Eni Rewind 2020 Sustainability Report

Eni Rewind's Mission

We are Eni's environmental company.

We work according to the principles of the circular economy to enhance the value of industrial land and waste through efficient, sustainable reclamation and recovery projects.

We base our work on passion, skills and technological research to regenerate soils, water and recoverable resources.

We believe in dialogue and integration with the communities that host us.



🜔 Eni's Mission

We are an energy company.

13 15 We provide practical support to a socially equitable energy transition, with the aim of preserving our planet

- 7 12 and promoting access for everyone to energy resources in an efficient and sustainable manner.
 - 9 We base our work on passion and innovation. On strength and the development of our skills.
- **5 10** On equal dignity for people, recognising diversity as a fundamental resource for the development of humanity.

On responsibility, integrity and the transparency of our actions.

17 We believe in long-term partnerships with the countries and local communities that host us to create shared and lasting value.

OGlobal goals for sustainable development

The United Nations 2030 Agenda for Sustainable Development, presented in September 2015, identifies 17 Sustainable Development Goals (SDGs) that represent common sustainable development goals to deal with the current complex social challenges. These goals represent an important reference for the international community and for Eni Rewind in conducting its activities in the countries where it operates.



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Why read Eni Rewind's 2020 Sustainability Report? In its Sustainability Report, Eni Rewind wants to share the objectives whereby it proactively contributes to the energy transition and a fairer economy in line with Eni's strategy. In pursuing its mission, the Company is constantly committed to the valorisation of land, water and waste through sustainable remediation activities and the development of projects for the recovery of resources, according to the principles of a circular economy. The Company tackles the challenges of today bringing passion and expertise to research, technological innovation, digitalisation, the promotion of human rights and the building of alliances for the growth of local communities. The report describes the model of excellence whereby Eni Rewind operates in order to create long-term value in the territories where it is present, building new development opportunities through constant relations with stakeholders.

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Focus
HEALTH EMERGENCY

Message to stakeholders

In recent years, we have set our strategy based on the evolution of our business model, focusing strongly on creating value for all stakeholders over the long term, charting the path that will lead us to carbon neutrality in 2050. In pursuing this vision, we have strengthened our partnerships with international development and cooperation agencies and organisations, which represent effective leverage to mobilise resources that are not exclusively economic and support growth in the countries hosting us.

Claudio Descalzi, Chief Executive Officer of Eni

The second half of 2021 has opened with more optimism and significant signs of recovery, but the trend of the health and economic crisis, which has involved the whole world since last year, is still developing.

In OECD countries, the most acute phase has been overcome and we are recording slow but consistent improvement, thanks to the vaccination and economic recovery plans, supported by public funds and extraordinary organisational efforts, reminiscent of the post-war reconstruction years. In poorer countries, however, the health emergency is still serious and growing, due to the lack of vaccines, but also of hospital facilities and adequate economic resources to support the more fragile sections of the population and businesses.

In coming months, it will be essential to increase the production and distribution of vaccines more rapidly on a global scale, in order to reduce the mortality rate caused by the virus, but also the risk of new variants and resurgent pandemic waves.

Whatever applies to health and the health crisis, also applies to the environment and global warming: these are challenges to the planet, which we can only win if everyone plays their part and no one is left behind. These are challenges that require public rules and structures, but equally responsible behaviour, which involves each of one of us personally and in our interaction with others.

It has been widely agreed at international forums that to exit the crisis caused by the pandemic, with an acute and concomitant recession in all areas of the world, it was necessary to accelerate the energy transition and transform this into the primary leverage for economic recovery and development. An aspiration that our company has incorporated into its new name ReWIND, an acronym that summarises our operational strategy: Remediation and Waste into Development.

In this context, in addition to carrying out major production remediation and redevelopment projects in our areas of ownership and in the Eni extraction, refining, chemical and fuel distribution plants, representing annual expenditure of more than € 500 million, we are working on the construction of new industrial waste treatment plants, which will reduce our dependence on a market with shortfalls in supply.

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In Basilicata, plans are underway for the construction of a plant to regenerate the water extracted with the oil; in Ravenna, a process is underway to establish plants that will treat and recover contaminated land through bio-piles and for an environmental platform for industrial waste in a joint venture with Herambiente. In Porto Marghera, we will be building the first industrial-scale plant that will use the proprietary Waste to Fuel technology to transform the organic fraction of municipal waste into bio-oil and water, that can be reused for industrial purposes.

Furthermore, with the aim of transforming progressively from an Eni service company for environmental activities to a market operator servicing third party customers in Italy and abroad, we were assigned two important projects during 2020 that are still underway.

In April, we carried out a preliminary assessment of the soil and groundwater matrices at the former Ilva plant in Taranto for Arcelor Mittal and, in September, we received a second assignment to update the risk analysis and environmental design aimed at ensuring the steel hub's operational safety.

In December 2020, we were mandated by Edison to conduct the reclamation of the Mantua SIN Collina area, with a contract that includes the excavation in a confined environment, the characterisation and categorisation of the contaminated land, as well as the management of the related water treatment plants.

Based on a logic of knowledge sharing and partnerships, we have signed collaboration agreements with the main Italian companies that manage the collection and treatment of waste, but also with key players in the supply chain such as CONAI. Alliances aimed at investigating which waste treatment and recycling plants are most inadequate in each region, in relation to the progressive growth of separate collection and the European objectives for 2035, to reduce landfill disposal to below 10% and increase recycling by more than 65%.

This shortfall in supply, particularly in the regions of Central and Southern Italy, could be overcome by creating new hubs for the treatment and recovery of waste on reclaimed land or land made available as a result of the progressive conversion of refining and chemical sites, which have the ideal characteristics in terms of size, industrial context and logistics' infrastructure.

The conversion of the energy production and consumption model will be profound and radical, but inevitably also slow and complex.

It will be like completely renovating a building where many families live, all with diverse needs and preferences, mindful that the work could continue for at least thirty years.

It would certainly be easier to build from scratch, or at least to renovate the building while temporarily moving the tenants elsewhere. But it is precisely the extent and pervasiveness of the renovation that does not allow it, because the land is the first finite resource and because there will be multiple construction sites that will need to operate on a parallel basis.

The sequence of activities and their critical interrelationships must be clearly defined, in order to synchronise the phase-in with the phase-out, minimising the inconvenience and disruptions, whilst redeveloping pre-existing structures that can be integrated and enhanced.

We at Eni Rewind, are committed to providing our best contribution to these challenges and consolidating our offering of environmental services to third parties. A contribution focusing on creating long-term value for the territories where we operate, taking into account their specific nature and working in synergy with all stakeholders, based on dialogue and dynamic collaboration.

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Paolo Grossi Managing Director

Eni Rewind in summary

Eni Rewind is Eni's environmental company that operates in line with the principles of the circular economy to give new life to land, water and waste resources through efficient, sustainable reclamation and revaluation projects, both in Italy and abroad. Furthermore, Eni Rewind is engaged in the development of plants for the treatment of organic waste - especially OFMSW - which, based on Eni's proprietary "Waste to Fuel" technology, will produce bio-oil and biomethane, as well as recover water for industrial uses and irrigation.

Eni Rewind currently owns about 3,800 hectares of areas in Italy, about 65% of which fall within Sites of National Priority. Since 2003, the Company has spent more than \notin 3 billion on environmental interventions, 85% of which was used at the sites conferred by law or acquired through mergers in the 1980s and 1990s based on the political decision to engage Eni, when it was a State entity, in the rescue of industrial companies in crisis.

Eni Rewind is environmental global contractor for all Eni business lines, from upstream to refining, to chemistry and commercial activities. As of 2020, Eni Rewind has been providing environmental services to third parties, with the objective of progressively transforming from an Eni service company to a market operator.

Eni Rewind wishes to contribute to the sustainable development of the country with its wealth of experience, knowledge, technology and a systemic vision, in which all stakeholders interact with each other to pursue a common goal.



Eni Rewind in 2020









Eni Rewind around the world

Since 2018, Eni Rewind has expanded its activities abroad, making its environmental know-how available to Eni Companies around the world, also with a view to supporting development and cooperation.

After an initial analysis of the potential needs of Eni upstream activities and its associates, in particular in environmental engineering, soil remediation and water treatment, the Company has proposed projects at numerous sites in Africa, the Middle East and Asia.

The goal is to offer the skills consolidated in Italy beyond national borders, also through the numerous training and knowledge sharing activities, while extending its experience in the management of complex projects. To date, projects have been launched in Iraq, Nigeria, Egypt, Tunisia, Kazakhstan and Angola, alongside Eni's foreign subsidiaries. Furthermore, partnerships have been established with other operators in Bahrain and China.



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ANGOLA

In synergy with EniProgetti, Eni Rewind carried out the project for the development of a new plant for the treatment and recovery of production water for subsequent industrial reuse, as part of the Northern Gas Complex.

EGYPT

Eni Rewind supported the subsidiary International Egyptian Oil Company (IEOC) in the identification of circular economy projects and the regeneration of water resources at the Zohr site (the largest gas field in the Mediterranean discovered in 2015) and at El Gamil.

IRAQ

Since May 2018, Eni Iraq has been cooperating with Eni Rewind for the development of environmental initiatives in the territory of Basra, where Eni is engaged in the development of the large oil field of Zubair. In particular, remediation proposals with a significant social impact were presented to local stakeholders, including the construction of the Al-Buradeja and Al-Bardjazia water purification plants in the Basra area, based on the revamping and installation of new units. The interventions will improve the quality of water resources for about 150,000 people. Another important circular project entrusted to Eni's environmental company is dedicated to the treatment and re-injection of urban waste water from the Hamdan plant into the Zubair field.

KAZAKHSTAN

Eni Rewind supports the North Caspian Operating Company NCOC consortium (Eni stake 16.81%), which manages the Kashagan offshore field, with projects aimed at the treatment and valorisation of water resources, more specifically, the treatment of municipal waste water for recycling.

NIGERIA

Eni Rewind supports Nigerian Agip Oil Company (NAOC) in the design of solutions for the management and treatment of production water and rainwater at the Brass terminal, located south of Port Harcourt, where crude oil is stored for subsequent shipment by sea. Furthermore, characterisation plans have been undertaken in Brass and Clough Creek to identify the best solutions for soils reclamation.

BAHRAIN

Eni Rewind has signed a memorandum of understanding with the National Oil and Gas Authority of the Kingdom of Bahrain NOGA to identify and promote joint initiatives for the management, recovery and reuse of water, soil and waste resources in Bahrain, in line with the goals of the 2030 Agenda for sustainable development approved by the United Nations; See page 70

CHINA

On 29 September 2020, a Memorandum of Understanding was signed between Eni and the International Cooperation Centre (ICC) of the National Development and Reform Commission (NDRC) of China. The purpose of the MoU is to outline the areas of possible cooperation between Eni (including affiliated companies) and ICC-NDRC (including the appropriate companies and institutions) within the defined collaboration areas covering all Eni business lines.

In the scope of the MoU, Eni Rewind will contribute to identifying and developing collaboration initiatives related to the environmental remediation and water management sectors, in particular, by applying innovative and sustainable technologies.

TRANSVERSAL "WATER VALORISATION" PROJECTS

Eni Rewind has carried out a study on water management and valorisation in 10 areas of Eni's exploration & production upstream (Egypt, Iraq, Kazakhstan, Pakistan, Tunisia and Turkmenistan).

Eni Rewind in the Eni value chain

Eni is a global energy company, engaged in the entire value chain: from the exploration, development and extraction of oil and natural gas, to the generation of electricity from cogeneration and renewable sources, to refining and traditional and bio chemistry, through to the development of circular economy processes.

As part of its long-term strategy, Eni promotes a change of the energy paradigm and the transformation of the current economic model. In more industrialised countries, the linear economy model is progressively evolving into a more sustainable, responsible and inclusive economy, with production processes that include the recovery, regeneration and reuse of natural resources and the goods produced.

In this scenario, Eni Rewind has identified strategic objectives and initiatives promoting a new circular economy, combining environmental activities with the regeneration of soil, water and waste through their efficient management and innovative recovery projects, in synergy with the territories. A commitment that the Company pursues by contributing tangibly and transversally to the Eni value cycle.

Eni Rewind's contribution to the Eni value chain





The Eni business model

Eni's Business Model aims to create value for all stakeholders, through a strong presence along the entire energy value chain. Eni aims to contribute, directly or indirectly, to the achievement of the United Nations 2030 Agenda of Sustainable Development Goals (SDG), supporting a socially equitable energy transition, which responds with tangible and economically sustainable solutions to the challenges of combating climate change and providing access to energy for all in an efficient and sustainable manner. Eni organically combines its business plan with the principles of environmental and social sustainability, extending its range of action in three directions: 1. operational excellence, 2 carbon neutrality by 2050, 3. alliances for development.



The Eni Rewind integrated model

Eni Rewind, an acronym for Remediation & Waste Into Development, also means rewinding time, going back to capitalise on what we have learnt and building a new alternative with a sustainable approach into the future.

Based on its integrated end-to-end integrated model, Eni Rewind monitors each phase of the remediation and waste management process, and, right from the earliest stages plans projects for the enhancement and reuse of resources (soils, water, waste), making them available for new development opportunities. In carrying out its activities, Eni Rewind integrates the principles of environmental sustainability and applies the best available technologies on the market, with the aim of maximising the effectiveness and efficiency of its interventions. To this end, the Company collaborates with Eni research centres and with top national and international universities and institutes, inspired by the values of innovation and technological excellence.

Eni Rewind promotes dialogue with all stakeholders, to ensure that its projects translate into concrete opportunities for the territories where it operates.



