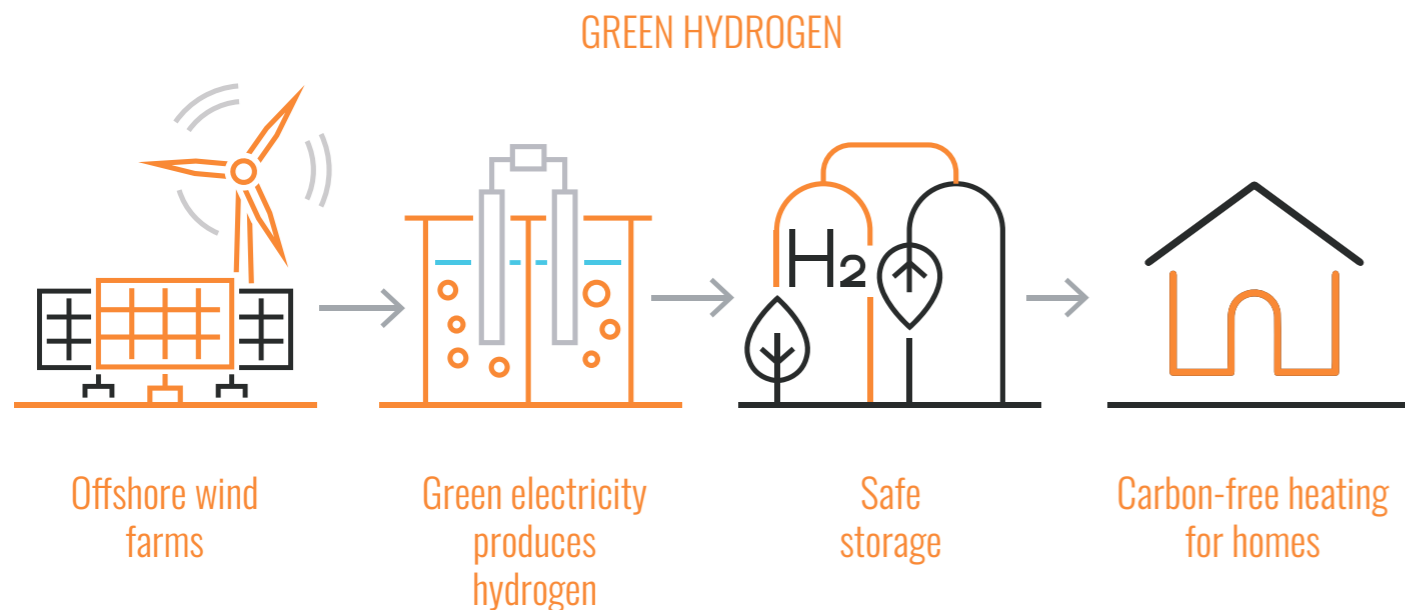
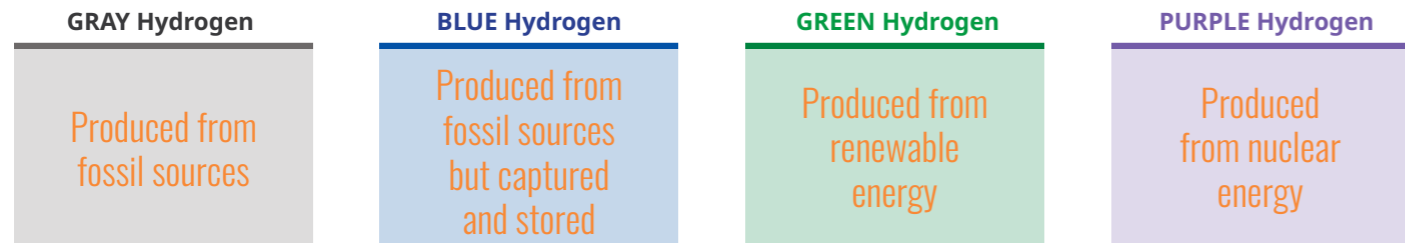
In 2018, the International Energy Agency (IEA) stated that energy and products derived from oil and natural gas are set to remain part of the world's economic system for decades to come, predicting that oil and gas together will provide 48% of total energy demand in 2040 (Figure 19).

assessing the feasibility of installing greenhouse gas capture and reuse systems.

Specifically, in 2021 the company has launched a series of initiatives aimed at:

- make the Augusta refinery further flexible for potential future arrangements;
- increase the sustainability of the site in line with national and EU guidelines.

This is the background to the collaboration with Sasol Italy with Sasol Italy, Snam and Edison for the development of projects for the production of green hydrogen.

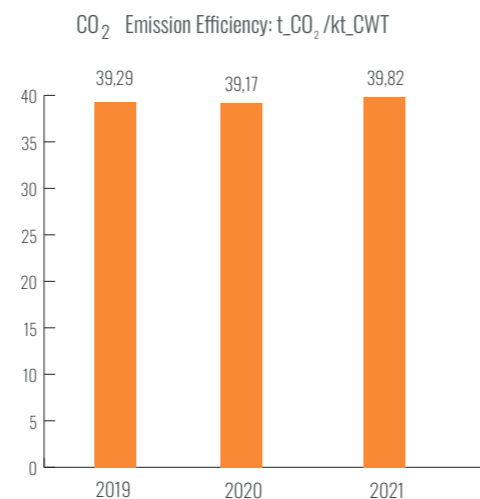


Today, greenhouse gas emissions are regulated and monitored through the **European Union Emission Trading System (EU ETS)**, a fundamental pillar underpinning the EU's energy policy to combat climate change. In fact, the EU has set a cap on the total amount of greenhouse gases that can be emitted by plants covered by the scheme, including refineries.

The SRI's direct greenhouse gas emissions in 2020 amount to approximately 1,950,000 tons and in 2021 to approximately 2,000,000 tons (figure 20).

The marginal difference is due to the higher amount of crude oil processed in 2021 compared to 2020, the year of the global pandemic crisis. 99.9% of the volume of greenhouse gases emitted is carbon dioxide (CO₂).

FIGURE 20
Trend of emission efficiency index 2019-2021 (*)



(*) The "Complexity Weighted Tonne" CWT is a function that represents a standard emission activity index recommended by Concawe. The ratio between real CO₂ emissions and the CWT represents the emission efficiency index, independent of the type of process or plant size.

Energy

A refinery is generally associated with that class of activities referred to as "energy-intensive" because of the high energy consumption required for its operation and generally produces and consumes electrical and thermal energy to heat process fluids and produce steam. The electricity used by the company is minimally purchased (<1%) and mostly self-generated (>99%) by the Cogeneration Plant. Steam is entirely self-produced by the plants and the Cogeneration Plant.

Sonatrach Raffineria Italiana's objective is to improve the refinery's energy efficiency. This will help to significantly reduce the impact on the climate and the environment, as well as bring clear benefits in terms of the financial sustainability of operations. In terms of energy efficiency, the company has always been committed to reducing fuel consumption through cogeneration production of electricity and heat, which has led to savings compared to separate production of the same quantities of electricity and heat summarised in the table below:

TABLE 20
Fuel savings (2019-2020-2021)

YEAR	SAVINGS [IN GJ] -
2019	~ 830000
2020	~ 800000
2021	~ 940000

Fuel savings were calculated from measured data, applying the method set forth in the Ministerial Decree (MISE) of 5 September 2011 on High-Yield Cogeneration and the Application Guidelines published by the same Ministry.

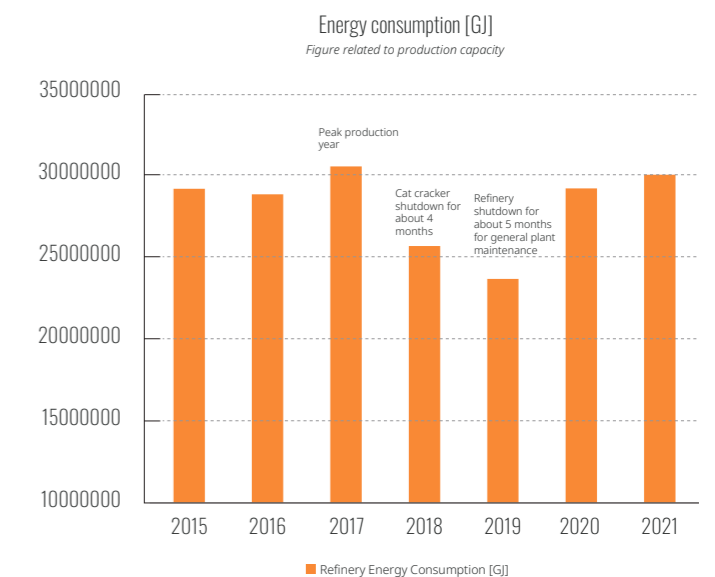
The company's energy improvement goes through the internal management system, implemented to manage and continuously improve the energy performance of the refinery.

Since December 2021, the Augusta refinery has achieved **ISO 50001 certification**.

Energy performance monitoring of significant energy uses is measured through Energy Performance Indicators (EPIs), which include consumption and/or use of each refinery energy carrier (steam, electricity, various fuels, etc.).

In addition to IPE, energy data, which are collected daily, are also consolidated into other performance indices (KEV, IEE, CAR, etc.) on a weekly, monthly or semi-annual basis and communicated to management and other main stakeholders.

FIGURE 21
Energy consumption trends 2015-2021



ENERGY EFFICIENCY AND ISO 50001:2018

The company decided to formalise its operational practices for energy management, monitoring and optimisation according to the rules of ISO 50001, i.e. to structure and certify an Energy Management System (EMS) according to international standards, which joins and supplements those already existing, and well established, relating to quality (ISO 9001), environment (ISO 14001) and SGSA (Health, Occupational Safety and Environment).