Eni Rewind and the Sustainable Development Goals

On 25 September 2015, the United Nations adopted the 2030 Agenda for Sustainable Development, an "action programme for people, the planet and prosperity" articulated in 17 Sustainable Development Goals (SDGs), which in turn are based on 169 targets. An historic agreement, whereby more than 190 governments of the member countries of the United Nations expressed a "clear judgement on the unsustainability of the current development model", promoting an integrated vision of the different economic, social and environmental dimensions of development. Member countries are committed to achieving the SDGs by 2030. The implementation of the 2030 Agenda requires the involvement of all components of civil society: institutions, universities and research centres, the media and businesses. For this reason, in agreement with Eni, Eni Rewind promotes an integrated and organic vision of all 17 Sustainable Development Goals and incorporates the related goals into its operating model.

Eni Rewind's efforts contribute to Eni's sustainable business strategy, whose long-term goals include decarbonisation, the development of renewables and the protection of the environment, technological innovation, research and development, digitisation, human rights, the definition and construction of alliances, the sharing of know-how and local development projects.



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₽ ŢŢ	CARBON NEUTRALITY BY 2050	Energy transition and circular economy	Promotion and implementation of sustainable remediation interventions Regeneration of brownfield/reclaimed land Increased share of treated and reused water Optimising consumption in water management Increased percentage of waste destined for recovery Waste to Fuel plant design on an industrial scale in Porto Marghera 158 million in decarbonisation and circular economy projects	6 MEAN MATHEM 7 MERIONALE AND 9 MONTRY INNOVATION 11 SUSTAINABLE CETES Image: Comparison of the comp
	OPERATIONAL EXCELLENCE	People and Health	Training: design and development of professional career paths Promotion of Diversity & Inclusion initiatives Projects dedicated to health promotion and care Strengthening of work-life balance initiatives	3 GODHEATH A GOLLTY A GOLLTY D I D I D EDWARD S BECK S BE
		Safety and Environment	Initiatives to raise awareness of employees and contractors on HSE aspects Continuous improvement in safety leadership, launching the THEME pilot project Adopting tools to analyse weak signals (HSE pre- sense; Root Cause Analysis) Process Safety: gap analysis conducted for groundwater treatment plants with respect to process safety standards Participation in the RENTRI trial for environmental logistics	3 GOOMEATH A BOALTY A BO
		Human Rights	Application of Eni human rights guidelines Dissemination of the Supplier Code of Conduct	4 BUCKTUR 8 BESSET WARK WOL 10 BERGERTURS 10 BER
		Integrity in business management	Continuous improvement of the Anti-Corruption Compliance Programme Application of methodology to segment the population for anti-corruption training purposes Contribute to the promotion of legality agreements in more complex remediation sites	16 ASTRE AST
	ALLIANCES FOR DEVELOPMENT	Local Content and partnerships for sustainable and circular development	Promotion and development of projects for the dissemination of environmental know-how Enhancement of technical, natural and cultural heritage through projects, investments and events/ sponsorships as part of the territorial inclusion and integration actions Signature of agreements and partnerships for sustainable and circular development	4 SMULTION 6 SEGNEWARDER 8 SECOND WORK MORE 9 MORENT MORE MORE 11 NETRAMARETERS 12 SOCIONED 15 MELAN 17 REFINE COLL 11 NETRAMARETERS 12 SOCIONED 15 MELAN 17 REFINE COLL
	TRANSVERSAL THEMES	Innovation and digitalisation	Expected R&D investments in the period 2021- 2024: about € 14 million Partnerships/agreements with the academic world for the development of innovative remediation and resources valorisation solutions	6 REAMATER PROFILE PROFILE RECORDER TO A CONTRACTOR RECORDER TO A CONTR

Eni Rewind's Governance

Eni Rewind is subject to Eni's management and coordination activities and has a Corporate Governance system designed to effectively comply with the principles of integrity and transparency. Following the Eni guidelines, the system attributes the responsibility for management to the Board of Directors, the supervisory functions to the Board of Statutory Auditors and the financial auditing to the Independent Auditors.

Eni Rewind's current macro-structure includes six business support functions and two operational lines under the Chief Executive Officer (in addition to the subsidiary Ing. Luigi Conti Vecchi SpA), as represented below.



Eni Rewind's operational activities are organised into two departments that coordinate the Remediation and Water and Waste Management activities:

- "Environmental Technical & Site Activities": integration of engineering, technological innovation and operational management of environmental recovery projects, to promote the development and application of increasingly effective and efficient remediation technologies, the revalorisation of remediated areas and the identification of new development opportunities, including those abroad;
- "Water and Waste Management": manages the treatment/disposal of water and waste, through governance of the supply chain, the development of strategic partnerships and plant operations, maximising recovery and regeneration.

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Integrated Risk Management Model

Eni Rewind has adopted the Integrated Risk Management Model developed by Eni, aimed at ensuring that management makes informed decisions, taking into adequate consideration current and future medium- and long-term risks within the framework of an organic and dynamic vision. The integrated risk management model:

- assigns a central role to the Board of Directors, which defines the nature and level of risk compatible with the strategic objectives, assessing all the risks that may be relevant to the sustainability of the business in the medium to long term;
- plans a corporate risk analysis through periodic risk assessment & treatment and monitoring cycles, the results of which are presented to the Board of Directors and Control bodies;
- is based on assessments that consider potential impacts that are both quantitative (economic-financial operational) and qualitative (environment, health and safety, social, reputational).

The main risks that the Company is exposed to in the ordinary management of its activities are:

External risks COUNTRY		 Critical situations in the phase of obtaining authorisations for remediation activities and circular economy projects (Permitting)
	FINANCIAL	"Guarantees, commitments and risks"
	REGULATORY DEVELOPMENTS	Operational impacts related to the evolution of HSE Information
Strategic risks	STRATEGIC	Relations with Stakeholders
Operational risks	OPERATIONAL	 Delay in carrying out remediation activities Accidents involving workers and/or contractors Critical nature of waste management Unexpected discovery of contaminants Evolution of the Business Model
	INVESTIGATIONS AND DISPUTES	Unethical behaviour reported in the procurement process by personnelInadequacy of the supplier base

The top risk for Eni Rewind remains the risk related to the potential critical problems and delays in obtaining preliminary authorisations for remediation activities ("permitting"). The Company pursues specific risk mitigation actions which, in recent years, have consistently reduced the probability of their occurrence and the relative impact on activities. At the end of 2020, there were 9 projects pending authorisation (down from 12 in December 2019). The reduction in exposure was confirmed during the 2020 Annual Risk Assessment, with the consequent downgrading of the probability of their occurrence and derisking of the "permitting" process.

Certifications

Eni Rewind constantly works to protect the environment, protect the health and safety of all workers and ensure quality service that responds to the multiple and diverse needs of public and private customers. Eni Rewind's commitment is guaranteed by timely compliance with current legislation on the subject and the voluntary adoption of an integrated management system for HSEQ aspects, with the entire Company covered by a single certification pursuant to the "Environment" UNI EN ISO 14001, "Quality" UNI EN ISO 9001 and "Health and Safety" UNI ISO 45001 standards, recognised internationally and issued by the ISO International Organization for Standardisation). In 2020, the Company implemented the new ISO 45001 of 2018 requirements ("Occupational health and safety management systems – Requirements with guidance for use"), obtaining the relative certification. Furthermore, in June 2021, Eni Rewind obtained SOA Certification, in the OG 12 and OS 22 categories; the mandatory certification for participation in tenders to execute public works contracts.

attesla	SOA OG 12 and OS 22 certification	Mandatory certification for participation in public tenders to execute works, with an auction amount higher than \notin 150,000.00. Eni Rewind has obtained certification for its core activities, in the general category OG 12 – Remediation and environmental protection works and plants and in the specialised category OS 22 – Drinking water treatment plants and purifiers.
Member of CISQ Federation	UNI EN ISO 14001 of 2015	The ISO 14001 standard is an international instrument outlining the
CERTIFIED MANAGEMENT SYSTEM	Environmental management systems - Requirements	parameters of the Environmental Management System, created to certify the commitment to reduce and prevent the impact of polluting activities and enhance any opportunities that may emerge from the context analysis.
Member of CISQ Federation	UNI EN ISO 9001 of 2015	The ISO 9001 standard is a globally recognised instrument for the cer-
CERTIFIED MANAGEMENT SYSTEM	Quality Management Systems - Principles and glossary	tification of the Quality Management System that guarantees the abili- ty of an organisation to manage resources and business processes in order to ensure the final satisfaction of customers, with a commitment to constant improvement.
Member of CISQ Federation	UNI ISO 45001 of 2018	The ISO 45001 standard is an international instrument outlining the
	Occupational health and safety management systems - Requirements and guidance for use	requirements for the implementation of the Occupational Health and Safety Management System and provides for the continuous and pro- active improvement of company performance in terms of people's health and safety.

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Environmental laboratories

The quality of Eni Rewind environmental activities is managed directly by 3 environmental laboratories located in the region (Ferrara, Priolo Gargallo and Assemini), which represent the national points of reference for the sampling and analysis of environmental indices. The laboratories equipped with modern, high-tech scientific instruments, are accredited by ACCREDIA for the main analytes relating to the soil, groundwater, sewage and gaseous emissions environmental matrices, in compliance with the requirements of UNI EN ISO IEC 17025: 2018 "General requirements for the competence of testing and calibration laboratories".

ISO 26000

In 2019, an analysis was carried out with the support of RINA, regarding Eni Rewind's level of application of the international standard ISO 26000 "Guidance on social responsibility". The analysis, which included visits to operational sites and interviews with external stakeholders, confirmed the Company's excellent performance in this area, suggesting certain actions be undertaken during 2020 with a view to continuous improvement.

Stakeholder engagement activities

Eni Rewind believes in proactive engagement with stakeholders and is committed to building relationships based on dialogue and transparency. This increases the trust of stakeholders and improves decision-making processes aimed at pursuing the development and regeneration objectives at the sites where we operate. The Company adopts a participatory approach that involves stakeholders from the early stages of a project and the pooling of technologies and skills. Our ability to work as a system, and create value over time derives from this synergistic and constructive outlook.



The remediation of disused lands is an opportunity both from an environmental point of view and for the productive redevelopment of areas. From this viewpoint, it is essential to establish alliances and cooperation with the various stakeholders from public, private and civil society sectors. The combination of skills and innovation with a focus on listening and inclusion allows Eni Rewind to promote a more sustainable future for all, contributing to the development of the circular economy and the energy and ecological transition. Eni Rewind's constant dialogue with stakeholders in all project stages allows us to identify potential critical issues and, through dialogue, promote convergence, taking into account the parties' different needs. This allows the Company to anticipate and resolve potential conflicts that could affect the implementation of projects. This commitment has led to the consolidation of a virtuous practice of technical dialogue, through dedicated tables, ensuring in-depth knowledge of environmental and revalorisation interventions prior to Service Conferences. A method that has helped increase the number of approved projects and obtain the relevant local authorisations, without which activities and operations cannot start.

Once again in 2020, Eni Rewind received important authorisations from the Ministry for the Ecological Transition and other local authorities for remediation and regeneration projects. The significant acceleration in recent years has allowed for almost all operational remediation projects to be decreed in all Sites of National Interest, at the end of 2020.

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Stakeholders	2020 Engagement activity
National and international institutions	 Periodic meetings and consultation tables with Authorities (MiTE - Ministry for the Ecological Transition, MISE - Ministry of Economic Development, MIBACT - Ministry of Cultural Heritage and Activities and Tourism, ISPRA - Higher Institute for Environmental Protection and Research, ISS – Higher Institute of Health, INAIL - National Institute for Insurance against Accidents at Work, ARPA - Regional Agencies for Environmental Protection, ASL – Local Health Authorities, Regions, Provinces, Municipalities, Port Authorities, Superintendencies) for technical discussions and examination of the projects presented; Visit by a Parliamentary delegation to the Porto Torres site and of the Parliamentary Committee of inquiry into waste at the Gela site; Signing of an Agreement between ISPRA and UNEM (Energy for Mobility Union - former Petroleum Union) for the promotion of technological innovation in remediation activities, including passive sampling.
Local Communities	 Gela Circular Tour; Sponsorship of the 44th Maremma Rally Trophy in the Colline Metallifere area of Tuscany; Donation of employee hours to the Red Cross; Local initiatives in support of anti-COVID-19 measures: 400 suits against biological risks (EN-14126) were supplied to the Piedmont Region/Civil Protection and masks were supplied to the Municipality of Melilli.
Trade Unions	 Continuous dialogue and discussion to support the development of the Company's organisation and the achievement of business objectives.
Civil Society	 Workshop at Ecomondo on the most innovative and environmentally friendly remediation techniques, including proprietary techniques; Publication of a handbook on environmental remediation technologies made available to stakeholders, including through the website, focusing on proprietary technologies among which e-hyrec; Agreement with LIPU (Italian League for the Protection of Birds) for securing pathways in the N.O. Saline reserve in Priolo.
Customers	• Series of meetings to illustrate Eni Rewind's mission and know-how to Italian institutions and major companies, with the aim of initiating discussion on the main environmental and regeneration interventions in the country.
Industrial Partners	 Memorandum of Understanding with Herambiente for the establishment of a joint venture that will create a multifunctional platform for the pretreatment of special waste in the Ravenna industrial area; Agreements signed with major Italian utilities to initiate collaboration for the management of special industrial waste, optimisation of waste processes and identification of innovative "End-to-End" and "closing-the-loop" plant solutions. See page 39
Universities and Research Centres	 Eni Rewind has become an institutional partner of the Ca' Foscari Foundation; A new agreement has been signed with Ca' Foscari for the application of models for the assessment of Eni Rewind's work in terms of sustainability (ecological risks and socio-economic impacts).
Eni Rewind People, Suppliers	 Campaign to raise awareness on an environmental culture through a series of training initiatives (e.g. Relay project, "remediation of contaminated sites") and information (e.g. "Short clips" on regulations, leaflets, Lessons Learned); A new format of the Pact for Safety and the Environment was carried out at two pilot sites; Stakeholder Management System training for approximately 100 resources.
Media	In 2020, more than 300 articles were published by major national and local newspapers with references to Eni Rewind

Interview with Giuseppe Vadalà

Contaminated sites represent a problem but also an opportunity for the country system: what strategy and actions can accelerate the operation of remediation interventions?