ISO 50001:2018 is a voluntary international standard, developed by the International Organisation for Standardisation (ISO), aimed at all production sectors and proposing actions to improve energy efficiency and thus save energy. This primarily means consuming fewer resources, e.g. natural gas and electricity, so reducing atmospheric emissions such as CO₂/SO₂/NO_x and being more sustainable.

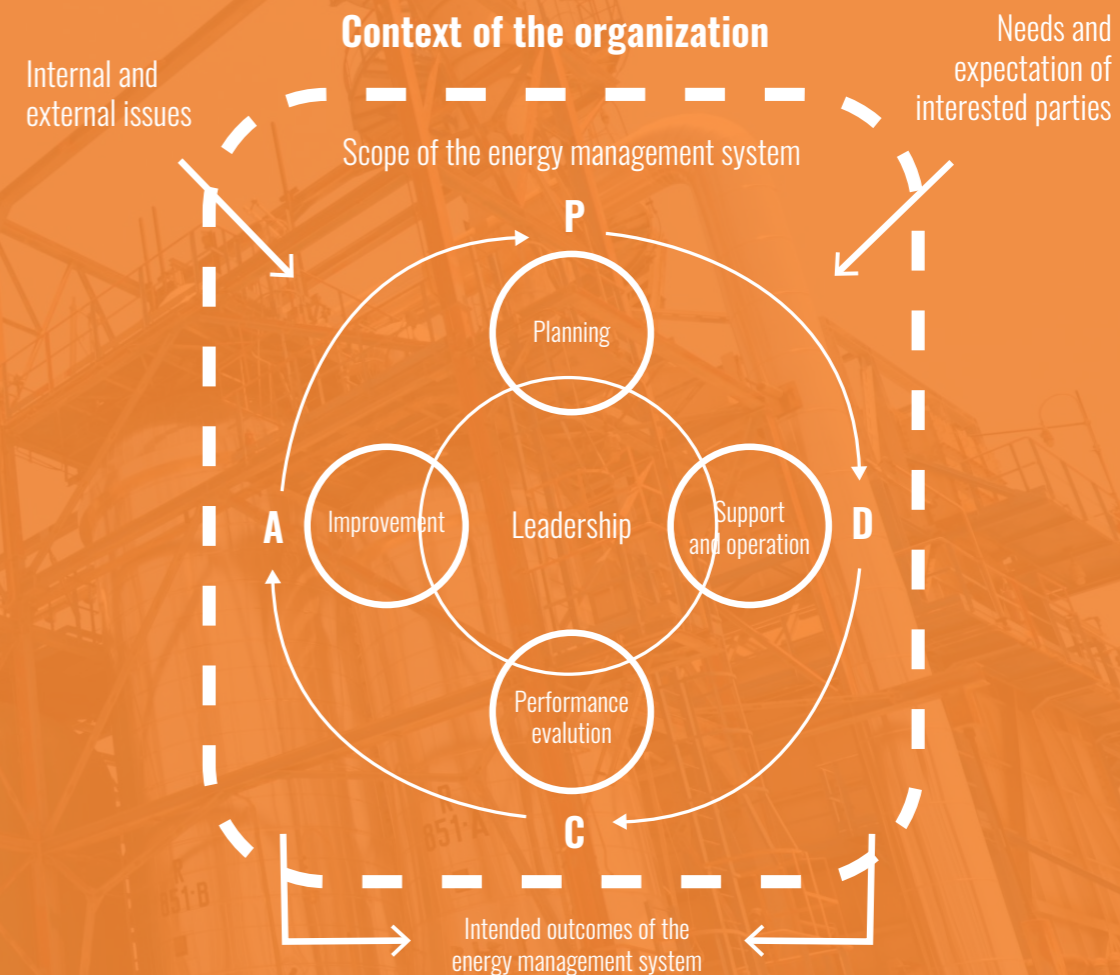
The Energy Management System is a set of strategies, procedures and work processes, formalised and implemented with the aim of managing all operations (from the development of new projects to their implementation, from the procurement of

materials and services to employee training/information, from the management of production processes to plant maintenance) while ensuring energy savings. Saving energy does not only mean consuming less, but above all using the available resources effectively and efficiently.

In order to be able to do this, the ISO 50001 standard defines the requirements that a management system must have and helps in formalising an energy policy (already in place today in SRI, even if not formally) and precise company objectives. The standard, specifically, follows the so-called "Plan-Do-Check-Act" cycle, which regulates the approach to energy management and also company organisational practices.

The "Plan" phase requires planning and scheduling activities. In concrete terms, it is necessary to carry out an analysis of the context in which one operates, formalise the energy policy, analyse risks and opportunities, and establish a team to deal with energy management and system implementation.

Context of the organization



It is at this stage that an analysis of so-called energy uses, priority objectives and targets for reducing consumption, as well as a plan to improve energy performance, is required. In the "Do" phase the operational activity takes place, implementing what was defined in the previous one.

During the "Check" phase, the progress of each process and activity is monitored and measured, and then appropriate actions, i.e. "Act", are taken to ensure the achievement of the established energy targets and performance.

In the "Check" phase it is essential to be able to accurately monitor energy consumption data by means of appropriate measuring/monitoring tools. The monitoring system, suitably structured, must make it possible to continuously receive data on the performance of each plant, so that it can be analysed, detect any criticalities and intervene in good time.

Without an energy monitoring system, on the other hand, it is not possible to certify with "technical" tracking the effect of the system itself, nor to calculate the so-called "consumption baseline", i.e. the starting point to be continuously optimised (one of the main requirements of ISO 50001).

Today, this is already fully operational at Sonatrach Raffineria Italiana. For example:

- the process of the KEVs, Key Energy Variables, existing plant by plant, and the continuous monitoring of their deviations (GAP) from predefined targets
- the CAR (Cogenerazione ad Alto Rendimento, High Yield Cogeneration) qualification process,

which the Augusta refinery has had since 2014 and which requires very advanced monitoring of its energy consumption and uses;

- the ETS process for monitoring and reporting CO2 emissions, which is also highly structured and based on a monitoring system whose accuracy levels are certified annually by a third-party verifier.

ISO 50001 helps to prioritise focus areas and structure formal procedures for action. The whole system, in fact, being set up within a complex organisation such as a refinery, must necessarily be based on a set of documents that include procedures and instructions, previously agreed upon by all the parties involved, useful to define the operating methods with which to carry out all the activities mentioned.



ISO 50001 certification was awarded to the Augusta refinery in December 2021 by an accredited third party. The certification is an acknowledgement of the company's commitment to structuring its energy management system.

THE NEW ENERGY POLICY

The **ISO 50001:2018** certification, obtained from a third party, is just the crowning achievement of a journey that started a long time ago.

To achieve this goal, a specific "Energy Policy" was introduced and approved by the Board of Directors, whereby the company commits to implement and maintain its ISO 50001-compliant energy management system. This standard, through a systematic approach to efficient energy management, aims to help achieve the following objectives:

- establishing and maintaining **working procedures** and instructions aimed at **reducing consumption** and ensuring the virtuous use of energy;
- pursuing **continuous improvement of energy performance** and of the energy management system, ensuring the availability of the information and resources needed to achieve the energy objectives and targets set;
- **improve energy efficiency** and reduce the refinery's CO2 emissions through a) the constant and detailed monitoring of energy consumption; b) the search for innovative technological and managerial solutions aimed at reducing energy consumption; c) support for the purchase of energy-efficient products and services and the design of plants, machinery and work equipment that can lead to an improvement in energy efficiency, considering energy consumption as a fundamental criterion when purchasing products and services;
- ensure **full and substantial compliance** with **legislative and other applicable requirements** on the use of energy pertaining to the refinery;
- identifying precise **responsibilities and duties** aimed at continuous improvement of energy efficiency, including

through the formal appointment of an Energy Management Committee;

- keeping its employees **continuously updated**, spreading greater awareness on the use of energy, through communication, training and information channels, with specific reference to areas where energy consumption is significant.

Company Management is responsible for ensuring compliance with this policy and achieving the set objectives, in particular by verifying:

- periodically, with a discriminating and objective approach, the effectiveness, adequacy and degree of application of the management system, including the policy itself;
- the progressive improvement of energy performance, objectives and targets achieved.

With the aim of communicating and disseminating the Energy Policy within the company, a specific module was recently drafted and added to the company's internal training plan.

Indeed, the active participation of each and every employee is required to achieve excellence in energy efficiency, ensuring full compliance with the requirements of the policy and related practices and procedures



ACTIVITIES OF AUDIT OF THE ENVIRONMENTAL MANAGEMENT SYSTEM - THE ISO 14001:2015 STANDARD

The year 2021 was full of activities aimed at the continuous improvement of SRI's environmental management system in terms of both the synergy with the activities of the Sustainability Committee, and the additional certified management systems (e.g. the ISO 50001:2018 energy management system, certified at the end of 2021), and the updating of the SGSAE (Safety, Environment and Energy Management System) system documentation referring to the "Environmental Protection" element aimed at verifying compliance with the requirements of ISO 14001:2015. This standard provides a guideline for the implementation and implementation of environmental management systems and has a High Level Structure (HLS), similar to that of other management system standards.

Consistent with the Environmental Policy adopted by the company, the expected outcomes of an environmental management system include:

- improving environmental performance;
- fulfilment of compliance obligations;
- achievement of environmental objectives.

Underlying this approach is an environmental management system based on the Plan-Do-Check-Act (PDCA) concept. The PDCA model provides an iterative process used by organisations to achieve continuous improvement:

- Plan: establish the environmental objectives and processes necessary to deliver results in accordance with the company's environmental policy.
- Do: implement processes as planned.
- Check: monitor and measure processes against the environmental policy, including its commitments, environmental objectives and operational criteria, and report the results.
- Act: take action for continuous improvement.

The second half of 2021 saw the performance of several audits, both internal and external, aimed at verifying the implementation and effectiveness of the environmental management system on several fronts.

Internal audit is one of the requirements of the same standard. The audit must be carried out at planned intervals with the aim of providing information as to whether the Environmental Management System complies with the requirements of the standard and of a company's own management system, and whether it is effectively implemented and maintained.

Between the end of September and the beginning of October 2021, an environmental compliance audit of the Augusta refinery and the Augusta, Palermo and Naples depots was carried out.

With the support of a third party company, the accurate compliance with the requirements applicable (more than 350) to the various sites according to international, national and local environmental regulations, e.g. F-GAS Regulation, Legislative Decree no. 152/06 and subsequent amendments, etc., was verified. The audit was coordinated internally by the Environment department. During the audit, interviews were conducted with the relevant departments for each area/topic. No "non-compliance" was found for any site, while suggestions and/or opportunities for pursuing were identified.

At the beginning of October 2021, an internal audit was also carried out for the Augusta refinery in accordance with ISO 14001:2015. The team appointed for this audit was composed of people having different experience in ISO-certified management systems and environmental issues. The audit was a further opportunity for everyone to investigate various aspects: leadership, company policies, risks and opportunities, environmental aspects, planning activities, objectives, operations, resources, internal and external communication, performance evaluation and ongoing improvement. The audit allowed for a detailed examination of all documentation with field checks and interviews with operational staff, all fundamental to the assessment of the management system's effectiveness. The auditors reviewed in detail the interviews and documents recorded by each of them, assessing their full compliance with the standard requirements. The audit's outcome validated the compliance of the management system

with the standard requirements, highlighting opportunities for optimizations. The management review was then carried out, as required by ISO14001:2015 standard, at the Environment Steering Committee during which the outcome of the internal audits and the scheduling of the external ISO 14001:2015 audit was shared by the Certification Entity (SGS).

Undoubtedly, the internal audit activities carried out, precisely and accurately, in the last four months of 2021, made it possible to arrive at the external audit with an ever-increasing awareness of our management system and its procedures, as well as of the relevant compliance with the several standard requirements. The auditors appreciated the structure and effectiveness of the environmental management system, confirming the Augusta refinery's ISO 14001:2015 certification, and identified some remarks and opportunities for continuous improvement of the management system.





05

GRI 400

PEOPLE AT THE CENTRE

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SONATRACH RAFFINERIA ITALIANA'S FOCUS ON INTERNAL STAKEHOLDERS

The team in numbers

Sonatrach Raffineria Italiana rely on a **competent team** that is always ready to manage the activities of its sites. This is also due to a human resources management aiming at enhancing not only individual skills, but also the **spirit of participation**, which is necessary for the organisation to achieve its goals while maintaining high quality standards. In fact, it is Sonatrach Raffineria Italiana's team, based on specialised professional skills, aligned and focused on the objectives and characterised by a sense of belonging to the organisation, which is the added value of the company's business performance. It follows the numerical trend of the total workforce on the three-year period 2019, 2020, 2021 depicted in Figure 22 showing an increasing trend linked to the development of new skills and the strengthening process of key sectors for improving reliability such as technical and maintenance, covered by the previous owner with relocated supports.

In particular during 2020, in order to respond to the changing needs and challenges of the market and to increase organizational efficiency with a view to continuous improvement, the company worked on a substantial internal reorganization which saw on the one hand the progressive evolution of staff functions and, on the other hand, a new structure of the Operations support with the aim of guaranteeing operational efficiency and being able to face macroeconomic and environmental challenges with long-term prospects in a more structured way. In 2021 the process of insourcing continued moving to cover some corporate functions partly covered by external partners during the first three years. In particular, the insourcing activity of the administrative function (Accounting, Budget and Tax) was finalized, which, starting from August 2021, has, independently, managed all accounting / administrative activities and part of the IT function.

FIGURE 22
Total workforce over the three-year period 2019, 2020 and 2021

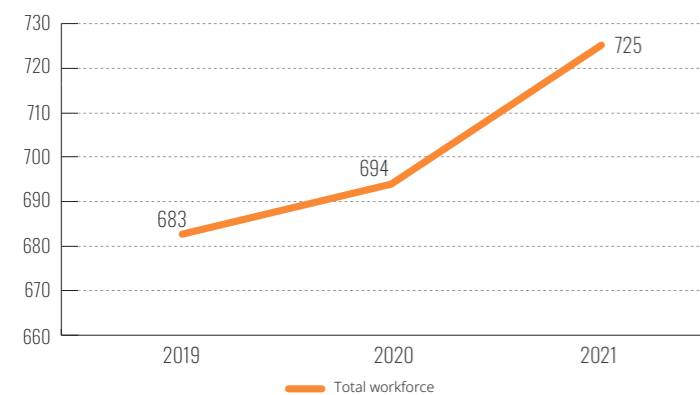


Figure 23 presents an analysis of the total workforce by origin over the three-year period 2019, 2020, 2021. The following figures (Figure 24 and Figure 25), which show the 2021 cross-section by gender compared with 2019, show how in the years 2020 and 2021 the numerical gap between men and women narrowed further. Finally, Figure 26 shows the 2021 cross-section by role.

FIGURE 23
Total workforce by origin (Sicily and outside the region) for the three-year period 2019, 2020 and 2021

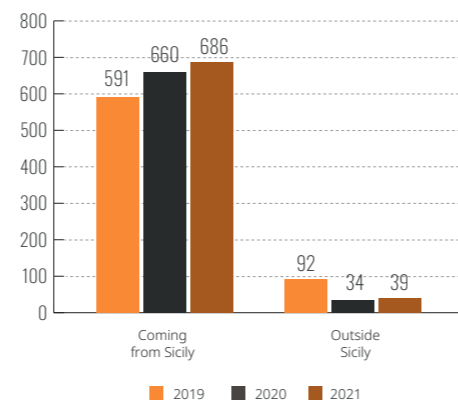


FIGURE 24
Total workforce in 2019 by gender

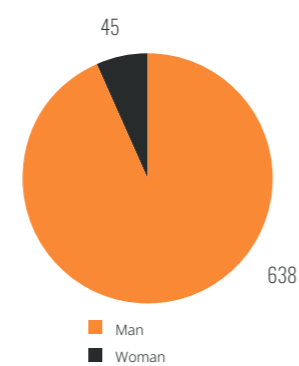


FIGURE 25
Total workforce as at 2021 by gender compared with 2019

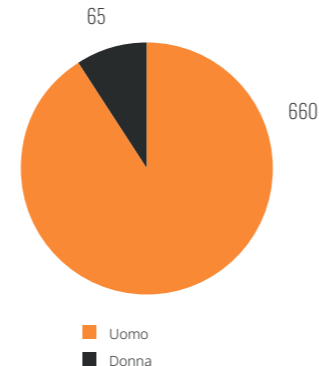
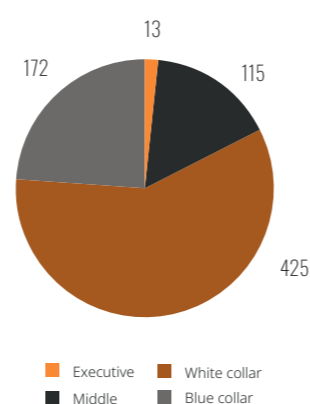


FIGURE 26
Total workforce as at 2021 by role



The numbers and composition by age, origin and gender of those hired from 2019 to 2021 are analysed below.

44% of new hires in 2020 are under the age of 30 (34 individuals), 35% (27 individuals) between 30 and 39, new hires between 40 and 49 make up 19% (15 individuals) and 1% are between 50 and 59. 32% of new hires in 2021 are under the age of 30 (15 individuals), 38% (18 individuals) are between 30 and 39, new hires between 40 and 49 make up 23% (11 individuals) and 6% (3 individuals) are between 50 and 59.

Overall, there is a turnover compensation rate slightly above 100%, a sign of attention to maintaining skills and expanding strategic sectors covered by the previous owner with delocalized departments.

FIGURE 27
Number of new hires in 2020 and 2021 by age

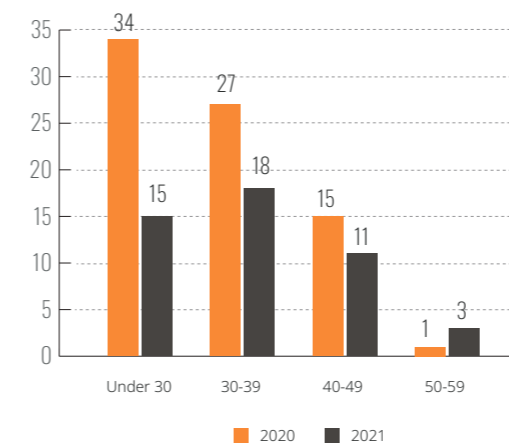


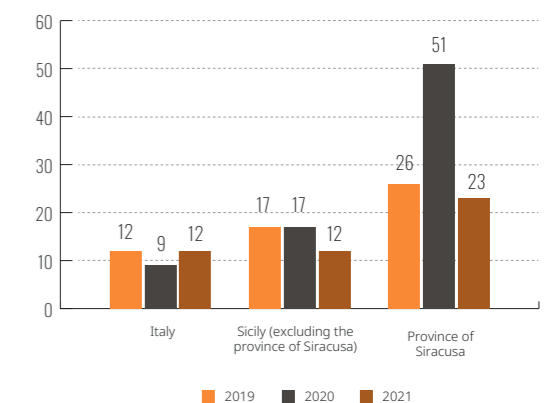
FIGURE 28
SRI Personnel in 2020 and 2022 divided by age groups



Sonatrach Raffineria Italiana plays a key role in the economy at local level through the **employment of a predominantly local workforce**. Figure 29 shows over the three-year period a consistently high percentage of individuals from the Region of Sicily, divided between those from the province of Siracusa and those from outside the province.