Based on our operational experience, and the method we have implemented that was developed over the last four years, the following three priorities definitely emerge as fundamental tools, and are vital when developing a strategy: synergy with all stakeholders in the sector, joint action by the public administration involved and, above all, transparent cooperative dialogue between the public and private sectors.

Could you give us two examples of the best and worst practices? What are the main factors to reproduce the best cases, and what should be avoided to replicate the critical issues found?

A complex question with many implications as it also refers to the Country System, and which would need a great deal of thought and many more words in response, but in summary the answer is simple: everyone pursuing the final objective, speeding up and simplifying the administrative process (we have found that the duration has unfortunately often become a "worst practice", where in some cases it can even take 10 years to conclude a procedure that we have defined in less than 3). Time is sometimes an indefinite variable that is "priceless", but which is rather the fundamental prerequisite for a good remediation or for securing safety. In this sense, the "best way" is dialogue, without hiding behind positions and directing every action towards the objective of de-pollution and returning the restored areas to communities, therefore "doing things well and fast", but all together.

Does the fact that you are part of law enforcement facilitate and speed up the dialogue with Entities? And more generally with regions?

No doubt, belonging to the Carabinieri and their contribution to this mission represents the key that has unlocked the procedural stalemates, and the means that has primarily supported us in this task; being Carabinieri means representing values and having "operational characteristics" that are recognised and that have supported us in our mandate and helped us in our relationship with all parties. As is our tradition, we have established a great capacity for dialogue and listening that reflect the values that the Carabinieri represent and put in place in every corner of the country, through one of the more than five thousand Carabinieri stations, the value of proximity, support, of "never abandoning anyone", at the service of citizens and populations.

How can the important synergy between public and private stakeholders and with the territories be strengthened, so that remediation becomes a real opportunity for growth?

Conducting dialogue in order to understand each other, understanding each other's ways, acting together towards shared strategies, trying to increase synergy that is no longer parallel but substantially coordinated and oriented towards the goal of improving the country. Acting by drawing up guidelines that prevent the recurrence of misconduct, that protect the environment and that guarantee legality, transparency in our actions and common goals for remediation, in our opinion, these are the assets that we need to focus on for a dynamic and appropriate relationship between the public sector and private sector.

What is the role and contribution of universities and societies in this "networking"?

Staying in the context of synergy between subjects of the sector: the role of Study Centres, Universities, researchers and science, the National Environmental Protection System (S.N.P.A.) – Higher Institute for Environmental Protection and Research (I.S.P.R.A.) – regional agencies (A.R.P.A.) in general represents a primary function because combining the "agents" with the "thinkers" is an exemplary criterion and synonymous with excellence in results. Uniting the country towards a collegial synergy aimed at environmental recovery for the complete development of citizens' well-being is a basic assumption. In this sense, continual dialogue with Universities, Research Centres is vital, namely the professors, researchers and graduate students, as well as officials, because the future is built by being propped up by the veterans, but starting from the young. The I.S.P.R.A. – A.R.P.A. System is a national model that is also recognised abroad and by the European Union as a sentinel of healthy territories and we work closely together at each stage of the remediation process to be "fast and good" in this mission.



Brigadier General of the Carabinieri **Giuseppe Vadalà** Extraordinary Commissioner for the Remediation of Illegal Landfills

Innovation and digital transformation

We participate in the strategy and commitment of Eni in the process of digital transformation and technological innovation, fundamental pillars for growth in value, aimed at making the business increasingly integrated and resilient. This evolution optimizes the efficiency and quality of environmental interventions, contributes to reducing risks as well as improving the physical safety of people and the integrity of assets.

From this perspective, research and engineering activities are integrated and refer to each phase of the life cycle of soil and groundwater remediation projects, as well as waste management, with the aim of progressing in terms of environmental sustainability and effectiveness, but also energy efficiency and safety.

P

Remediation technologies handbook

In November 2020, Eni Rewind developed a handbook on remediation technologies, making available the know-how gained in the field over the last twenty years, and providing a review of Eni's innovative technologies and methodologies, such as e-hyrec and e-limina. An interdisciplinary guide that takes into account both the specific type of contaminants and the environmental context, with drawings, diagrams, infographics and photographs, aimed not only at professionals but also whoever, albeit without a specific background, would like more information on the complex world of remediation **7** To find out more: enirewind.com



E-hyrec[®] technology

e-hyrec[®] is an automatic device that is positioned inside pumping wells for the selective removal of hydrocarbons (LNAPL - Light Non-Aqueous Phase Liquid or supernatant) from groundwater. The heart of the technology consists of a hydrophobic filter (patented by Eni) capable of separating and extracting only the portion of contaminant from the aquifer, with a significant reduction in the quantities of water and waste sent for disposal. Compared to traditional systems, the application of the e-hyrec[®] device ensures faster, more effective and efficient groundwater reclamation, making an important contribution to the protection and preservation of water resources. So far, thanks to the 36 e-hyrec[®] devices installed at our Gela, Priolo Gargallo and Porto Torres sites and at the remediation sites of some service stations, we have recovered over 260,000 litres of supernatant oil in much less time than traditional technologies, avoiding the disposal of more than 1,000 tons of equivalent waste. By 2022, we will be implementing e-hyrec[®] devices at other Eni Rewind sites in Italy. At the same time, in the context of growth outside the captive Eni market, e-hyrec[®] devices are also being made available in the environmental services to external customers. **A see page 37**



Passive samplers with polyethylene film (LDPE)

The monitoring methodology, developed in cooperation with Eni research and certain national and international universities, like the Massachusetts Institute of Technology, makes it possible to assess the leaching of contaminants from soil to groundwater and their volatilisation from soil to the surface, based on the use of simple films of polyethylene (LDPE). This makes it possible to more accurately determine the actual distribution of contaminants in the different environmental matrices (soils and water), which is useful in defining the remediation interventions that more closely correspond to the effective need for remediation and there where contamination is present. During 2020, field testing activities continued jointly with local control bodies and an Agreement was signed between ISPRA (Istituto Superiore per la Protezione e Ricerca Ambientale) and UNEM (Unione Energie per la Mobilità - former Petroleum Union) for the promotion of technological innovation in remediation activities, including passive sampling, which already plays a leading role. The aim is to test and validate its applicability as a simple and alternative tool to traditional monitoring systems, giving further impetus to field tests already started at the Porto Marghera site. Starting from 2021, we have planned joint testing and validation campaigns at different Eni Rewind sites, including Gela and Porto Marghera.



E-limina® method

The e-limina[®] method (acronym for eni linking isotopic and microbial investigations aid natural attenuation), born from Eni research, consists of the combination of two monitoring systems, microbiological fingerprinting and isotopic fingerprinting, in order to establish the existing biodegradation status of contaminants and evaluate the opportunity for biological treatment. It has been developed and validated for volatile organohalogenated compounds and hydrocarbons and is applicable to any type of matrix both during characterisation, to accelerate the natural attenuation phenomena already present, and during monitoring to verify the biodegradation status of contaminants in real time. It is a highly selective and high precision method, therefore making it possible to reduce the risk margins that many remediation techniques share. In particular at the Ferrara site, thanks to the use of the e-limina[®] methodology, a reduction of about 80% has been recorded in the main pollutant load (dichloroethane). **A see page 31** Ø

Partnerships with universities

Research and development activities are carried out in conjunction with Eni research facilities and through a network of collaborations with various Italian and foreign universities, from the Polytechnics of Milan and Turin to Ca' Foscari University in Venice, La Sapienza University in Rome and the Alma Mater Studiorum in Bologna, from the National Research Council to the Massachusetts Institute of Technology - MIT. The continuous dialogue with academic institutions provides the tools to continue along the path of selecting technologies based on sustainability. With La Sapienza University in Rome, we continued the process of identifying new innovative and more sustainable solutions related to groundwater treatment, such as recirculation wells and reactive permeable barriers. Furthermore, research initiatives have been initiated with the Alma Mater Studiorum in Bologna and Rome Tor Vergata Universities in the field of sustainability, circularity and innovative tools for environmental research. With the Cà Foscari University Foundation in Venice, the activities for the validation of the model for the assessment of the sustainability of environmental techniques and interventions were completed last year, with the implementation of indicators deriving from the Life Cycle Assessment. This collaboration will also lead to the drafting of Guidelines for ecological risk assessment (ERA) that can be adopted on water, soil and sediment matrices, potentially affected by contamination and will be applied to practical case studies Augusta inlet, Vallivo area at the Mantua site). Collaborations and projects continued on a parallel level with the Polytechnic of Milan for the study and experimentation of the applicability of thermal desorption technologies, by means of a rotary oven and in accumulation, and with the Polytechnic of Turin, for the first phase to develop an application tool for the definition of groundwater and water treatment trains related to extraction activities according to the contaminants present, with the aim of reducing the environmental footprint compared to traditional technologies.

Ground Circulation Wells

This type of technology is applicable to secondary sources active in groundwater for different pollutants, such as hydrocarbons, heavy metals and aged sources, i.e. all those situations where a progressive concentration of residual contaminants has occurred in areas that are difficult to access using traditional systems. This is made possible by a mechanism that recirculates the water around the well with vertical movements, which cannot be achieved using traditional pumping systems. The on-site technology consists of implementing multi-window wells, which can be activated in different ways. Each window, connected with independent pumps, can work during extraction or for the re-injection of the water into the aquifer, after an external treatment path, thus creating different "circulation cells". All this takes place without waste water being produced. The technology also has multi-level sampling systems to verify the effectiveness of the recirculation, but also the possible stratification in the contamination. In cooperation with the Sapienza University in Rome, a well recirculation system was successfully installed and applied at the Manfredonia/Monte Sant'Angelo site of national priority, with the objective of optimising the groundwater remediation intervention.



- 1 Remediation well with upper and lower windows
- 2 Pump
- 3 Packer (section isolator)
- 4 Extraction line
- 5 Reinjection line
- 6 Aquifer level

Interview with Prof. Marco Papini

How can technical collaboration between academic institutions, private entities and the State promote the development of new more sustainable remediation technologies? What are the benefits of applying innovative technologies?

Applying the concept of "sustainability" to remediation interventions may not be immediately apparent, as would be the case in a traditional production process. In the case of remediating polluted sites, one of the essential elements in order to assess the actual sustainability of the identified process, understood as all the consequent economic, social and environmental impacts, is the effective ability to achieve the expected result. Especially in the case of historical and complex contaminations, characterising most sites of national priority, the construction of sufficiently robust conceptual models for the location and perimeter of active secondary sources is an indispensable prerequisite when selecting the most appropriate intervention process or strategy. For this purpose, it is therefore necessary, if not indispensable, to use innovative technologies, both for the characterisation and for processing and representing the results, that go well beyond the traditional methods. Only consistent sharing and technical collaboration between the world of research, private entities and public administrations can effectively contribute to the introduction of truly sustainable approaches to managing polluted sites.

From the perspective of an increasingly sustainable approach to remediation activities, what contribution can the Ground Circulation Well technology make?

Over the last few years, the collaboration between the Faculty of Chemistry at Sapienza University in Rome and Eni Rewind has aimed at finding technological solutions that could improve the "sustainability" of the approaches proposed, especially in the management of complex sites. One of the essential aspects was to shift attention from simply managing the plumes of contamination (this process is nonetheless very onerous both from an economic and environmental perspective) to the combatting of active secondary sources, which in many cases with historical contaminations are located in aguifers rather than in unsaturated portions of the subsoil. Among the various technologies considered, the so-called recirculation wells (Groundwater Circulation Wells) have been identified as a particularly flexible and effective solution, for the very reason that they address active sources in the saturated portions of the subsoil. Based on this technique, the conveyance of contaminants from the matrix concerned is facilitated, with the localised removal of the groundwater, to a suitable treatment system and the purified water is continuously returned to the same well that was used for collection. In this way, the water resource impacted by contamination is then preserved. This process is already being applied on a pilot scale with successful results, at the Manfredonia site for acceleration in the remediation of the groundwater affected by the historical contamination by As. This technological approach has already been included in additional pilot projects and operational remediation projects as a targeted solution against sources of contamination, both from hydrocarbons and chlorinated solvents.

What other areas are being explored to find on-site remediation solutions, based on the synergy between universities and industry?

Driven by the concept of the "sustainability" of remediation interventions, technological solutions are currently being explored based mainly on the possibility of intervening effectively in situ on contamination sources, without having to move the polluted matrix. Among the various processes, we are focusing attention on those based on stimulating the natural biodegradation capacity of the microbial communities that are selected in the sites impacted by contamination (especially in the case of potentially biodegradable organic contaminants). The combination of advanced approaches in the microbiological characterisation of environmental matrices with identifying appropriate soil improvers, capable of supporting this natural degradation capacity, is currently one of the main objectives of our joint research. In addition, a study is being carried out on the overall strategies in managing the remediation process that can identify not one, but a sequence of interventions, which may also be profoundly different in nature (chemical, physical, biological or thermal), so as to be able to gradually adapt to the progressive evolution of the contamination sources.



Prof. Marco Petrangeli Papini "Sapienza" University in Rome

Digitisation



Waste Management

Eni Rewind's waste management model adopts the best available technological solutions on the market and optimises the distance between the source site and the delivery facilities, minimising environmental impacts. Currently, Eni Rewind is automating some document control activities, enhancing data traceability and increasing the efficiency of operational activities. The project started in 2019 involves the development of three components: Planning, Operational Management, Monitoring & Reporting.