Specifically for each year, there were 43 (out of a total of 55 new hires) in 2019, 68 (out of a total of 77 new hires) in 2020, and 35 (out of a total of 47 new hires) in 2021.

FIGURE 29
Number of new hires in 2019, 2020 and 2021 based on origin



The focus on its employees is reflected in Sonatrach Raffineria Italiana's commitment to ensure **continuous training for all its staff**. The training plan is tailored to individual needs and is reviewed and updated regularly when employees change their roles or tasks.

In order to ensure the effective and prompt performance of staff training and information activities, the company makes use of IT tools to facilitate **on-line training sessions**, which are complementary to in-person training sessions held in the classroom by certified trainers. In fact, the company provides all employees with an **e-learning IT platform** which, in addition to containing specific training plans and programmes tailored to each employee, allows on-line learning tests related to the different training modules. In addition, the IT platform allows constant monitoring of the assigned training plans over time.

TABLE 21
Training Hours (2019-2020-2021)

TRAINING HOURS	2019	2020	2021
Health and safety	15,302	21,362	18,765
Technical - Professional	29,091	100,942	47,800
Managerial and languages	126	208	274

In 2020 and in 2021, 100 per cent of employees received regular performance and professional development appraisals.

Health and safety at work

In addition to the quarterly information carried out both in accordance with Ministerial Decree of 16 March 1998 (now replaced by Appendix 1 of Annex B to Legislative Decree 81/2015) and on the basis of the provisions contained in Legislative Decree 81/08 and the related laws and State-Regional agreements, also the following topics were addressed during the year 2021:

- Confined space hazards;
- Electrical equipment in operating areas;
- Fire suppression systems testing procedure;
- Environmental protection topics;
- Types of extinguishers and their use;
- Roles and responsibilities of work coordination technicians - work permit;
- Fixed fire extinguishing systems;
- Isolation plans procedure;
- Risk identification and management topics;
- Accidents and near misses that occurred during the year;
- Use of portable gas detectors - continuous in WebCat;
- Safety management in general stop;
- Training in the use of fire extinguishers at the testing ground.

Training

In 2020, the training completion rate was, overall, over 90 per cent, 100% for legal-type mandatory modules, thus in line with the company's targets. Furthermore, 100% of process personnel achieved the level of proficiency expected for their area. Total training hours for company personnel amounted to approximately 122,000 hours, namely to approximately 21 days/employee.

Four information sessions were also held for representatives of companies operating at the company's sites, on the occasion of which, during the year 2021, the following topics were addressed:

- Training and refresher courses for workers, supervisors, managers, rlsa [employees' representative for company's safety], aspp [officer for prevention and protection service], safety trainers;
- Confined space hazards;
- Electrical equipment in operating areas;
- Environmental protection topics;
- Types of extinguishers and their use;
- Roles and responsibilities of work coordination technicians - work permit;
- Fixed fire extinguishing systems;
- Isolation plans procedure;
- Accidents and near misses that occurred during the year;
- Use of portable gas detectors - continuous in WebCat;
- Safety management in general stop;
- Training in the use of fire extinguishers at the testing ground.

In 2021, the training completion rate was, overall, over 93 per cent, 100% for legal-type mandatory modules, thus complying with the company's targets.

Total training hours for company personnel amounted to approximately **64,000 hours, equivalent to approximately 12 days/employee**.

The main activities carried out in 2020 and 2021 to improve the training system include:

- of a procedure to define roles, responsibilities and performing modes within the training system;
- conducting the main courses provided for in Article 37 of Legislative Decree 81/2008 through in-house trainers;
- mapping the training requirements of the applicable regulatory acts (e.g. Legislative Decree 105/2015) with the modules available in the internal training system;
- revision of training profiles for process operators.

In addition, four information sessions were also held for company representatives operating at company sites.

The company is committed to maintaining a safe work environment enriched by diversity and characterized by open communication, trust, and fair treatment. As a demonstration of the commitment to this objective, no cases of discrimination were detected in the years 2020 and 2021.

Career Day

Career Days are an opportunity both for the company's promotion in the labour market and for **talented young people** to learn about exciting opportunities and career paths.

Early Career Program

The Early Career Programme is a specially structured programme to **accompany young talents** on a **career growth path** during the first three years after hiring.

JOB FAIR

In addition to training, Sonatrach Raffineria Italiana offers every employee:

- a Total Reward package as benefits designed also for families;
- company canteen;
- company contribution to the sector's supplementary pension fund.

Welfare

Recruiting, employer branding and communication

2020	2021
<p>In terms of employer branding, the presence of the Human Resources function at job fairs and university career days, held in 2020 in a digital version due to the restriction caused by the pandemic, was important, encouraging contact with brilliant newly graduates hired during 2020.</p> <p>In the area of onboarding, talent retention and communication, corporate management support was renewed for the internal "N.E.S.T." (New Employees Sonatrach Team) group, consisting of newly hired staff and staff with reduced corporate seniority, in order to promote initiatives for new recruits' inclusion in collaboration with the Human Resources department, to promote initiatives for inclusion, team building, training and corporate communication.</p> <p>In 2020, the company implemented a series of HRIS (Human Resource Integrated System) software to make personnel management increasingly digitised and integrated.</p>	<p>The company's commitment to using digital media as the main channels for recruiting and employer branding also continues in 2021. In particular, recruiting initiatives are sponsored both through the company website and through the official LinkedIn page, which represents a showcase where the company, in addition to publishing job advertisements, carries out ongoing dissemination activities aimed at informing stakeholders of the main events in which it is involved and at stimulating discussion on topics of importance to the business.</p> <p>The company's ongoing commitment to the search for the best profiles is also reflected in its continuous participation in job fairs and career days - mainly conducted through digital channels as a result of the social and healthcare context - which also enabled it to come into contact with talented newly graduates in 2021.</p> <p>Company support for the internal "N.E.S.T." group was also renewed. With this in mind, the "Buddy Program" initiative has been set up for 2021, a mentorship programme whereby new hires are paired with staff with at least one year's seniority in the company.</p>

People Engagement and Employee Value Proposition

2020	2021
<p>During 2020, in order to respond to the changing needs and challenges of the market and to increase organisational efficiency with a view to continuous improvement, the company has worked on a substantial internal reorganisation that has seen, on the one hand, the gradual evolution of staff functions and, on the other hand, a new structure of the functions supporting Operations with the aim of ensuring operational efficiency and to be able to face economic and environmental challenges in a more structured manner with long-term sustainability prospects.</p>	<p>During 2021, the company continued to work on the organisational structure with a view to continuous improvement aimed at greater competitiveness, thanks, on the one hand, to the insourcing of corporate functions previously outsourced to external partners; on the other hand, thanks to appropriate organisational changes that have made the company's work processes leaner but at the same time more structured and therefore sustainable over time.</p>

From the point of view of resource management and enhancement, the company took care to verify the experience of people during the crucial phases of the SARS-COV-2 pandemic. In fact, after the first months of the pandemic, which saw a large part of the company's workforce change their working methods following massive recourse to smart working, a survey was carried out to gather feedback from human resources. The survey showed that the experience of **working remotely**, even considering the very particular time, was characterised by positive aspects such as **increased flexibility** and a general improvement in **work-life balance**. In addition, it was found that virtual participation in meetings favours punctuality and facilitates travel time, allows meetings to take place even where no physical space is available, and also encourages the promptness and thoroughness of the security measures put in place.

The focus on human resources always remains very high. The continuous training on both HSE and specialist topics, the participation in association networks, the involvement in an integrated performance assessment and the continuous improvement system are just a few examples of how much the company invests in its human capital and how much it values a meritocratic and responsible approach.

With regard to employee welfare, the company has adopted a **new platform** for more effective management of the **company welfare plan**, in order to guarantee **greater capillarity** of the offer and smoother management of agreements.

Industrial Relationships

2020	2021
<p>From the point of view of industrial relations, the company has often had to discuss with trade unions the effects of the SARS-COV pandemic and the necessary actions to be taken, applying in synergy and in continuous liaison with the Workers' Representatives for Safety and Environment, as well as with the Unitary Trade Union Representative, the most suitable organisational and management methods that best combine technical, organisational and production requirements with the primary need to safeguard the health and safety of workers. To this end, proactively, acting as a best in class and anticipating by several weeks the protocol signed by the trade unions at government level, the company - in agreement with the RSU/RLSA - has adopted specific protocols aimed at preventing the spread of the SARS-COV-2 virus, revised from time to time in the light of the evolution of the pandemic and on the basis of the emergency regulations issued from time to time by the legislator and the Italian government. The content of the protocols adopted by the company was in continuity with the Protocol signed at government level by the Employers' and Workers' Trade Union Representatives, placing itself in a relation of "specificity". In fact, further provisions were added concerning reciprocal information obligations, dissemination of health recommendations, corporate organisation, workspaces distribution, access to the company, relations with contractors, cleaning and sanitisation, work organisation, management of symptoms and emergencies, application of the so-called smart working, protection of the "vulnerable" people, and the limited and staggered shifts.</p>	<p>The year 2021 was also characterised by excellent industrial relations with trade union representatives at company, territorial and national level. The company recognises the role of trade union representatives as a privileged interlocutor, capable of fostering dialogue with workers and, in this sense, has undertaken to preserve a direct and reliable communication channel.</p> <p>In 2021, an ongoing dialogue further continued with the trade unions and Workers' Representative for Safety and Environment regarding the actions to be taken to deal with the effects of the SARS-COV 2 pandemic, always safeguarding the health and safety of workers and, at the same time, guaranteeing business continuity. The company is committed to complying with specific protocols to prevent the spread of contagion - defined in consultation with the RSU/RLSA - and to defining control procedures for safe access to workplaces, revised from time to time in the light of the pandemic progress and the applicable legislation.</p> <p>In October 2021, the company and the RSU signed a new company agreement in which several topics were addressed, including: corporate welfare, smart working regulations for the year 2022. The agreement represents a good balance between reducing costs and organisational efficiency on the one hand and increasing flexibility as well as maintaining welfare levels on the other, thus keeping the organisation focused on corporate objectives, especially in an increasingly competitive market context where an aware, motivated and well-trained workforce makes the difference.</p>

Health and safety at work

Health and safety in the workplace is a cornerstone on which the company bases the conduct of all business activities. In order to monitor its performance in the area of personnel's health and safety, the company adopts an accident classification system consistent with the US Occupational Safety and Health Administration (OSHA) standard.