Water management

The implementation of the automation and digitisation of groundwater treatment plants (GTP) continues so as to increase ground water remdiation processes efficiency and reduce risks. In 2020, another 6 plants were remotely connected, bringing the plants managed by the central control room in San Donato Milanese to 25 out of 42. The digitisation process involved the implementation of a portal (E-Portal TAF) through which it is possible to monitor the quantities of water treated and reused by the plants and the driving factors of all operational assets. The control room, operating 24 hours a day, achieves the following objectives: analysis of system reliability and performance, increased safety levels, control standardisation, savings on utilities and reagent consumption. Furthermore, thanks to greater operational and organisational flexibility, it is possible to dynamically identify the optimal control strategy (APC) of the water treatment system.



Security

Since 2019, we have been contributing to the digitisation process with the "Digital Security Project Eni Rewind Italia", which aims to increase the prevention and protection of corporate sites from security risks such as intrusions, sabotage, vandalism and arson. The project, mapped in the Eni Digital Agenda, involves the installation of intelligent video surveillance systems and robotic rovers for intrusion prevention and the remote thermal detection of fires. The videos and alarms, which are acquired in real time and in georeferenced mode, are transmitted to a Security Control Room, which is manned 24 hours a day. Eni Rewind has also implemented an interactive dashboard to analyse and digitally monitor security risks in the numerous abandoned sites managed on behalf of Eni Green/Traditional Refining and Marketing (423 points of sale and industrial sites). The application of these technological tools significantly optimises the effectiveness and efficiency of our actions making it possible to maximise prompt intervention on site and implement immediate mitigations in the field, in the event of security problems.



Environmental procurement

The solutions offered by technological innovation are also implemented in various areas of environmental procurement, with the aim of facilitating operations and increasing data security. In 2020, eniSpace, - Supplier Portal And Collaboration Environment was launched. This platform combines communication, collaboration channels, an open Innovation tool and classic Procurement processes. The digital space between Eni companies and their current and future suppliers allows them to stay updated on Eni business initiatives, share common goals and best practices, stimulate ideas, work and grow together on the sustainable transition pathway.



Carbon Neutrality by 2050

Energy transition and the circular	
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Eni has developed a new strategy with a short, medium and long-term evolutionary path that envisages the achievement of carbon neutrality by 2050, including direct and indirect GHG emissions throughout the entire life cycle of activities and products.

The business model adopted in this regard includes not only the reduction of emissions but also the development of alternative businesses such as renewables and new businesses based on circularity and the valorisation of resources. The Transition will require the decommissioning of several existing plants and remediation of abandoned areas that could house new assets, thus reducing land consumption to a minimum. Furthermore, as water scarcity is constantly on the rise and waste generation needs to be reduced. sustainable and forward-looking management aimed at maximising reuse and recovery is essential.

27

Energy transition and circular economy



Why is it important to Eni Rewind?

The leverage of the circular economy represents a key factor in Eni's path towards carbon neutrality by 2050, based on an approach that looks at the entire life cycle of products and processes. At Eni Rewind, this perspective is assured through research into continuous development and the ability to regenerate disused industrial sites, as well as to valorise water and waste resources, laying the foundations for developing new projects. Environmental sustainability in all our interventions is an indispensable element for the growth of lasting value over time.

POLICIES AND OTHER REGULATORY INSTRUMENTS

HSE management process integrated into a Management System Guideline; Eni Rewind Health, Safety, Environment, Public Safety and Quality Policy. Eni Rewind's Integrated HSEQ Policy enhances the Company's circularity aspects and processes.

PROGRESS IN 2020

- +50 ha of areas freed up after remediation (hectares intended for reuse)
- +1 million m³ of water recovered (6.1 million m³ vs 5.1 million m³ in 2019)
- +19% recovered vs. recoverable waste (78% vs. 59%)
- · Optimisation of consumption in plant management
- Reduction of weighted average Km/ton travelled for waste management
- W2F plant design on an industrial scale at Porto Marghera

TARGETS

- Increase land regenerated and made available to the community
- Optimise/Increase the efficiency of water treatment
- Increase volumes of treated water destined for reuse
- Maximise the recovered/recoverable waste ratio
- Development of Waste to Fuel plants on an industrial scale

CIRCULAR OUTPUT REUSE, RECYCLING AND RECOVERY Generate value from waste: Minimising waste, maximising recovery: water management and treatment in order to optimise reuse and reduce the use of water from nature; promoting waste recovery and the use of in-situ and on-site remediation technologies transforming organic waste into Reuse of treated water for the bio-oil and water recovery production of demi water for industrial use; Blue Water technology; research and development of bioremediation technologies CODESIGN AND XTENSION OF INDUSTRIAL **SYMBIOSIS** €158 MLN SERVICE LIFE Researching and promoting existing industrial, INVESTMENTS environmental and socio-economic synergies 2021-2024 in host territories. CDP MOU; Herambiente other local partnerships (Ponticelle Project, W2F Marghera) Batch remediation projects; Ponticelle redevelopment project; land reclaimed for the

The road map towards energy transition has been charted in the Green Deal at European level and includes measures for sustainable, inclusive and equitable growth. This objective will be achieved through economic growth based on the rational use of material and natural resources, transforming climate issues and environmental challenges into opportunities. Eni Rewind is ready to make a tangible contribution by making available skills and know-how, and undertakes to achieve the objectives of sustainable development by searching for new redevelopment and regeneration solutions for natural soil and water resources, as well as industrial, remediated and organic waste, based on the principles of zero consumption and zero waste.

Besides eliminating contamination, environmental remediation minimises land consumption, making brownfields available again for the construction of plants for the production of energy from renewable sources or for the treatment and recycling of waste, acting as a driver for the country's development. In Ravenna, on land undergoing environmental intervention to render it permanently safe, Eni Rewind is creating a platform for the bio-recovery of contaminated soils using 'biopile' technology that exploits the capabilities of native bacteria to biodegrade specific pollutants. This activity will furthermore make it possible to reuse a valuable natural resource in industrial and commercial areas, deriving from the remediation interventions at service stations. After the Gela pilot plant testing the Waste to Fuel technology, which transforms municipal organic waste into bio-oil and water, the design of an industrial-scale plant in Porto Marghera has begun on rehabilitated land owned by the company. Furthermore, in Basilicata Eni Rewind is planning the first application of its proprietary Blue Water technology to maximise the purification and reuse of aquifer water extracted from production wells, contributing to making the Viggiano Oil Centre self-sufficient in terms of water for industrial use, and consequently avoiding water being withdrawn from nature.

To successfully pursue this path focusing on the Green Deal, it is essential to be able to rely on an adequate regulatory environment, the involvement of everyone, from companies to communities, institutions and on a strong management with an overall vision to guarantee the prioritisation and synergy of projects. Today more than ever, it is possible to show how much an alliance of skills is key to ensuring sustainable development for future generations. The cooperation agreements signed by Eni Rewind for the promotion of the circular economy, the redevelopment of industrial production sites and assets and for Waste Management initiatives fall into this context.



Scenario elements: challenges and opportunities

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The consumption of land in Italy continues to rapidly transform the national territory. In the last year, new artificial coverings have claimed another 57.5 km^2 , or an average of about 16 hectares per day. This is what emerges from the ISPRA Report "Land consumption, territorial dynamics and ecosystem services" – 2020 edition.

"An increase that, unfortunately, shows no signs of slowing down and in line with what was recorded in the recent past, means our country loses almost two square meters of land every second".

LAND CONSUMED AT MUNICIPAL LEVEL (% 2019)



Source: ISPRA analysis of SNPA maps



In 2019, the production of special waste was at almost 154 million tons. There was a 7.3% increase in total production between 2018 and 2019, corresponding to about 10.5 million tons. The increase recorded is attributable almost entirely to non-hazardous waste, which represents 93.4% of the total waste produced, increasing by almost 10.4 million tons (+7.8%), while hazardous waste increased by 110 thousand tons.

This is what was reported in the ISPRA Special Waste Report - 2021 edition



According to the Aqueduct Water Risk Atlas prepared by the World Resource Institute (WRI), global water withdrawals have more than doubled since the 1960s and show no signs of slowing down. Almost a third of the world's population lives in a country with high water stress, such as Italy, where more than 40% of the available water is consumed each year. The WRI report indicates that in several regions of the world there are still untapped or dispersed resources, such as unused waste water, which through regeneration could provide a new source of clean water.

Baseline Water Stress Tool 2019

Proprietary sites. Main remediation projects



protection of human health and the environment

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Remediation

Remediation activities can generate development opportunities for territories. To achieve this, it is essential that the future reuse of areas is planned from the initial stages of the remediation process, in agreement with local institutions and stakeholders. Today, thanks to the experience and skills gained by operating at more than 80 sites, of which 17 within 13 Sites of National Priority, Eni Rewind is able to oversee each phase of the remediation process for the future regeneration of soils and assets. From the preliminary characterisation surveys to final certification, the aim is to maximise the effectiveness and efficiency of interventions and adopt increasingly innovative and environmentally friendly solutions for every new project, working in conjunction with universities and Eni research centres. With a firm commitment aimed at ensuring the 'circular' management of resources and in compliance with current legislation, Eni Rewind favours the application of in situ technologies that undertake the remediation of environmental matrices in their natural environment, minimising handling, the excavation of soil and water, and waste generation. In 2020, Eni Rewind initiated the progressive transformation from an Eni service company for environmental services to a market operator providing remediation, waste treatment and management and complex projects design and development to third parties.

removal of contaminants from groundwater and soils with a strong focus on their recovery and reuse

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starting from the intervention planning phase, promote the repurposing of areas in line with local planning instruments reduction of carbon footprint in remediation activities: application of innovative and sustainable technologies in terms of environmental, social and economic impacts

Operations on service stations and the pipeline network

Since 2016, based on a mandate from Eni Refining & Marketing, Eni Rewind has been carrying out environmental restoration activities at disused and operating service stations in Italy, and in 2018 added soil and groundwater clean-ups following oil pipeline break-ins.

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The activities carried out in 2020 on over 650 Eni service stations (320 operating and 346 disused) involved remediation, decommissioning and asbestos removal activities, as well as a preliminary environmental Due Diligence for the regeneration of existing assets. With a view to increasing the sustainability of the interventions, Eni Rewind reduced the number of Pump & Stock systems installed for the treatment and external disposal of groundwater by about 30%, replacing them with on-site treatment systems (Pump & Treat). Furthermore, it brought from 40% to around 60% the recovery of contaminated soils after treatment.

In 2020, Eni Rewind also managed about 70 contaminated soils and groundwater remediation interventions following deliberate break-ins on Eni's oil pipelines located in Northwest and Central Italy.

In this context, the implementation of "pilot tests" at some sites continued, aimed at applying sustainable remediation technologies, such as "phytoremediation" or innovative biological processes for the bio-degradation of contaminants, as well as Ground Circulation Wells for the closed loop remediation of the aquifer, i.e. without generating waste water.

Ravenna Ponticelle

The Ponticelle area (26 ha) is home to an important production redevelopment project. There were 21 tanks in the area in the past. These were delimited by earth embankments, used for the sedimentation of the plant's rainwater, the equalisation of nitrogenous water and for phytopurification processes. Over the years, the embankments and tanks were removed, after being emptied. To complete the environmental rehabilitation of the area, the main project intervention involved Permanent Safety Measures (MISP), with capping over approx. 18 hectares, aimed at definitively isolating polluting sources in relation to the surrounding matrices and ensuring a high level of human safety. The capping work, designed according to the area's future production developments, was completed in May 2021, with the start of the authorisation process for the redevelopment projects, as well as obtaining the relevant Authorisation (January 2021) for the construction of the photovoltaic plant and related storage.

Ferrara

The PZPEC023 area at the Ferrara site, extending over about 4.5 ha, is the only area of the plant characterised by the presence of an intermediate layer between the surface and confined groundwater. In view of this particular hydrogeological feature, Eni Rewind submitted a programme to apply bioremediation technology in situ. Following the application of the "e-limina®" method (**see page 21**), Enhanced Reductive Dechlorination (ERD) was proposed and used, exploiting the degradation action of bacteria present in the environmental matrix, with the solution injected into the aquifer through 40 wells. The remediation intervention, started in 2019 and ended in December 2020. Post-intervention monitoring campaigns (lasting one year) are now in progress, which aim to confirm the effectiveness of the bioremediation intervention. Initial results have already shown a reduction in the main contaminant, with a consistently decreasing curve.

Porto Torres

The Nuraghe Project, divided into two phases at the request of the authorities, concerns the Minciaredda, Peci DMT and Palte Fosfatiche areas, and is characterised by high sustainability standards. A multi-purpose platform for the on-site treatment of excavated land is is being realised. The platform, which uses the most advanced technologies (thermal desorption, soil washing, biopiling, inertisation), will allow the in situ reuse of treated land, complying with the remediation objectives for filling the excavations from which they derive, avoiding transportation away from the site, in line with the regulatory guidelines. The project also uses multi-phase extraction technology to remove volatile contaminants that have migrated into the soil from the underlying groundwater.

Phase 2, relating to the remediation of the Palte Fosfatiche area (TENORM - natural radionuclides – according to Italian Legislative Decree 230/95 art. 165 bis) is currently under authorisation.

Furthermore, an important groundwater remediation of the entire site is underway, which includes a 10 km long hydraulic confinement barrier, 164 supernatant recovery wells (of which 5 equipped with the e-hyrec device) and 5 plants that can treat up to 340 m³/h of water. The capacity of water treatment is being increased up to 500 m³/h, and a thermo-oxidation plant is being installed to extract the gas phase from the water being treated.