Safety at work is the first objective to be pursued both towards its own employees and towards all external stakeholders, including suppliers, contractors and the relevant territory. Discussion with these stakeholders is also highlighted by the participation of workers through the presence of RLSAs (Workers' Representatives for Safety and Environment).

In order to ensure compliance with a high safety standard, the occupational health and safety management system was implemented based on the ISO 45001:2018 standard. The system, known as the SGSAE (Safety, Environment and Energy Management System), includes within its scope the protection of all employees, the activities carried out by them and the

working environment of Sonatrach Raffineria Italiana, as well as contractors, whose activities are governed by the system element known as Third Party Services, included in the SGSAE. The system covers **100 per cent of employees and non-employees** whose work and/or place of work falls under the organisation's control.

Safety also involves hazards identification, assessing risks and investigating possible accidents. The process used to identify hazards, assess risks and apply the relevant control hierarchy is described in the Risk Assessment Document (Documento di Valutazione dei Rischi, DVR), as well as in Safety Procedure PS 35 - Risk Analysis and Assessment. The skills of those who carry out the risk assessment are ensured, first and foremost, by the implementation and periodic updating of specific training courses for RSPPs and ASPPs (Manager and Officers for Prevention and Protection Service), pursuant to Legislative Decree 81/2008; in addition, collaboration initiatives are promoted with external experts and certified bodies.

The Importance of Management Systems: towards ISO 45001 standard

The wide diffusion of occupational safety management systems is due not only to the attention that the legislator has given to the issue, contributing to increasing knowledge and awareness on the subject, but also to the effectiveness of the adoption of these models in terms of reducing accidents. The subject of health and safety in the workplace is of primary interest to companies. Comparing the accident rates of companies that have adopted a Health and Safety Management System with their counterparts, based on production sector, that do not have it, the main finding is that the adoption of a Management System leads to a reduction in accidents and occupational diseases¹.

The UNI ISO 45001 standard "Occupational health and safety management systems - Requirements and guidance for use" establishes a framework for improving safety, reducing risks in the workplace and improving health and well-being, thus enabling companies to proactively increase their occupational health and safety performance. In addition, with its focus on leadership, workers' engagement, risk assessment and outsourcing management, it strengthens the management and organisational approach to support the adoption of a corporate culture looking at occupational health and safety not only as a matter of regulatory compliance, but as an essential part of work processes and an opportunity for overall improvement and growth in corporate performance.

Certifying the process, therefore, leads to considerable advantages, which is precisely why Sonatrach Raffineria Italiana has started its path towards the certification of its SGSAE with the ISO 45001:2018 standard.



The company also boasts an ISO 14001-certified Environmental Management System, an ISO 9001-certified Quality Management System and an ISO 50001-certified Energy Management System, the latter gained in December 2021.

Furthermore, the UNI ISO 45001 standard is an evolution of BS OHSAS 18001 that brings together reflections and operating methods developed in the world of industry and the professions. In relation to this evolution, the most visible innovation is the adoption of the HSL (High Structure Level) in accordance with other management system standards such as ISO 9001 and ISO 14001.

This common general structure will be the key to designing integrated management systems for quality, safety, environment and energy.

¹Adopting a Safety at Work Management System (SGSL), occupational injuries and illnesses can be reduced. This is confirmed by INAIL's periodic analyses (see table 21). The reduction of accidents allows the reduction of costs due to lack of safety:

TABLE 22
Comparison of accident rates of OHSAS 18001/UNI EN ISO 45001:2018 certified/non-certified companies

Sectors	Injury Frequency Indices				Percentage of serious accidents out of total accidents defined		
	DD INAIL Rate	Certified companies	NON-certified companies	Variation in percentage	Certified companies	NON-certified companies	Variation in percentage
Miscellaneous activities; services and trade	0	17,1	18,8	-9	3,9	5,1	-23,5
Fisheries, Food, Agriculture	1	23,1	26,2	-11,8	4	7,4	-45,9
Chemistry, Plastics, Paper, Leather	2	13,1	19,4	-32,5	2,6	5	-48
Building construction, plant engineering	3	25,4	28,3	-10,2	8,3	11,2	-25,9
Energy Plant Operations	4	16,6	21,1	-21,3	1,8	5,8	-69
Wood and related products	5	30,1	32,4	-71,1	3,6	9,4	-61,7
Metallurgy, Machinery	6	17,4	23,6	-26,3	1,7	5,6	-69,6
Mining, rocks and glass	7	17,8	33,1	-46,2	4,8	8,7	-44,8
Textiles and garment manufacturing	8	9,6	10,7	-10,3	5,1	7,3	-30,1
Transport, Warehousing	9	25,9	31,4	-17,5	2,2	6,7	-67,2
Overall Sectors		18,1	21,5	-15,8	3,5	5,8	-39,7

No injuries

An issue of no small importance, especially in the sector in which Sonatrach Raffineria Italiana operates, is that of injuries at work.

The company, in the three-year period 2019, 2020 and 2021, against **2,446,440 hours of work for employees** (1,328,736 in 2019, 1,210,850 in 2020, 1,235,590 in 2021) and **3,525,030 hours of work for non-employees** (3,968,852 in 2019, 1,687,570 in 2021 and 1,837,460 in 2021), **recorded neither deaths nor injuries with serious consequences.**

RESULTS	
2020	2021
<p>During the year 2020, there were no accidents involving loss of workdays or accidents that forced the affected persons to temporarily change jobs from their usual duties (Lost Time Injury / Restricted Work Injury- OSHA methodology). Only one reportable event was recorded at the Augusta refinery (Medical Treatment - OSHA Methodology). At the depots, no reportable event was recorded at Naples, Palermo and Augusta, reaching, respectively, 29, 20 and 32 years of uninterrupted operations with no reportable injuries.</p>	<p>During the year 2021, there were no accidents involving loss of workdays or accidents that forced the affected persons to temporarily change jobs from their usual duties (Lost Time Injury / Restricted Work Injury- OSHA methodology) or Medical Treatment (OSHA Methodology). At the depots, no reportable event was recorded in 2021 financial year at Augusta, Palermo and Naples, reaching, respectively, 30, 21 and 33 years of uninterrupted operations with no reportable injuries.</p>

There were no “Tier-1” process safety accidents, i.e. loss of containment accidents with significant consequences defined according to API RP 754. Furthermore, with a view to continuous improvement of process safety, an internal audit was carried out, with the support of specialized external staff, on the Safety Management System for Major Accidents Prevention (SMS-MAP) and on the elements of the Safety Management System. The audit confirmed the effectiveness of the management system adopted by the company.

In addition, there were no “Tier-1” process safety accidents, i.e. loss of containment accidents with significant consequences defined according to API RP 754. In accordance with the Process Safety Management Plan relating to the year 2021, periodic “Process Hazard Analyses” were carried out on the plants of the Augusta refinery and the three depots located in Augusta, Palermo and Naples, with a view to identifying possible areas of improvement in the management of equipment and operations and to achieve increasingly higher safety standards.

In October 2021 (see focus “Continuous improvement: the “Italian HF Alky Network” ensures the continuity of standards and staff skills”), an audit called “API RP-751 Assessment” was also conducted by specialised external staff to verify that the safety procedures, operations as well as inspection and maintenance activities adopted by the company regarding the alkylation plant are in line with the highest international standards. Finally, during the year, the company updated the Policy Document pursuant to Article 14 of Legislative Decree 105/2015 containing the aspects and structure of the Safety Management System for Major Accidents Prevention (SMS-MAP). The update of the Safety Report pursuant to article 15 Legislative Decree 105/2015 concerning both the Augusta refinery and the Palermo depot was also presented.

associated with a given factor. In this respect, prevention activities and a proactive approach have proven to be the winner hands-down over the years. In fact, by acting proactively, the company was able to avert the risk of injury, thereby limiting personnel safety events to 12 first aid during 2021 concerning: insect bites, small cuts, heat stress, slight bruises, minor abrasions and irritations, and slight burns from contact with hot surfaces. The company has also continued to show great commitment in making personnel protection and safety a priority; in fact, as anticipated, during 2021 the company’s integrated SGSAE (Safety, Environment and Energy Management System) was subjected to the first stage to obtain UNI ISO 45001:2018 certification.

The company’s targets for the future aim at continuous improvement in terms of respect for the environment and employees’ health and safety, who are driving the company’s growth and success. Among the goals set by Sonatrach Raffineria Italiana, is the completion of the ISO 45001:2018

certification process in order to obtain SGSAE management system certification according to the latest industry technical standards.

This will strengthen the management and organisational approach that already supports the adoption of a corporate culture strongly focused on occupational health and safety, as well as environmental protection, not only as a matter of regulatory requirement, but as an essential part of work processes and an opportunity for overall improvement and growth in corporate performance.

⁴Process Safety TIER1/2: characterises the classification of Process Safety events also in line with international standards (e.g. API754).
⁵First Aid Injury (FA): is a work-related injury that requires minor medical treatment.