Mantua

At the Mantua site of National Priority, on the basis of the Edison mandate, Eni Rewind is completing the interventions and managing environmental procurement in the Collina Area, of a remediation project where Eni Rewind followed the authorisation process and construction as a non-responsible owner until 2020. Following the Council of State ruling on 1 April 2020, ownership of the remediation obligations were transferred to Edison. The Collina area involves one of the most challenging and complex remediation projects, where ad hoc innovative solutions borrowed from maritime engineering have been implemented.

The interventions involve the removal of the former Montedison landfill with excavations up to 11 m deep in a confined environment, of more than 335,000 tons of waste for disposal in Italian and foreign landfills, or in authorised thermo-destruction plants located in Poland, Germany and France. A perimeter barrier was erected to isolate the area, extending almost 2 km with 1225 metal elements fixed in the ground at a depth of 25 m, and an imposing mobile tent structure (65 m by 75 m) that has the dual function of confining the excavation area and balancing the thrusts on the perimeter barrier while the soil is excavated, ensuring that the activities are carried out safely with an adequate air exchange thanks to a filtration and absorption system on activated carbons. To date, approximately 50 ktons of waste foreseen by the project have been removed and disposed of. There are also 3 water treatment plants operating in the area for the reclamation activities, which guarantee the dewatering of the intervention area, as well as the management of surface run-off and groundwater.











Alessandro Labile Environment and Health & Safety Manager Acciaierie d'Italia

Interview with Alessandro Labile

The collaboration between Acciaierie d'Italia (ADI) and Eni Rewind in designing the environmental interventions: an experience involving a complex site, what are the results to date and what are the expectations?

The collaboration with Eni Rewind, which has been in place for more than a year now, has allowed ADI to appreciate the integrated approach between technical experience consolidated in the field of industrial sites remediation and managerial expertise, gained from long-standing and in-depth knowledge on relationships with the various stakeholders and the relevant Authorities. The integration of experience and expertise between parties dealing with different industrial realities, but with a common focus on environmental issues, has allowed both companies to grow in terms of technical know-how.

What were the main strengths of this collaboration?

The real strength of the collaboration initiated with Eni Rewind is without doubt related to the approach. What makes Eni Rewind's assistance particularly effective is its approach to problems that is not as an external eye, of a mere consultant. Eni Rewind works on the activities on behalf of ADI from the perspective that it usually adopts when dealing with these problems at Eni's production sites; therefore, also from the perspective of contributing to improving the industrial asset and not only performing their specific task on someone else's site.

Besides the technical support, how do you rate what Eni Rewind has provided to the interaction with Authorities, the Ministry first and foremost?

We are still in the start-up phase of relations with the Ministry of the Environment regarding issues where Eni Rewind is providing its support. We are certain that the dialogue with the MiTE will be characterised by professionalism, clarity and an openness to discussion on the environmental commitments and technical solutions that we will be proposing.

3D geological reconstruction of the former Ilva site in Taranto



Remediation and redevelopment of industrial areas

Land is a limited resource because it is not reproducible. Decommissioned and unusable industrial areas are a critical environmental problem, as well as an economic and social shortcoming if not regenerated. The challenge for Eni Rewind is to breathe new life into them based on environmental remediation measures designed for their possible reuse and redevelopment. This could provide many benefits as the areas are located in industrial zones already hingly populated and infrastrucutred that can be used for new production activities in line with the prospects of environmental development and the circular economy, thus avoiding the consumption of "virgin" land.





State of Eni Rewind owned land (hectares) 2020



The histograms represent the foreseeable evolution of reclamations on the approximately 3,800 ha owned by Eni Rewind. During 2020, 50% was in the remediation phase, 17% was free from contamination and 8% had been allocated to the Renewables for Italy project, committed to the installation of plants for the production of electricity from renewable sources (11% by the end of 2024). By 2024, a further 14% of the areas are expected to be remediated and made available.

In particular, completion of the remediations, their certification and subsequent provision of the areas is foreseen for the sites of Brindisi (116ha), Cengio (18ha), Sa Piramide (37ha), in addition to Manfredonia, Avenza and Assemini.

82 MW

total installed photovoltaic capacity at 2020

31 MW Porto Torres plant inaugurated in early 2020

22,/00 photovoltaic panels installed in Gela



Eni Rewind's contribution to renewables

The development of renewable energies is central to Eni's strategy of progressive decarbonisation. The consolidated synergy with Eni New Energy, a group company dedicated to the development of projects for the generation of energy from renewable sources, is a practical example of the circular economy. Proprietary areas that have been decommissioned and are no longer productive are used to house renewable electricity production plants, after the environmental intervention by Eni Rewind. The energy produced is used for the energy needs of Eni's industrial assets and the remaining part is fed into the grid.

In this context, of significance are the photovoltaic plants already constructed, extending over 100 ha (power of about 55MWp) at Eni Rewind sites in Assemini, Porto Torres and Gela as well as those authorised in Porto Marghera and Ponticelle. The site in Porto Torres is a virtuous project that has seen the redevelopment of some areas of the Site of National Priority, with the construction of the largest photovoltaic park built thus far by Eni, with an installed capacity of 31 MW. About 70% of the annual production from the plant, inaugurated in early 2020, is intended for companies at the industrial site, with overall savings of over 25 thousand tons of carbon dioxide per year. Porto Marghera will shortly follow, with the authorisation in September 2020 of the project to construct a photovoltaic system of about 2.5MWp, as well as another 346 hectares by 2024, allowing Eni New Energy to reach a total installed capacity of 200MWp and a reduction of about 150 thousand tons of carbon dioxide per year. Furthermore, again at Porto Torres, a 34 MW wind farm has been designed and will be built and managed by Eni New Energy on an Eni Rewind area once the relevant authorisations have been obtained.

Decarbonisation: Eni Rewind's performance

Value of CO₂ emissions



The increase in 2020 is mainly due to the installation of boilers for the production of steam for the Porto Torres GTP that was previously supplied by the Versalis plant.


Water Management

Eni Rewind is committed to the implementation of major groundwater remediation interventions at 21 sites. The activities are executed through an integrated aquifer interception system – consisting of over 1,200 pumping wells and 4,900 monitoring wells – and the conveyance of water for purification to 42 treatment plants (GTPs), of which 26 are owned. All assets are aligned with the best technologies available (Best Available Technology - BAT and Best Available Technology Not Entailing Excessive Cost - BATNEEC).

The Company also manages urban and industrial biological treatment systems at the Gela, Cengio and Manfredonia sites. Water treatment processes include strict monitoring plans that ensure full compliance with water discharge quality and atmospheric emissions.

To facilitate the recovery and valorisation of water resources, from a circular economy perspective, the Company promotes and supports research into sustainable and efficient management solutions, with the aim of maximising reuse and reducing the withdrawal of water from the environment. This objective has led to the installation and activation of special demineralised water production sections at GTP plants at Priolo, Gela, Porto Torres, Assemini and Brindisi, intended for reuse within the industrial sites. In other cases, such as in Manfredonia, the treated water is re-injected into the aquifer to restore its natural conditions. In 2020, Eni Rewind treated about 36 million cubic metres of water, recovering about 6 million mainly for industrial use.



RECOVERED WATER (M³)



42

Water treatment plants

~36 million m³ treated water





Water treatment systems (volumes 2020)



Solutions for optimising water management

Eni Rewind uses different technologies at water treatment plants according to the contaminants present and the possible salinity adopting chemical-physical sections (metals), stripping (organic chlorinated), filtration with active carbons (organic), biological treatment (ammonia compounds), osmosis (salinity) and water purification for the water to be returned into the groundwater or so that it can be recovered and reused at Eni sites.

In accordance with its mission, Eni Rewind promotes the optimisation of water treatment processes to reduce water consumption by conducting research into new technical solutions. A project to automate and digitise the hydraulic barrier was completed in Crotone based on an instrument that controls the flow rate of the wells in order to extract only the amount of water from the aquifer that is required for remediation operations. To date, a reduction in the amount of water pumped is estimated to be about 5-10%, which corresponds to an equivalent energy optimisation. Furthermore, the new Dynamic Control System is operational in Priolo, based on refining experience and ensuring real-time monitoring of the pressure, flow rate and pH. Its adoption has reduced energy (-10%) and reagent (-15%) consumption and has resulted in an increase in the production of osmotized water.

Gela

At the Gela Site of National Priority, Eni Rewind, as the operator of groundwater remediation for all the Eni companies present, adopted the e-hyrec device on a large scale (**see page 21**) in order to optimise and speed up remediation activity. The automatic device, placed inside the wells and piezometers, carries out the selective separation of the aqueous from the oily phase, recovering only the portion of supernatant hydrocarbon on the surface of the aquifer, unlike traditional systems that withdraw a significant portion of water (about 70-80%). From the end of 2018 to March 2021, over 200,000 litres of oil was recovered in Gela alone, without having to dispose of any aqueous phase. Furthermore, the thickness of the supernatant has gone from over a metre to around one centimetre. The zero balance on the aqueous part, reduces the related disposal costs and minimises remediation times.



Blue water

In leveraging its know-how and experience in water management, Eni Rewind together with Eni research laboratories, has developed a technology called Blue Water, aimed at the treatment and recovery of production water deriving from crude oil extraction activities. With its application, it will be possible to regenerate reservoir water, as is the case in traditional purification plants, returning it to the surface water or, after further treatment, allocating it for industrial use. This reduces the disposal of outlet waste (salt solutions and sludge), which will be managed at appropriate external plants, and minimises the use of water from natural sources. The first industrial scale plant is being designed for the Val d'Agri Oil Centre in Viggiano, Basilicata, wehereby the permit applications are being processed by local authorities. The Blue Water plant is designed for a treatment capacity of 72 m³/h, with continuous operation throughout the year (24 h/day; 365 days/year), capable of satisfying the current water requirements of the Viggiano Oil Centre, ensuring zero withdrawals from the environment for industrial use. At the same time, the volume treated by the Blue Water plant will result in an equivalent reduction in production water transported to third-party plants – up to 1,000 km from Viggiano – decreasing the carbon footprint of the waste management process.

Waste Management

The recovery of industrial waste and waters is an important objective of the circular economy that Eni Rewind pursues in its waste management activities. As the environmental company of Eni, it manages the cycle of waste produced by Eni's industrial activities or from its remediation and decommissioning activities, ensuring on a daily basis the constant control of the entire supply chain in compliance with applicable legislation. In line with sector best practices, Eni Rewind has implemented a plan of interventions to increase the share of waste sent for recovery as an alternative to other disposal methods. In particular, it ensures the environmental sustainability of reclamation interventions thanks to consolidated in situ / on-site technologies such as biopiles and soil washing, which minimise the generation of waste, as they do not involve the excavation and disposal of contaminated soils. About 1.6* million tonnes of waste were managed in 2020, of which about 90% on behalf of Eni, and about 78% of the recoverable was assigned for recovery ery (an improvement compared to 2019: about 59%).

Furthermore, to reduce the transportation of waste by road and the consequent environmental impact, Eni Rewind adopted optimised logistics solutions that favour treatment plants close to the production site (Km 0), resulting in over 90% of waste being managed within a 400 km radius in 2020.



Waste management

* during 2020, there was a significant decrease in the volumes of waste treated (approximately -15%) directly related to the effects of the lockdown. This figure does not include approximately 100,000 tons relating to the environmental activities managed by Eni Rewind at Eni service stations, where the Company does not act as an intermediary in waste management.



Waste Management Partnerships

In order to expand and improve the technology of treatment and reuse capacity for all fractions of separate waste collection, promoting end-to-end plant solutions and optimising "closing the loop" processes, Eni Rewind has set up work tables with some of the major Italian Utilities (A2A, Acea, Hera and Iren), but also with key players in the supply chain such as CONAI.

New waste treatment and recycling hubs could be created, in joint ventures between multiple operators and with the involvement of the most proactive municipal companies, at remediated sites and more generally at the Eni industrial sites that will be affected in the coming years by the process of progressive energy decarbonisation. Minimising the disposal at landfills and the transportation of waste outside its region of production, promoting new plants that are appropriately geographically distributed, would generate significant environmental and economic benefits in terms of sustainaibility and community development.

Waste management in Italy: context analysis

An analysis carried out by Eni Rewind, developed mainly on the basis of ISPRA 2019 data, shows that Italy recycles 47% of its urban waste, allocates 18% to waste-to-energy and 21% to landfills. Only the countries of the Iberian Peninsula and Central and Eastern Europe have worse indicators than Italy, on average, for landfills and lower recycling rates. In order to reach the European targets by 2035 of recycling rates of more than 65% and landfill contributions of less than 10%, Italy will need to implement an integrated action plan that supports the development of differentiated, increased recycling, and the construction of new plants for the recovery of materials, in particular in the Central and Southern regions of Italy.



The graph shows the positioning of European countries in relation to the EU targets specified in the directives of the "Circular Economy" package. The size of the circles is proportionate to the amount of waste produced by each country. The only country to have already reached both the recycling (65%) and landfill (10%) targets is Germany.



Luca Ruini Chairman of CONAI - National Packaging Consortium

Interview with Luca Ruini

What is CONAI's mission and the main initiatives in progress?