2021 record year in the field of safety

As mentioned, the Safety Policy adopted by the company is based on principles and rules for management control, particularly with regard to the subjects of environment, health, quality, product safety and prevention of major accidents. The year 2021 was characterised by **excellent safety performance with no reportable events** (Lost Time Injuries, Restricted Work Injuries, Medical Treatment Injuries) and a **TRIR** (Total Recordable Injury Rate) **of zero**. This represents the best result achieved since 2005.

Furthermore, from a process safety point of view , 2021 was characterised by no TIER 1 events. Thanks to the company’s

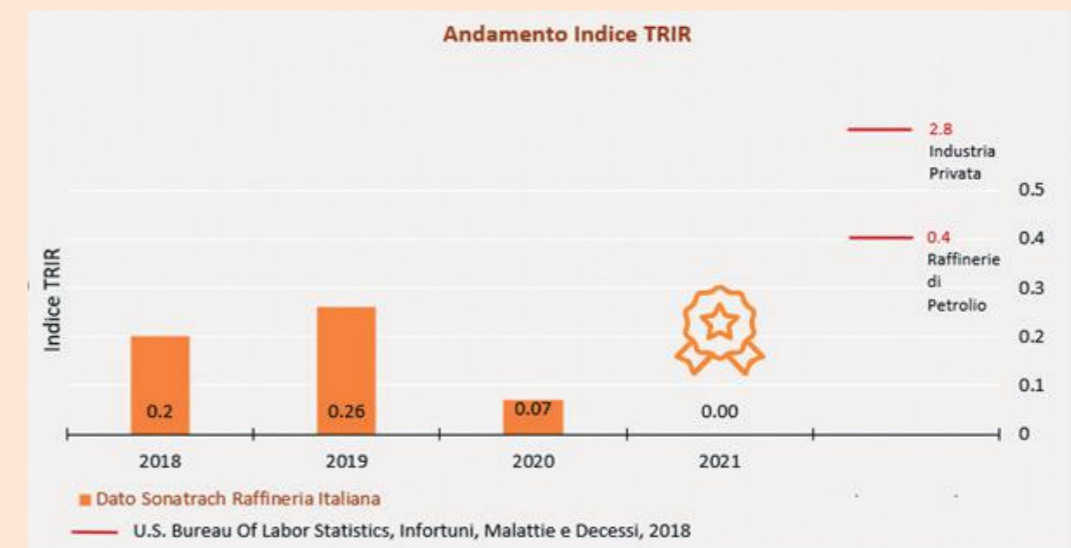
management systems, process control, constant efforts and workforce productivity, a continuous consistency in safety results has been demonstrated, allowing the company to maintain high levels of efficiency and competitiveness at all times. These results are also confirmed by the excellent performance recorded by the Sustainability Impact Rating (SI Rating). In fact, the company scored 90 per cent in the topic “Workers’ Health and Safety”, which was found to be extremely relevant.

Effective risk management requires good risk assessment. Through a good risk management process, the company identifies, analyses, quantifies and finally manages the risk

²Lost Time Injury (LTI): is a work-related injury that results in the loss of at least one day’s work in addition to the day on which the injury occurred; Restricted Work Injury (RWI) is a work-related injury that causes the inability to perform all normally assigned job functions during a scheduled shift/work day and as a result of which the injured person may be assigned to another job on a temporary or permanent basis after the day of the injury; Medical Treatment Injury (MTI): is a work-related injury that requires specific medical treatment.

³TRIR (Total Recordable Injury Rate) = total number of reportable accidents * 200000/total hours worked.

FIGURE 30
TRIR index trend



Continuous improvement: the “Italian HF Alky Network” ensures the continuity of standards and staff skills

The company is committed to continuous improvement in the management of the hydrofluoric acid alkylation unit, **promoting various initiatives over the years to ensure the use of the best operational techniques and standards** in the area of process safety.

In June 2021, the Italian HF Alky Network was created on the specific initiative of SRI, bringing together the users of hydrofluoric acid in the petrochemical industry. The aim of the Network is to ensure the continuity of standards and staff skills even **after the normal generational turnover**.

The structured sharing of information, good working practices and opportunities for improvement, contributes to the Safety of a Plant that due to its technical peculiarities requires a high level of know-how to mitigate potential exposures.

The Network has the task of promoting initiatives to foster the professional growth of all the Personnel involved in the management of the Unit and to facilitate the continuous improvement of the standards of the respective Units, also through full compliance with API 751 to ensure Personnel Safety, Process Safety & Reliability.

In October 2021, an audit called “API RP-751 Assessment” was therefore conducted by specialised personnel belonging to the major world organizations to verify that the safety procedures, operations as well as inspection and maintenance activities adopted by the company are in line with the highest international standards.

The team, consisting of five assessors, used a standardised protocol to assess both the presence of specific procedures and the effectiveness within the scope of those procedures. A result of 75 per cent or more indicates a site that meets and exceeds the requirements of API RP-751 and demonstrates an effective and sustainable programme.

The Augusta site achieved a score of 76 per cent, placing it when considering all sites where an API RP-751 Assessment was carried out by the **API team**.

The result achieved indicates a site where the potential risks inherent in hydrofluoric acid alkylation are understood and programmes, systems and training are identified to mitigate potential risks.

Best Practices were identified in the application areas of API RP-751 such that they can be exported all over the world.

TABLE 23

Site performance vs. industry based on 32 valuations

Site Performance Versus Industry Based on 32 Assessments			
Protocol	Augusta	Industry	Quartile
Process Hazards Management Plan Performance	76%	70%	1
Operating Procedures & Worker Protection Performance	77%	75%	2
Materials, New Construction, Inspection and Maintenance Perf.	75%	72%	2
Transportation and Inventory Control Performance	75%	74%	1
Relief and Utility Systems Performance	76%	72%	1
Mitigation Options and Techniques Performance	81%	74%	1

Occupational medicine

During the years 2020 and 2021, **the preventive medicine programme for all staff continued, on a voluntary and optional basis every two years**. This is a programme run by an external health facility, where the worker can go after booking through the health office of the Augusta refinery. The results of the examinations, protected by the confidentiality dispositions governing the processing of health data, are communicated by the health facility itself directly to the person concerned.

In addition, there is a preventive medicine programme specifically aimed at preventing those diseases that are the leading causes of death in industrialised countries (cardiovascular diseases and cancer).

In any case, workers are not exposed to work situations that may lead to occupational injuries or diseases, since a **specific job-related risk assessment** is carried out upstream. The worker is **educated, informed and trained** on prevention and protection measures, and undergoes periodic medical surveillance to certify that he or she remains physically fit for the job. Should health conditions arise that affect the worker's physical fitness for the job, the worker is generally transferred to a different job, maintaining the previous contractual status.

During the medical check-up of the company's staff under the Health Surveillance scheme pursuant to Legislative Decree no. 81/2008 carried out in the two-year period 2020-2021, no pathologies related to the performance of working activities were detected.

Specifically, 504 periodic visits were carried out in 2020 and 493 in 2021, meaning that, for each of the two years, 100 per cent of all planned health surveillance check-ups provided for by the company's health protocol and in compliance with Legislative Decree 81/08 and subsequent amendments were carried out. In addition, the planned biological monitoring was also successfully completed, and 160 doses of flu vaccine were administered in 2020 and 85 doses in 2021 (60 doses were administered in 2019).

In a context still characterised by the SARS-COV-2 pandemic, the Occupational Medicine service, together with the company management, played an active role in defining protocols aimed at avoiding possible contagions during work activities. In addition, the Occupational Medicine Service played a key role in the administration of SARS-COV-2 vaccines at the vaccination hub opened by Confindustria Siracusa with the participation of the main companies operating in the area, including Sonatrach Raffineria Italiana, from 17 May to **30 July 2021**.

Finally, an important milestone achieved regarding prevention is that no outbreak of the SARS-COV-2 virus has been detected within the company. The cases of infection detected were in fact exclusively attributable to domestic contagions.

FIGURE 31

Sonatrach employees at the Confindustria vaccination hub with members of the SRI Occupational Medicine Service involved in administering vaccines SARS-COV-2



THE RELATIONSHIP WITH THE COMMUNITY AND OTHER EXTERNAL STAKEHOLDERS: DEVELOPMENT, LISTENING AND SOCIAL COHESION

2020 activities

The 2020 external relations activities were aimed at constantly improving the company's social role and maintaining an adequate image of it in the areas in which it operates. An attempt was made to proactively meet the expectations of the territories themselves with targeted actions resulting from a careful analysis of the community needs carried out through the engagement of the main stakeholders (institutions, schools, the voluntary service, etc.).

The goals achieved have been marked by **a growing presence in the area**, an increasingly open and synergistic dialogue with local institutions, the world of education and the community in the main sectors of culture and voluntary service. Among these are, for example, the **"Associazione Promuovere Onlus Siracusa"** for the support of care activities for long-term and chronic oncological patients, the association **"NO.VE. non vedenti Augusta"** for the support of the organisation of team sports for blind people, the **"Misericordia di Melilli"** for the support of social activities, just to name a few.

With regard to activities with schools, support was given to the Istituto Scolastico comprensivo D. Costa di Augusta [Comprehensive School Institute D. Costa of Augusta] for the updating of computer/scientific laboratories and the project of work-related learning (the so-called "PCTO") with the Industrial Institute "RUJZ" of Augusta was started, involving all students of the third classes of the institute. The PCTO, initiated at the end of 2019, was continued until February 2020 and then it was temporarily suspended following the restrictions caused by the outbreak of the health emergency due to the SARS-COV-2 pandemic.