CONAI is a non-profit consortium made up of packagin producers and users, created to pursue the objectives of recovering and recycling packaging materials as required by European legislation and implemented by Italian legislation. Almost 800,000 companies subscribe to the consortium system. The consortium system today represents an effective public interest management model: the protection of the environment, according to a principle of shared responsibility between companies, the public administration and citizens. Based on the National Agreement with ANCI, CONAI collects the packaging waste amassed under the separate collection system by the Municipalities and conferred under agreement to the consortium system, recognising the greater costs of separate collection: CONAI manages more than 50% of packaging waste, as an ancillary support to the market. But the Consortium is also committed to promoting the dissemination of a culture of environmental sustainability among companies, starting with the design of packaging with a low environmental impact and providing maximum recyclability at the end of its life. In this context, one of the most important initiatives is the Eco-design competition, which is in its eighth edition this year: it recognises packaging solutions revisited from a sustainable perspective. Despite the difficulties related to the pandemic, the 2021 edition closed similarly to the previous ones with a double-digit percentage increase in submissions. We are taking forward a number of initiatives. It is important to add that CONAI commitment also focuses on professionals working in the field of the circular economy, with a series of training activities to increase their professional skills, and on citizens, who must be educated on the issue of quality separate waste collection.

Certain publications classify Italy among the best performers for recycling indicators, while others highlight critical structural problems and delays. What are the strengths and where can we improve?

Today, in our country, more than 7 out of 10 packaging units are sent on for recycling and have a second life. In Europe, Italy is a point of excellence in the field of the circular economy: we have nothing to envy from any other country, especially if we look at the packaging sector, which today represents a percentage of just under 30% of total municipal waste. We are first in Europe in terms of the per capita recycling of waste and second, just behind Germany, in terms of per capita recycling of packaging waste. The system as a whole has already met the European recycling targets for 2025. Targets that have already focused on individual packaging materials, with the sole exception of plastic, which lags behind by a few percentage points which should be recovered over the next four years. The green challenges faced by the business fabric of our country will however, be increasingly challenging. We need to deal with the new EU obligations, such as the environmental labelling of packaging. The Consortium has been working on this for months and provides assistance to Italian companies in detailed Guidelines. But also looking for new ways to really close the circle; we still need to work on filling in the gaps. For example, we need tax incentives for whoever chooses to use recycled rather than virgin raw materials. But we cannot ignore the shortage of plants experienced by certain areas in the South: existing plants urgently need to be upgraded and new ones built.

The European directives on the Circular Economy set ambitious targets to be achieved between 2030 and 2035, which Italy incorporated into its legislation last year. Recent studies and analyses have shown that Italy has a gap in terms of plants, which you also confirmed; this needs to be remedied to reach the targets. What are the proposals and areas you have identified to achieve the targets?

A very recent study, prepared by CONAI for the first time in Italy, quantifies the plant requirements for Central-Southern Italy: 165 new plants are needed so that a complete integrated waste cycle can be implemented, which is increasingly necessary in times of an ecological transition. An estimated investment of over € 2 billion. In order to really close up the circle, it is becoming necessary for the separate waste collected to be processed as close as possible to the place where

the waste itself was collected. This would bring down the environmental and economic impact linked to their transportation to facilities in the Northern-Central regions. The construction of these plants would also have a positive impact from an economic and employment point of view, thanks to the training and hiring of a large number of employees: over 2,300. This is very important during a socio-economic crisis like the one we are experiencing and will be facing in the future.

The National Recovery and Resilience Plan (PNRR) and waste management: in your experience, can there be opportunities for the sector? What input can the Italian government provide for Governance and how do we get consent from the territories?

The more than €2 billion that the PNRR has allocated to the circular economy is an opportunity that the country cannot afford to lose. This is a time for dialogue with the local authorities to explain the importance of the new plants, but also to help the regions in Southern Italy equip themselves with professional skills to properly authorise the projects. Our Green Jobs project is part of this process: since 2019, we have been organising post-graduate training courses to facilitate the entry of new young science graduates into the world of the circular economy. After the first two editions in Matera, in 2019 and 2020, the new edition of Green Jobs is starting at the University of Palermo this year. And before the end of the year, we will also be revealing the details of another edition in Calabria.

In this scenario involving more complex organisational models, how important is it to foster synergies between different industrial realities?

I would respond very simply: I think it is essential. In fact, synergistic effects are fundamental in any context. Especially during difficult times like the ones we are experiencing, which will probably have repercussions into the long term. Companies' attention to environmental protection is growing, but we also note how wanting to implement synergies also grows in the sharing of best practices, which tangibly realise the drive towards circularity. I am thinking, for example, of the many companies that have been recognised over the years in our eco-design competition: we can clearly see a willingness to create an effective database of cases of excellence, which can then become valid examples for companies today and tomorrow.

Ravenna Ponticelle

The project for the revival of Ponticelle, a decommissioned industrial area outside the Ravenna petrochemical plant, is a concrete example of how remediation can bring added value to territories and their communities. In synergy with local players and institutions, a virtuous development model will be implemented here to repurpose the brownfield in accordance with the principles of the circular economy. Eni Rewind, owner of the former industrial area, has completed the permanent safety measures (MISP) with capping implemented on 18 of the total 26 hectares (**measures in a set and the set**

The plants envisaged in the Ponticelle Project are as follows:

- a photovoltaic plant with storage lab (implemented by Eni New Energy): the structure, authorised by the entities in January 2021, is designed in accordance with the principle of "zero consumption of new land" and will be built on the ground, on a portion of the area involved in the MISP, with a solar tracking system (estimated power of about 6 MW) and with an adjoining storage lab for energy storage.
- a soil bio-recovery platform via mechanical treatment and bioremediation (to be realised by Eni Rewind): the plant, with a capacity of 80,000 tons/year, through the use of indigenous micro-organisms (bacteria), will be dedicated to the treatment of soil contaminated by hydrocarbons originating from service stations remediation, with the aim of returning the soil to the same stations after treatment, according to a circular recovery and reuse scheme. It also includes a bio-laboratory able to carry out preventive analyses on the conformity of waste entering the platform and periodic monitoring on the progress and effectiveness of bio-remediation processes.
- an environmental platform for the management of industrial waste (to be developed and managed by HEA): on 3 March 2021, a joint company (HEA) Eni Rewind – Herambiente Servizi Industriali was established, aimed at creating a multifunctional platform for the pretreatment and treatment of special waste. The plant will manage up to 60 thousand tons of waste per year, produced by environmental and production activities, prioritising thoseoriginated in the region, in line with the European directives of the Circular Economy Package transposed in Italy in September 2020.



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Interview with Michele De Pascale

Industry, the environment and technological innovation converge in the projects promoted by Eni and Eni Rewind in Ravenna. How can the public and private sector cooperate, what further synergies, to achieve the environmental targets of the Green Deal and of the city of Ravenna? What are the effects?

The Municipality of Ravenna has always been particularly attentive to the targets in the Green Deal, by directing public funding and its own resources, and especially those that will be coming through in the future from Europe, into energy redevelopment, sustainable mobility and urban regeneration projects.

Likewise, collaboration between public administrations and private companies is essential so that each one can provide a driving force for the investments of the other, enriching the territory with job opportunities, new resources, technological innovation and good practices, and helping it achieve the goals set by Europe far more quickly.



Michele de Pascale Mayor of Ravenna

Never before, as in this historical moment, is it essential to broaden citizens' awareness of the issues around recovery and circularity: how much will the Ponticelle project contribute in this regard?

In the circular economy, Ravenna can play a leading role at national level. The Ponticelle project, which is recovering a decommissioned area transforming it into a place where renewable energy production plants and land and waste recovery plants coexist and work in conjunction, contributes substantially to achieving this objective.

In this sense, it is also essential to raise awareness among the younger generations, both from the perspective of good practices and offering them specific training and professional opportunities, such as the post-graduate ITS course to become a Senior Circular Economy Technician, which this administration has strongly promoted.

How do you assess the decision by Eni Rewind and Herambiente to undertake the environmental platform based on the Hera and Eni joint venture for the Environment, HEA SpA?

This involves an important agreement that establishes the definitive safety and reclamation of a formerly abandoned industrial site, where a technologically-advanced project will now be carried out. A virtuous intervention that makes us protagonists in relation to the issue of the circular economy, and important for the city's economic development. The first fundamental collaboration between two leading industrial groups such as Eni and Herambiente is being substantiated in our region, which can also bring significant future benefits in terms of employment and economic growth for the community.

The industrial vocation and collaboration between institutions, the territory and operational reality have been decisive in making Ponticelle an example of productive redevelopment. What direction would you recommend to replicate more virtuous projects in Italy or other circular projects in Ravenna, by repurposing industrial areas and promoting industrial symbioses?

We have worked hard to establish a process for supporting companies that intend implementing important and innovative business projects in the region; this translates into prior discussions on the most significant issues upstream for the formal submission of applications, in order to simplify the bureaucratic process where possible and thus accelerate the timing for issuing authorisations.

We are also always ready to listen to experimental business proposals to build the Ravenna of tomorrow, starting from today's specific context.

Eni proprietary technology

sustainable urban waste

management in large

metropolitan areas.

at the service of

Waste to Fuel

The commitment to the regeneration and rational use of resources is also evident at Eni Rewind with the Eni Waste to Fuel proprietary technology, developed at the Eni Research Centre for Renewable Energy and the Environment in Novara and tested at the Gela pilot plant. The technology enhances the energy potential of organic waste based on a thermoliquefaction process – which transforms it into bio-oil and bio-methane and recovers the water contained therein. A phenomenon that nature accomplishes over millions of years is replicated in just a few hours. The raw material needed for the process is the Organic Fraction of Municipal Solid Waste (OFMSW), consisting of household food waste and waste from the agri-food industry. The biooil obtained, which varies from 3% to 16% depending on the composition of the incoming load, can be used in blending as a low-sulphur fuel for maritime transport or refined to produce biofuels. The water contained in the organic waste – up to 60% of its weight – is recovered and reused in the industrial sector. Each step is designed to minimise the waste sent for disposal: even solid waste, consisting of non-transformable waste, is used to generate the heat intended for the plant's energy requirements.



Development on an industrial scale

The first industrial plant is planned in Porto Marghera, in areas owned by Eni Rewind within the petrochemical site, and will have a treatment capacity of up to 150 thousand tons per year, equivalent the OFMSW produced by approximately 1.5 million inhabitants.

The advantages

Waste-to-Fuel technology makes it possible to reuse waste raw materials without subtracting resources from the food and agricultural chains. Furthermore, it represents a valid solution for sustainable waste management in line with European policies, in particular the 2020 Circular Economy Action Plan, the 2017 Bioeconomy Strategy and the "European strategic long-term vision for a climate-neutral economy".



Operational excellence

Each of us	47
Safety	52
Environment	58
Human rights	62
Transparency and anti-corruption	64

In line with Eni, our model for operational excellence focuses on our commitment to the enhancement of people and the protection of the environment in which we operate. For us. operational excellence means conducting every activity with the utmost attention to sustainability, promoting the health and safety of workers, and more generally human rights, operating with integrity and transparency. These founding values allow Eni Rewind to welcome the opportunities related to new environmental challenges and the circular economy, through technological innovation and the skills and experience gained in the field over the years.

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Each of us



Why is it important to Eni Rewind?

Eni Rewind's most valuable resources are people, their skills and their energy. The women and men who work here are unique assets in taking on new challenges and achieving new successes. The people share the company's values, like team spirit, respect for the environment and the local community. The Company is committed to ensuring the health and safety of people and creating a work environment that offers opportunities on the basis of shared criteria of merit and free from all forms of discrimination, based on dignified work conditions and dialogue.

POLICIES AND OTHER REGULATORY INSTRUMENTS

"Our People", "Integrity in our Operations", "Operational Excellence" Policies

MANAGEMENT AND ORGANISATION MODELS

Integrated health, safety and environment and quality management system: compliant with ISO 9001:2015, ISO 14001:2015 and OHSAS 18001:07 standard for health and safety management

THE TEAM

In 2020, total employment numbered 1,057 people, a net increase of 11 resources compared to 2019.



EMPLOYEES By Education



Employee engagement during the health emergency

During the two-year period 2018-2019, Eni Rewind was identified as a pilot company in Eni for the implementation of Smart Working. The experience gained has facilitated the use of this work method during the health emergency over the last year, thus allowing our people to continue to ensure the normal supervision of activities, while at the same time, reconciling the new personal and family life needs.

In this context, internal engagement has assumed a decisive role in the management of crisis communications and involvement of people. Several updates were made regarding the health situation and consequent measures, government directives and company decisions, and the rules of conduct to adopt in the workplace.

A year of us

The year 2020 for Eni Rewind was told directly through its people, in a video summarising the activities carried out and the results achieved together

↗ To find out more visit Eni Rewind's LinkedIn page



Diversity and inclusion – The culture of plurality

Eni's approach to diversity and inclusion (D&I) has developed in the wake of its international culture of plurality, based on the fundamental principles of non-discrimination, equal opportunities and the inclusion of all forms of diversity, as well as integration and balance between work and personal and family demands. Eni Rewind together with Eni, is committed to creating a working environment where different personal and cultural characteristics or orientations are considered a source of mutual enrichment and an indispensable aspect for business sustainability, both on the basis of constant personal involvement and responsibility and through top management's communications and raising awareness among all employees. Eni Rewind aims to establish work relationships that are free from all forms of discrimination, and requires that all companies that collaborate with us adopt similar values. Everyone at Eni Rewind and third parties have a duty to report any breaches of the Code of Ethics, using one of the Reporting Channels, in accordance with the reference regulatory instruments.

Main D&I initiatives promoted together with Eni in 2020

The D&I Matters path	In 2019, a training and internal communication course D&I Matters was started, to develop awareness around unconscious biases, and in 2020, the event "Eni Global Inclusion" was organised to develop this issue further in corporate culture and in daily life and work relationships.
The Unconscious Bias training	A training campaign on Unconscious Bias was introduced for all employees, to address the issue both
campaign	from a theoretical point of view and through a series of exercises and opportunities for self-observation, as well as insights, to strengthen personal awareness and the ability to manage prejudice correctly and effectively.
Female, international intergenerational mentoring	Processes to reinforce the value of intergenerational exchanges and make internal relations more open to discussion between different sensibilities and in respect of mutual inclusion, with particular focus on the careers of women.
Orange the world	Participation in the global initiative against gender-based violence "Orange the world" (25 November – 10 December) with support for the campaign by top management and executives, and the introduction of a new e-learning course on Harassment.

With regard to gender diversity, Eni Rewind in line with Eni, focuses particular attention on promoting initiatives aimed at attracting female talents, as well as developing managerial and professional growth careers for women in the company. This commitment is confirmed by the main employment and development indicators monitored to enhance the presence and development of women. Of the appointments made to permanent posts in 2020, 38% involved female staff, up by 1 percentage point vs. 2019. Furthermore, in 2020, the percentage of women in positions of responsibility increased, reaching 19.8% compared to 18.5% in 2019, out of a total of women corresponding to 17.7% of total employees.

Female role modelling in support of studies and STEM

During 2020, Eni Rewind, together with Eni, promoted a series of initiatives focusing on gender parity for students highlighting the STEM (Science, Technology, Engineering and Mathematics) subjects, and participated in national and international initiatives with the aim of constantly enriching its processes and operating practices from a gender equality perspective. Some of the activities, which continued online in 2020, include:

- **InspirinGirls**: an initiative started 3 years ago, with the involvement of about 5,000 girls in 187 lower secondary school classes, to help them overcome prejudices by becoming aware of their talent;
- Think About Tomorrow: an event in high schools aimed at helping young people make a conscious educational and professional choice to overcome gender stereotypes, stimulating girls' interest in STEM studies and raising awareness among the male audience on issues related to gender equality.

Welfare

The 2020 health emergency has impacted on all services provided to people, making it necessary to revise both the methods of organising consolidated initiatives with a view to maximum safety and compliance with the regulations, and identify areas of innovation in designing new services that can respond to the emerging needs deriving from family and social complexities and new work methods.

Family and work life balance	The organisational and management methods at the nursery schools in San Donato and Rome and sum- mer holiday courses were reformulated, with specific health protocols adopted, reducing the number of children and strengthening the educational and auxiliary staff. The career guidance courses for employ- ees' children and services dedicated to caregivers were confirmed.
Parenting	Allowance of 10 working days' leave at full pay for both parents.
Health and well-being	The delivery of corporate catering services was completely revised to deal with the health emergency and still guarantee this service to employees.
Prevention campaigns	Strengthening prevention programmes with the inclusion of the medical protocol for oncology check- ups and with cardiovascular examinations; in addition, new prevention initiatives are under review for the family members of employees.

36 % of women in engineering / R&D





49

25,278 total hours of training

In continuity with the w

HSEQ content

54%

Training and development of professional paths

Eni Rewind enhances human capital with initiatives that promote the development and strengthening of the skills necessary in the Company. It also supports and encourages professional development, offering job opportunities in Italy and abroad.

In continuity with the work carried out in the last three years, also in 2020 some initiatives were promoted to enhance human capital, or encourage the contributions that everyone can give, fostering the development of knowledge and skills. In this particular year, given the context and limitations of classical training, new digital training methods prevailed, particularly on environmental issues in addition to the usual commitment to safety issues.

The summary data as of 31 December 2020 relating to training is as follows:

- total number of participations: 7,670, of which 36% on HSEQ topics;
- total hours of training: 25,278, of which 54% with HSEQ content.

Some of the most important initiatives include:

- POLITO specialist course: in cooperation with Eni Corporate University (ECU), a specialist course was delivered in virtual learning mode by lecturers from Turin Polytechnic on innovative remediation technologies with low environmental impact. The course, divided into 4 modules with a total duration of 16 hours, involved about 80 people;
- Workshop on the new Italian Legislative Decree 101/2020: a training workshop was held with teachers from the Eni specialised unit on the new legislation on specific risks contemplated by art. 110 of Legislative Decree 101/20 - Radiological Risk Management dedicated to Employers, Managers and HSE staff;
- Training on Waste Management: to increase the environmental skills of people working in waste management, lasting 24 hours and directed at about 60 people;
- IT Security Training: promoted in line with Eni guidelines; the courses aimed at raising awareness among our people on aspects of Cyber Security;
- Open training promotion: given the times, an open space was made available at EniCampus, in agreement with Eni Corporate University, with the aim of offering opportunities for discussion and reflection and becoming more aware of our behaviour and our way of relating to others, exploring topics such as digital collaboration, uncertainty, change, also related to the particular year we have experienced;
- E-Learning courses on compliance: in 2020, over 1000 distance learning modules were delivered regarding the code of ethics, 231 Model (organisation, management and control model) and anti-corruption.

Performance appraisal

A performance appraisal is one of the essential tools for managing resources and a guide for the continuous improvement of management and professional skills. Performance appraisals are done for all executives, middle managers and managers in organisational documents and young university graduates, with a progressive expansion of the population involved. Goals are derived from the Eni annual performance plan and the planning and budgeting process, and also include sustainability goals.

Health

In 2020 the programme implementing an integrated health management system (HSEQ and HR) continued, with the aim of promoting and maintaining the health and well-being of people and ensuring adequate risk management in the workplace.

Health surveillance

The health surveillance check-ups were carried out on personnel present at sites, in compliance with the anti-COVID-19 procedures. With regard to activities abroad, travel was suspended due to the health emergency.

Healthcare

In terms of healthcare, 204 medical check-ups were carried out for employees and 3 for contractors at the medical facilities. The main reasons for using medical facilities are:

- Check-ups of pre-existing conditions (arterial hypertension) or administration of therapies prescribed by GPs or specialists;
- symptoms affecting the osteo-muscular system, mostly for previously diagnosed cases;
- symptoms affecting the respiratory system, mostly as a result of cold-related illnesses.

Health promotion initiatives continued where compatible with the COVID emergency, both at local level and through participation in Eni projects (campaigns for cancer prevention and prevention of cardiovascular diseases).

With regard to occupational diseases, in 2020, a total of 19 applications were received to recognise diseases suspected of being of professional origin, all by former employees (6 by their heirs), without particular clusters of origin. The downward trend in the number of complaints is therefore confirmed.

Expenses incurred in 2020 (\in /000)



1,365 €/000 Total health expenses

MEDICAL EMERGENCIES MANAGEMENT

2020 health surveillance check-ups

655

periodic check-ups

19

preventive pre-recruitment medicals

6

medical check-ups on the resumption of work after being absent for health reasons; medical check-ups on returning from COVID-related illnesses were carried out regardless of the days absent

3

medicals on termination of employment

8 job change check-ups

6

extraordinary medicals (postponement of pregnancy leave)

Safety



Why is it important to Eni Rewind?

Aware of the central role of its employees in achieving its Mission, Eni Rewind is constantly committed to ensuring the protection and safeguarding of their health and safety, putting in place measures to minimise the sources of risk associated with the different operating contexts. These tools include: organisational models for risk management and asset integrity, training and skills development, process security and the application of new digital technologies to support security. Eni Rewind pursues the objective of reducing the occurrence of accidents by improving the conduct to be adopted in the workplace at all levels of the Company, and promoting a culture of best practices in the field of health and safety. In this context, it introduces awareness-raising initiatives on HSE issues and the sharing of Eni and Eni Rewind Lessons Learned, aimed at employees and contractors.

POLICIES AND OTHER REGULATORY INSTRUMENTS

"Our People", "Integrity in our Operations" Policies, Eni Declaration on Respect for Human Rights; Code of Ethics.

MANAGEMENT AND ORGANISATION MODELS

Integrated health, safety and environment and quality management system: adopted by the organisation and certified compliant in 2020 with the ISO 45001:2018 for health and safety management. Regulatory updating process with a focus on Health and Safety.

PROGRESS IN 2020

- **HSEQ training**: 13,650 hours of in-house training provided and promoted
- **Raising awareness**: initiatives to raise the awareness of employees and contractors on HSE aspects and the importance of near-misses and unsafe conditions
- Leadership safety: implementation of the Leaderometro, a tool developed by Eni for the self-assessment of leadership and HSE commitment of management at the Brindisi and Porto Torres sites
- Process safety management system: to prevent significant accident risks with the application of high management and technical standards; the Safety Fundamentals Process introduced;
- **Process Safety**: gap analysis conducted for groundwater treatment plants in relation to process safety standards
- **HSEQ integrated management system:** carried out transition to ISO 45001:2018 requirements
- **Smart Safety**: initiative launched at the Brindisi site in the scope of the Eni Smart Operator project for the protection of workers while carrying out activities alone
- E-Wp (electronic work permits): digitalisation of Work Permits at the Assemini, Porto Torres, Gela and Priolo sites
- **HSEni App**: used at the Priolo site (pilot site), the Safety Golden Rules App is a digital work tool that can be downloaded to your smartphone for field checks, the start of work analysis, safety moments, tool-box talks, safety meetings, tracking and sending reports relating to unsafe condition, etc.

TARGETS

- Raising awareness: promoting initiatives to raise the awareness of employees and contractors on HSE aspects and the importance of analysing and managing near-misses and unsafe conditions/acts (so-called weak signals)
- **THEME (behavioural analysis project)**: methodology to analyse and manage the human factor in the field of safety to be launched at the Ravenna site to improve leadership in safety
- **HSE Eni Safety Pre Sense**: start up the project at some operational sites to analyse the weak signals entered in the INDIGO database
- Safety Competence Assessment HSE: start up the project (methodology to analyse and improve preparation in the field of Safety) at the Priolo and Porto Torres sites
- RCA (Root Cause Analysis): specific Eni training for the investigation of accident events
- Asset Management: census completed and criticality of ER assets audited
- Smart Safety: extension of the project at the TAF plant in Brindisi and the related hydraulic barrier and implementation of a "Mobile" mode that allows for its use outdoors and in unmanned areas where remediation sites are located
- E-Wp: implementation of the Electronic Work Permit (e-WP) at the sites in Ferrara, Avenza, Cengio, Ravenna and Brindisi
- **HSEni App**: adoption of the App at the Pieve Vergonte, Ferrara, Assenimi, Gela, Avenza, Viggiano sites
- HSE commitment: implementation of the initiative to evaluate leadership in the HSE field, of ER and Contractor resources, at the Gela and Viggiano sites
- HSE++: implementation of the initiative aimed at measuring the level of HSE preparedness and HSE culture of employees and contractors, at the Porto Marghera, Porto Torres and Gela sites

Accident rates and intervention actions

As part of the prevention and mitigation of risks to the health and safety of its own workers and service providers, Eni Rewind pursues the objective of minimising the occurrence of accidents.

In 2020, two occupational accidents were recorded, one involving a contractor at the Mantua site with a total prognosis of 161 days for the fracture to the hand, and one involving an Eni Rewind employee in Gela, with a prognosis of 8 days for a sprain to the foot. The FI figures (frequency index, ratio of the number of events per million hours worked) and SI (severity index, ratio of total days absent for an accident per thousands of hours worked) for Eni Rewind record a slight worsening in the indices compared to the previous year due to the number of absent days related to the incidents above.

The results of 2020 drive our commitment to further improve our safety performance and those of our contractors. For each accident that occurred, as well as for the more serious accidents and near misses, in-depth investigations are carried out in order to identify the causes of the events and develop Lessons Learned to be shared with all the staff of the various Eni Rewind operational units. Actions aimed at avoiding similar events and preventing their repetition are undertaken by identifying specific operating procedures, providing training and raising the awareness of contractor and employee personnel.

Furthermore, in line with Eni, in order to focus the company's commitment on the pursuit of employee safety, specific safety parameters and related commitments are identified, such as the Severity Incident Rate (SIR – internal index that considers the level of severity of accidents) and the Safety Culture Program (SCP - preventive safety management indicator that involves aspects such as the analysis and management of weak signals, the implementation of safety awareness campaigns and emergency preparedness), which are included in the short-term remuneration of the CEO and managers with strategic responsibilities.

		2018	2019	2020
Hours worked (ML/h)	Workforce	4,320	5,186	5,020
	Employees	1,442	1,501	1,644
	Contractors	2,878	3,685	3,376
Number of accidents (contributes to FI calculation)	Total	2	5	2
	Employees	-	-	1
	Contractors	2	5	1
Days absent from work (contributes to SI calculation)	Total	12	56	169
	Employees	-	-	8
	Contractors	12	56	161
Frequency rate (accidents with days absent from work/ hours worked) x 1,000,000	Workforce	0.46	0.96	0.40
	Employees	-	-	0.61
	Contractors	0.69	1.36	0.30
Severity index (days absent/hours worked) x 1,000	Workforce	0.005	0.011	0.034
	Employees	-	-	0.005
	Contractors	0.007	0.016	0.048
TRIR Total recordable accident frequency rate [(accidents + work restrictions + medical treatments)/hours worked)] x 1,000,000	Workforce	0.46	0.96	0.60
	Employees	-	-	0.61
	Contractors	0.69	1.36	0.59

Safety expenses and investments (excluding ILCV) - €/000 2019	2020
TOTAL CURRENT SAFETY EXPENSES 700	500
TOTAL SAFETY INVESTMENTS 1,500	1,500
TOTAL CURRENT HSE EXPENSES 170,000	180,000
TOTAL HSE INVESTMENTS 33,300	46,100



The Safety Culture

Eni Rewind is committed to ensuring that everyone can become a leader and example when performing their activities in complete safety, by promoting a growing involvement by management. To guarantee safety in all work environments, the Company promotes various initiatives, carried out with the involvement of both management and operational units, aimed at raising awareness, developing skills and adopting responsible and proactive behaviour, in full compliance with HSEQ principles.

The initiatives were conducted on an ongoing basis, despite the contingent situation related to the health emergency, taking advantage of the "online mode".