As an activity in support of culture, a **volume of interest** to the area was created and produced, entitled **"The 70 years of the Augusta refinery: a future that starts from afar"**. The volume was distributed to the Authorities and stakeholders on the occasion of the institutional sending of end-of-year greetings and to all the libraries in the area as well as to the main national ones. The book describes how, since 1950, the refinery has acted as a **driving force for the development of the territory**, paving the way for other industrial settlements, not only guaranteeing levels of **well-being and economic prosperity** but also intervening in those indices that today are

part of the HDI, Human Development Index (such as level of education and life expectancy) which, in their entirety after the Second World War, placed the Siracusa territory on the same level as the most developed national territories. The book also becomes a journey into the investments made in recent decades, from the point of view of industry and environmental sustainability.

An intense activity was linked to the SARS-COV-2 pandemic. Since the beginning of the pandemic, the company has been committed to supporting the activities of local institutions, healthcare facilities, law enforcement agencies and the voluntary service by supplying masks, disposable coveralls and latex gloves to the 118 emergency services and healthcare facilities in the province of Siracusa, and by periodically sanitising the offices and vehicles of the Siracusa Traffic Police, as well as supporting the AIL Project for home care for hematological patients in the northern area of the province of Siracusa.

In addition, together with a number of other companies in the industrial hub, the company contributed to the **donation to the Siracusa ASP** [provincial healthcare company] of twelve multi-parameter monitors and three monitoring units for the completion of twelve intensive care units at the Umberto I Hospital in Siracusa and the supply of ultrasound scanners, electrocardiographs and equipped trolleys for the Covid-19 centre in Augusta.

It is precisely this last activity (of which the company was a promoter at Confindustria Siracusa, also taking on the coordination) went going beyond the vision of "social responsibility" limited to the individual company, its internal organisation and interactions with the outside world, enhancing rather the system of relationships and interactions that bind together the various players within a given territorial context. In this perspective, the social responsibility for the territory has referred to the system of relationships in which all the players, including public and private stakeholders in the territorial context of the Siracusa industrial hub, are active and to their ability to generate shared strategies and objectives of sustainable development that are all the more effective if they are able to increase social cohesion and, at the same time, make the territory the centre and part of the activities. The situation that occurred due to the SARS-COV-2 pandemic has made it evident how a relationship between industries and territory can be strategic for the construction of new forms of community and to respond to population needs, including new needs related to the pandemic, motivating all stakeholders to converge towards a shared value system, aimed at pursuing social cohesion as one of the main goals of sustainable development.

In April 2020, still in the middle of the health emergency, the company's staff wanted to be present in the actions of solidarity towards those in the area who were most affected by the slowdown in production activities and services, with enormous economic difficulties. Therefore, employees donated part of their monthly salaries to local voluntary associations engaged in providing assistance to the population during the health emergency caused by the SARS-COV-2 pandemic. The decision was communicated by the company's internal union representatives, who - in turn - decided to double the amount

Activities in 2021

The external relations activities carried out in 2021 were geared towards continuity of the work undertaken in 2020. An attempt has been made to proactively meet the expectations of the territories themselves, with targeted actions resulting from a careful analysis of the community's needs carried out through the engagement of the main stakeholders (institutions, schools, the voluntary service, etc.), including in accordance with the objectives set out in the "2019 Sustainability Report", published in 2020.

The goals achieved have been marked by a growing presence in the area, an increasingly open and synergistic dialogue with local institutions, the world of education and the community in the main sectors of culture and voluntary service. Among these, priority was given to charities supporting the economically disadvantaged people and those in a difficult situation as a result of the SARS-COV-2 pandemic.

Then, the company also supported specific projects in favour of the territory in which it operates. More specifically, together with other companies operating in the area, it provided for a contribution to the construction of a well for drinking water in the Municipality of Augusta. This cooperation, in the context of "corporate social responsibility", is aimed at enhancing the local territory and the system of relations and interactions linking the various stakeholders.

collected. The beneficiary associations were identified in agreement with the company's internal union representatives on the basis of the needs of the territorial coordination units set up by the competent authorities.

In addition, a collaboration agreement was initiated and completed between the Municipality of Melilli and the ASP of Syracuse for the implementation of a project for the identification and treatment of uro-oncological pathologies in Melilli and in the surrounding area. The main objective of the project was the creation of a screening campaign for uro-oncological diseases for the target population and to guarantee access to diagnosis and treatment in the shortest possible time with the activation of in-depth diagnostic paths for patients at risk intercepted during screening.

In accordance with the measures and protocols adopted by the company to contain the SARS-COV-2 pandemic, the school visits to the Augusta refinery have begun again, during which topics of current interest have been also discussed.

In the associative field, the company has made its commitment within **sector associations** such as Confindustria Siracusa (vice presidency and coordination of technical tables assigned to the company) and Unem, where the company is recognized a role at national level, thanks to the constant daily commitment of each of its representatives within the various Working Groups always committed to being able to maintain competitiveness and future prospects for the current industrial system.

Renewal of ISO 9001 certification, confirmation of ATIEL certificate and CE marking of Bitumen

In 2019, the re-launch of the QMS (Quality Management System) was initiated.

One of the first action was the formal issuing and dissemination of the Quality Policy, in which the four pillars were defined:

- REGULATORY COMPLIANCE
- PRODUCT INTEGRITY
- CUSTOMER SATISFACTION
- CONTINUOUS IMPROVEMENT

In 2021, the Refinery received its annual inspection by SGS, the certification company for ISO 9001 (Quality Management System - QMS), ATIEL (specific for the production of lubricant bases) and CE marking of Bitumen.

This was a special appointment, as the previous ISO 9001 certificate (which was valid for three years) would have expired on 31 July 2021.



The audit was successfully completed (photo shows the closing meeting) with no major “non-compliance” reported.

The external audit team particularly appreciated the availability and transparency shown by the interviewed colleagues and the entire organisation.



CONCLUSIONS

The years 2020 and 2021 were undoubtedly very complex years that Sonatrach Raffineria Italiana managed to face **with a great sense of responsibility and devotion.**

Two years with the pandemic and during which we have not activated even one hour of layoffs and our protocols and the joint efforts of all made it possible to contain the spread of the virus without having internal infection focus and reporting better statistics than the national and local averages.

All challenges were met with the professionalism and with the team spirit that has always been peculiar to the entire organisation while maintaining excellent relations with the communities around us continuing to put sustainability at the heart of our values in a path that will increasingly have to combine development and health, well-being and safety, progress and environmental protection.

We will take advantage of the resilience capacity gained over the years to be able to face all the economic challenges that will test the competitiveness of the Company. We will continue to maintain a transparent dialogue with the local communities through the values and spirit that animate all the SRI people who give their best every day by carrying out their work with professionalism, aware of how much SRI plays an important role in the Syracusan production context.

Having, at the same time, **a great responsibility:** to contribute to the development of the Sicilian and international oil industry **with the utmost respect for the environment, people and the territory.**

METHODOLOGICAL NOTE

The 2022 Sustainability Report (related to 2020 and 2021 reporting) is the **second to be published by Sonatrach Raffineria Italiana**, which has decided to continue the path of transparency and reporting on its sustainability performance that began in 2020 with the drafting of the **2019 Sustainability Report**.

The reporting scope of this Sustainability Report mainly includes the **Augusta operating office** to which reference was made for the analysis and engagement of stakeholders and, for the consolidation of the data, also the **storage warehouses in Palermo and Naples with reference to the financial year 2020 and 2021**. In order to allow for the comparability of data over time and to assess the company's performance, a comparison with the past years has been proposed wherever possible.

The Sustainability Report is of a voluntary nature and does not fall under national legislation on non-financial reporting (Legislative Decree 254/2016).

The system for tracking key performance indicators was implemented in accordance with the **"GRI Sustainability Reporting Standards"** published in 2016, and subsequent versions, by the **Global Reporting Initiative (GRI)**, according to the "in accordance - Core" option.

For this Sustainability Report, it was decided not to conduct a third-party review of the information.

The stakeholders involved in the preparation of this Sustainability Report were externally the neighbouring communities represented by their mayors and by the main stakeholders in the area and internally the employees and top management of Sonatrach Raffineria Italiana.

All data in the environmental area refer to mandatory regulations and have therefore already been verified and validated by third parties. In order to reduce, or avoid, the negative impacts of the organisation's activities on the environment, it is emphasised that the Group's approach to environmental risk management takes into account the Precautionary Principle as stated in Principle 15 of the United Nations (UN) "Rio Declaration on Environment and Development": "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental

degradation."

The materiality of the issues identified and covered in the Sustainability Report was identified through a stakeholder mapping and stakeholder engagement process that was developed on the basis of the **Accountability 1000SES standard (AA 1000SES) and the Global Reporting Initiative (GRI)**, which defines, at an international level, guidelines on the conduct of the stakeholder engagement process. In compliance with the GRI 101 disclosure, the contents' definition of this Sustainability Report is based on the principles of stakeholder inclusiveness and materiality: the topics considered material have been extrapolated from the materiality matrix and are therefore the result of a process of direct interaction and engagement of the company's key stakeholders.

This Sustainability Report was prepared with the cooperation and advice of **ARB S.B.P.A.**, which edited its contents and also contributed to the training of employees and the process of engaging internal and external stakeholders.

The topics covered in the Sustainability Report and the respective GRI disclosures were associated with the **SDGs (Sustainable Development Goals) of the United Nations 2030 Agenda** by defining how the company contributes to the achievement of these goals.

GRI INDEX

The table of GRI indicators, conforming to the GRI Standards Core option, is presented below. Any omissions, where applicable, are reported as notes to the single indicators.

CODE	INDICATOR	PAGE/NOTE
Organisation profile		
GRI 102-1	Name of organisation	Pag. 10-11
GRI 102-2	Activities, brands, products and services	Pag. 10-11, 13
GRI 102-3	Location of headquarters	Pag. 10-11
GRI 102-4	Location of operations	Pag. 10-11
GRI 102-5	Ownership and legal form	Pag. 10-11
GRI 102-6	Markets served	Pag. 10-11, 13
GRI 102-7	Scale of the organisation	Pag. 10-11
GRI 102-8	Information on employees and other workers	Pag. 10-11
GRI 102-9	Supply chain	Pag. 51-53
GRI 102-10	Significant changes to the organisation and its supply chain	Pag. 51-53
GRI 102-11	Precautionary Principle	Pag. 102
GRI 102-12	Membership of associations	Pag. 33-34
GRI 102-13	Adesione ad associazioni	Pag 98-99
Strategy		
GRI 102-14	Statement by the Corporate Sustainability Committee	Pag. 6
Ethics and Integrity		
GRI 102-16	Values, principles, standards and standards of behaviour	Pag. 15-17
Governance		
GRI 102-18	Governance structure	Pag. 20-21
Stakeholder engagement		
GRI 102-40	List of groups of stakeholders	Pag. 32
GRI 102-41	Collective bargaining agreements	Pag. 88-89

GRI 102-42	Identifying and selecting stakeholders	Pag. 32-33
GRI 102-43	Approach to stakeholders' engagement	Pag.32-35
GRI 102-44	Key topics and concerns raised	Pag. 32
Reporting practice		
GRI 102-45	Entities included in the consolidated financial statements	Pag. 102
GRI 102-46	Defining report content and topic Boundaries	Pag. 126
GRI 102-47	List of material topics	Pag. 39-43
GRI 102-48	Restatement of information	Pag. 102
GRI 102-49	Changes in reporting	Pag. 102
GRI 102-50	Reporting Period	Pag. 102
GRI 102-51	Date of most recent report	Pag. 102
GRI 102-52	Reporting cycle	Pag. 102
GRI 102-53	Contact point for questions regarding the report	Pag. 111
GRI 102-54	Claims of reporting in accordance with the GRI Standards	Pag. 102
GRI 102-55	GRI content index	Pag. 103 -107
GRI 102-56	External assurance	Not applicable as the organisation has opted for a self-declaration
Economic Indicators		
Informativa 201-1	Direct economic value generated and distributed	Pag. 46-48
Informativa 201-2	Financial implications and other risks and opportunities due to climate change.	Pag. 56-51
Informativa 202-2	Proportion of the senior management hired from the local community	Pag. 50
Informativa 203-1	Defined benefit plan obligations and other retirement plans.	Pag. 14, 29, 49, 54
Informativa 204-1	Proportion of spending on local suppliers	Pag. 49
Informativa 205-3	Confirmed incidents of corruption and actions taken	Pag. 50
Informativa 206-1	Legal actions for anti-competitive behaviour, anti-trust and monopoly practices	Pag. 50

Environmental Indicators		
GRI 302-1	Energy consumption within the organisation	Pag. 77-81
GRI 302-3	Energy intensity	Pag. 77-83
GRI 302-4	Reduction of energy consumption	Pag. 77-83
GRI 302-5	Reductions in energy requirements of products and services	Not applicable as Refining products do not have energy labelling
GRI 303-1	Interaction with water as a shared resource	Pag. 65-67
GRI 303-2	Management of water discharge-related impacts	Pag 67-70
GRI 303-3	Water withdrawal	Pag 67-70
GRI 303-4	Water discharge	Pag. 67-68
GRI 303-5	Water consumption	Pag. 65-66
GRI 304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	Not relevant as the refinery does not interfere with protected natural areas; the nearest area (not adjacent, about 3km NE) is the salt pans of Augusta. It is outside biotopes and archaeological sites. It intercepts areas <300m from the coast and <150m from watercourses and is adjacent to protected wooded areas.
GRI 304-2	Significant impacts of activities, products and services on biodiversity	Not relevant as the refinery does not interfere with protected natural areas; the nearest area (not adjacent, about 3km NE) is the salt pans of Augusta. It is outside biotopes and archaeological sites. It intercepts areas <300m from the coast and <150m from watercourses and is adjacent to protected wooded areas.
GRI 304-3	Habitats protected or restored	Not relevant as the refinery does not interfere with protected natural areas; the nearest area (not adjacent, about 3km NE) is the salt pans of Augusta. It is outside biotopes and archaeological sites. It intercepts areas <300m from the coast and <150m from watercourses and is adjacent to protected wooded areas.
GRI 304-4	IUCN Red List species and national conservation lists species with habitats in areas affected by operations	Not relevant as the refinery does not interfere with protected natural areas; the nearest area (not adjacent, about 3km NE) is the salt pans of Augusta. It is outside biotopes and archaeological sites. It intercepts areas <300m from the coast and <150m from watercourses and is adjacent to protected wooded areas.

GRI 305-1	Direct GHG (Scope 1) emissions	Pag. 75-76
GRI 305-6	Emissions of ozone-depleting substances	Pag. 58-60
GRI 305-7	Nitrogen oxides (NOX), sulphur oxides (SOX) and other significant emissions	Pag. 58-60
GRI 306-1	Water discharge by quality and destination	Pag. 67-68
GRI 306-2	Waste by type and disposal method	Pag. 70-74
GRI 306-3	Significant spills	Pag. 68-70
GRI 307-1	Non-compliance with environmental laws and regulations	Pag. 68-70
Social indicators		
GRI 401-1	New employee hires and employee turnover	Pag. 86-87
GRI 401-2	Minimum notice periods regarding operational changes	Pag. 90-91
GRI 403-1	Occupational health and safety management system	Pag. 92-96
GRI 403-2	Hazard identification, risk assessment and incidents investigation	Pag. 94-96
GRI 403-3	Occupational health services	Pag. 97
GRI 403-4	Worker participation, consultation, and communication on health and safety at work	Pag. 92-96
GRI 403-5	Worker training on occupational health and safety	Pag. 95-96
GRI 403-6	Promotion of worker health	Pag. 97
GRI 403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Pag. 92-96
GRI 403-8	Workers covered by an occupational health and safety management system	Pag. 92-96
GRI 403-9	Work-related injuries;	Pag. 93-96
GRI 404-1	Average hours of training per year per employee	Pag. 88-99
GRI 404-2	Programmes for upgrading employees' skills and transition assistance programmes	Pag. 88-89

GRI 404-3	Percentage of employees receiving regular performance and career development reviews	Pag. 88
GRI 406-1	Incidents of discrimination and corrective actions taken	Pag. 89
GRI 413-1	Operations with local communities' engagement, impact assessments and development programmes	Pag. 98-99
GRI 413-2	Operations with significant actual and potential negative impacts on local communities	Pag. 58-70

GLOSSARY

AIA: Integrated Environmental Authorisation

ATIEL: technical association for the lubricants sector

BAT: acronym for Best Available Technologies (BAT)

Best practice: good practices that lead to excellent results in a given area.

Sustainability Report with assurance: report audited by a third party

Bio attenuation: a method for monitoring the natural progression of degradation to ensure that the biodegradation process decreases with time at selected sampling points. It is often a method of cleaning up oil-contaminated soil and groundwater.

CODE OF ETHICS: adopted on a voluntary basis, it is a document that defines a set of ethical and social standards to which company representatives must adhere.

Contractors: literally Contractors

CORE BUSINESS: core activities

VOC: Volatile organic compounds

Data Privacy and DPO

ESG: acronym for Environmental, Social, Governance.

Greenhouse gases: gases present in the atmosphere that are able to retain, to a large extent, a considerable portion of the infrared component of solar radiation that strikes the Earth and is emitted by the Earth's surface, atmosphere and clouds.

GRI STANDARDS: Developed by the Global Sustainability Standards Board expert group, the GRI standards are the internationally recognised benchmarks for sustainability reporting.

ISO 14001: ISO 14001 is a voluntary international standard, applicable to any type of public or private organisation, which specifies the requirements for an environmental management system.

ISO 9001: ISO 9001:2015 "Quality Management Systems - Requirements" is the reference standard for quality management in any organisation.

JET FUEL: kerosene, a product obtained in large quantities from the primary distillation of crude oil.

LNG: acronym for Liquid Natural Gas

LPG: acronym for Liquid Petroleum Gas

LPS: acronym for Loss Operation System translated into Italian as Loss Prevention System (Sistema di Prevenzione Perdite)

Bitumen CE marking: a label stating that the performance of the product is measured and monitored in accordance with the applicable European technical regulations and therefore it may be placed on the market and freely move within the European Union.

Materiality matrix: this is a matrix used to highlight the issues considered most relevant to the company.

MODEL 231: is a set of protocols, which regulate and define the corporate structure and the management of its sensitive processes, and reduce the risk of criminal offences being committed.

NOx: Nitrogen oxides

UN: United Nations Organisation

SP: Safety Procedure

Refinery: Industrial plant in which the refining of a product, in this case oil, is carried out

Reliability: literally Reliability

CSR: Corporate Social Responsibility

SASB: acronym for Sustainable Accounting Standards Board is a non-profit organisation known internationally for developing sustainability accounting standards

SDGs: acronym for Sustainable Development Goals

RMS: Reliability Management System

EMS: Energy Management System

ECMS: Energy Control Management System

SGSA: Safety and Environment Management System

SHE: acronym for Safety Health Environment

SI Rating: an acronym for Sustainability Impact Rating, an innovative tool designed for all types of sectors and activities to assess and communicate the level of sustainability in a company.

SOC: acronym for Safe Operation Committee

SOx: Sulphur oxides

STAKEHOLDER ENGAGEMENT: stakeholder involvement

STAKEHOLDERS: stakeholders, those affected by the company's operations. They can be either internal (e.g. employees) or external (e.g. neighbouring communities) to the company core

STEWARDSHIP: administration/management

For comments, requests, opinions and suggestions for improvement on the sustainability activities of Sonatrach Raffineria Italiana and the information contained in this Sustainability Report, please contact



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