Key initiatives to strengthen the safety culture

Lessons LearnedIn 2020, 7 Lessons Learned were developed on Eni Rewind cases and then shared with Eni Inside Lessons Learned during the 90 regular HSE Takeaway meetings. The lessons learned represent a time of fundamental growth for workers. These involve documenting the lessons learned during or after the completion of an activity, to analyse the successes and failures of the entire work team, in order to provide a useful and convenient way to facilitate the progress of work or the organisation of subsequent work in an increasingly efficient and effective way. Lessons learned provide a better understanding of the errors to avoid and best practices to follow for a continuous improvement in HSE performance.HSE TakeawayEni Rewind initiative to raise staff awareness on safety and environmental aspects, where HSE issues are shared informally in regular meetings, in a climate of debate and exchange of experiences. 90 meetings were held in 2020 involving about 250 people. On this occasion, the Environmental Lesson Learned inspired by Eni Rewind activities were shared.Safety PactSubscribing by Eni Rewind and its contractors of a commitment that binds the parties to adopt and use a series of common to distentified with the aim of carrying out works under contract without significant occupational accidents or accidents, detecting the near misses sub-standard conditions for preventive purposes and permanently improving the safety culture and environmental management of contractors. Due to COVID-19, no new safety pacts were launched during 2020, but those already started have continued. In 2021, the Pact is expected to integrate environmental issues – becoming the Pact for Safety and the Environment – which will be signed at the sites in Pieve Vergonte, Porto Torres, Porto Marghera, Mining Sites, Ponte Galeria, Avenza, Cengio, Service Stations.Leaderometror walks	HSE Day	Awareness-raising programme targeting employees and contractors in order to share corporate HSEQ principles, objec- tives and results, as well as Lessons Learned to be acquired for the future. Due to the COVID-19 pandemic, physical attend- ance at initiatives was suspended, therefore, only one HSE Day meeting was held remotely for Gela Site employees. Since 2020, the method adopted for HSE Day includes a meeting to discuss HSE principles, where employees and contractors participate, as well as a workshop focusing on a specific topic (for example, "communication").
HSE Takeaway IN Eni Rewind initiative to raise staff awareness on safety and environmental aspects, where HSE issues are shared informally people. On this occasion, the Environmental Lesson Learned inspired by Eni Rewind activities were shared.Safety PactSubscribing by Eni Rewind and its contractors of a commitment that binds the parties to adopt and use a series of common tools identified with the aim of carrying out works under contract without significant occupational accidents or accidents, detecting the near misses sub-standard conditions for preventive purposes and permanently improving the safety culture and environmental management of contractors. Due to COVID-19, no new safety parts environmental issues – becoming the Pact for Safety and the Environment – which will be signed at the sites in Pieve Vergonte, Porto Torres, Porto Marghera, Mining Sites, Ponte Galeria, Avenza, Cengio, Service Stations.LeaderometroInitiative adopted at the Brindisi and Porto Torres sites, focusing on increasing virtuous actions by staff aimed at becoming leaders in safety.Meetings with the Workers' Representative (RLSA)Initiative launched at the end of 2020, aimed at strengthening the involvement and participation of all workers, through the Marks of new issues stipulated by health and safety regulations.	Lessons Learned	In 2020, 7 Lessons Learned were developed on Eni Rewind cases and then shared with Eni Inside Lessons Learned during the 90 regular HSE Takeaway meetings. The lessons learned represent a time of fundamental growth for workers. These involve documenting the lessons learned during or after the completion of an activity, to analyse the successes and failures of the entire work team, in order to provide a useful and convenient way to facilitate the progress of work or the organisation of subsequent work in an increasingly efficient and effective way. Lessons learned provide a better understanding of the errors to avoid and best practices to follow for a continuous improvement in HSE performance.
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LeaderometroInitiative adopted at the Brindisi and Porto Torres sites, focusing on increasing virtuous actions by staff aimed at becoming leaders in safety.Safety Tours and Safety WalksSafety awareness raising initiatives with site visits with employers, Delegated Managers and HSE representatives of Eni Rewind in addition to contractors.Meetings with the Workers' Representative (RLSA)Initiative launched at the end of 2020, aimed at strengthening the involvement and participation of all workers, through the sharing of new issues stipulated by health and safety regulations.	Safety Pact	Subscribing by Eni Rewind and its contractors of a commitment that binds the parties to adopt and use a series of common tools identified with the aim of carrying out works under contract without significant occupational accidents or accidents, detecting the near misses sub-standard conditions for preventive purposes and permanently improving the safety culture and environmental management of contractors. Due to COVID-19, no new safety pacts were launched during 2020, but those already started have continued. In 2021, the Pact is expected to integrate environmental issues – becoming the Pact for Safety and the Environment – which will be signed at the sites in Pieve Vergonte, Porto Torres, Porto Marghera, Mining Sites, Ponte Galeria, Avenza, Cengio, Service Stations.
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Meetings with the Workers' Representative (RLSA)Initiative launched at the end of 2020, aimed at strengthening the involvement and participation of all workers, through the RLSA, regarding the sharing of new issues stipulated by health and safety regulations.	Safety Tours and Safety Walks	Safety awareness raising initiatives with site visits with employers, Delegated Managers and HSE representatives of Eni Rewind in addition to contractors.
	Meetings with the Workers' Representative (RLSA)	Initiative launched at the end of 2020, aimed at strengthening the involvement and participation of all workers, through the RLSA, regarding the sharing of new issues stipulated by health and safety regulations.

Safety Pre-Sense

As part of the digital transition, a new analysis tool known as "Safety Pre-Sense" was adopted starting from 2021. The software being developed can analyse the accumulation of data and information related to accident events (occupational accidents, near misses, unsafe conditions/ unsafe acts) recorded annually in the Eni database, in order to identify keywords and recurring patterns and then intercept the weak signals on which to intervene to avoid an accident occurring. The use of this new technology will allow for the capabilities of large-scale statistical data analysis to be strengthened, extending the possibilities of analysis beyond human capabilities, and an automatic alarm system will be able to highlight potential situations of accident risk in real time to allow for the implementation of preventive measures. The initiative has been introduced at the Brindisi and Gela sites.

Process safety

Process Safety is a management system to prevent and control accident risks, in order to safeguard the safety of people, the environment and assets during their life cycle. Specifically, Process Safety management provides proactive identification, assessment, prevention and mitigation for the release of materials and energy that could result from process or equipment malfunctioning, or the inadequacy of regulatory instruments, in accordance with the best applicable technical and safety standards.

In line with the different nature of the hazards and risks associated with specific operational activities, Process Safety, which is based on accurate knowledge of the processes, is promoted and supported by a culture that is widespread at all levels of the organisation. As part of this process, training was also initiated for all personnel dedicated to the management of GTP plants on the fundamental aspects of Process Safety and some resources were specifically trained for the role of Auditor in Process Safety. Furthermore, the Company due diligence continued on groundwater treatment plants (GTPs) in line with Eni standards and main best practices, and, with a view to continuous improvement. In 2020, two Process Safety assessments were carried out at the subsidiary Ing. Luigi Conti Vecchi and the TAF plant in Brindisi, aimed at assessing the gaps in Eni Rewind plants in view of the transposition of the new Process Safety provisions.

Eni Process Safety Fundamentals

In 2020, Eni Rewind undertook to ensure the disclosure of Eni's PSF (Process Safety Fundamentals) mainly through promoters that were appropriately identified within Eni Rewind and the company Ing. Luigi Conti Vecchi. An online workshop was also organised, with the support of Eni, which involved numerous employees from operating units.

7 To find out more: Eni For 2020 - A just transition (page 51)



The Process Safety Fundamentals

Emergency preparedness and response

Emergency preparedness is constantly tested through drills used to test response capacity in terms of plans, resources, means and materials and to identify appropriate corrective measures. Despite the pandemic having reduced the total number of drills carried out, Eni Rewind conducted over 100 drills, maintaining a high level of emergency preparedness and adapting the relevant methods for carrying them out, in agreement with management or the Authorities.

In 2020, two pre-alarms causes were recorded due to natural causes; one at the Pieve Vergonte site (flooding of the Marmazza River) and one at the Crotone site (flooding of the rivers adjacent to the site); in addition, a first-level emergency was recorded that was perceptible from outside the Assemini site (fire in perimeter areas).

Contractor management

With regard to the management of contractors at its sites, Eni Rewind has worked by integrating its HSE-SPP (Prevention and Protection Service) structure with Eni's Safety Competence Centre (SCC), which has provided approximately 35 resources that are used to coordinate and supervise site safety (including decommissioning and remediation of active and disused service stations). This structure has continued to oversee and support the process of improving the safety of companies, by encouraging them to focus on more functional and preventive management models. About 160 companies were monitored and the non-conformities detected (about 230¹) were subject to immediate corrective measures, while at the same time implementing the recognition and dissemination of good practices. About 160 companies were monitored and evaluated by the Safety Competence Centre, with almost 150 findings issued.

Industrial hygiene

In 2020, Eni developed and promoted activities aimed at strengthening the monitoring and control of risk factors in the workplace, in particular:

- I) participation in Eni working groups aimed at sharing the risk assessment approach;
- increasing knowledge on risk factors by ensuring alignment with the latest best practices in this field, through the implementation of a targeted training/information programme;
- III) Specific training for the resources involved in the field of Radiation Protection, regarding the new Law on Radiation Protection (Italian Legislative Decree 101/2020). The topics covered have helped to strengthen awareness on organisational roles' responsibilities in terms of their obligations.

Asset integrity

The asset integrity system, of fundamental importance for Eni Rewind, ensures that assets are managed effectively and efficiently for the protection of people, the environment and business continuity. In 2020, the company completed the census of its primary assets at sites, grouping them by HSE risk level, in order to continue implementing the measures necessary to ensure the highest safety standards.



Eni Rewind and the COVID-19 emergency

2020 was the year when the whole world was hit by COVID-19 related health emergency. Despite the rapidity and scope of the pandemic, Eni Rewind intervened promptly thanks to the synergies with Eni and the implementation of a consolidated Health, Safety, Environment, Security and Public Safety risk management model, in accordance with the regulatory, organisational and operational instruments (including the Protocol of 14 March 2020 between the government and social partners). The Company ensured the maximum protection of its people and suppliers and at the same time, ensured continuity in its activities that could not be suspended so as to protect environmental matrices (soils and water), as well as the management of waste generated by Eni's production activities. The health emergency related to COVID-19 has been addressed centrally by Eni through the establishment of the Crisis Unit, in which Eni Rewind actively participates. From the outset, strategic guidelines were defined for the coordinated and transversal management of the health emergency.

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The actions undertaken to ensure safe operations during the crisis period mainly referred to:

- communication, information and constant training on HSEQ issues with the Employers in order to address the health emergency in a coordinated manner and promptly communicate any existing regulatory updates;
- the adoption of extraordinary smart working for workers who did not need to be physically present in the workplace and parttime for workers who follow non-interruptible activities (water treatment plants and other remediation/safety measures);
- the suspension of those activities (between 25-30%) that could be interrupted without impacting on the environment or public safety;
- the preparation of a contingency plan to identify substitute figures in the event of an entire team of a single plant being infected or in quarantine, as well as a plan to increase stocks of chemicals and consumables necessary to ensure continuity of operation;
- the delivery of Personal Protective Equipment for the COVID-19 risk and the measurement of body temperature at the entrance to work areas;
- · the reorganisation of procedures for accessing workplaces and areas of aggregation;
- the integration and updating of Medical Emergency Response Plans (MERPs), Emergency Plans and Risk Assessment Documents (DVRs), informing workers;
- the continuity of the contractors activities and the supply chain in safety, so as to guarantee restarting, after the emergency situation;
- · assurance of the activity verification process (remote audits).

Furthermore, a constant information campaign was delivered to all staff and contractors on the new provisions and good hygiene and sanitary standards to be followed.

Eni Rewind and the cooperation with the Sicily Region for leachate disposal in Gela

In the context of the local emergency actions taken by the Presidents of the Region to deal with the COVID-19 emergency, the Region of Sicily, considering the difficulties of transportation outside the Region, asked Eni Rewind whether it could use the water treatment plants at the Gela Site (TAS and the Industrial Organic facility) to dispose of leachate from "OFMSW" recovery plants and landfills that guarantee non-interruptible services for the island. Eni Rewind is working in conjunction with the Region following the Order issued in March 2020, (renewed twice), which authorises the TAS and Industrial Biological plants in Gela to dispose of the leachate, following a technical analysis that guarantees compliance with disposal parameters after treatment.

Environment



Why is it important to Eni Rewind?

Respect for the environment is central to Eni Rewind's vision of sustainable development, providing the leverage of an operating model that stands out for the efficient use and regeneration of natural resources and waste produced. For this reason, the Company is committed to ensuring that all activities are always carried out in accordance with international agreements and standards, in compliance with national laws, regulations and policies. As Eni's environmental company, during 2020, Eni Rewind implemented a specialist training programme and information and awareness-raising initiatives on environmental issues in order to strengthen its sector skills and disseminate good environmental practices, on a technical and operational level.

POLICIES AND OTHER REGULATORY INSTRUMENTS

"Sustainability", "Integrity in our Operations", "Eni Biodiversity and Ecosystem Services" Policies, Code of Ethics

MANAGEMENT AND ORGANISATION MODELS

Integrated health, safety and environment and quality management system: adopted by the organisation and certified to the OHSAS 14001:2015 standard for environmental management. Regulatory updating process with a focus on the Environment. Technical round tables for analysing and sharing experiences on specific environmental and energy issues

PROGRESS IN 2020

- Water: around a 20% increase in the volume of treated and reused groundwater vs. 2019
- Waste: increase to about 78% of recovered waste from total recoverable vs. about 59% in 2019
- Waste process digitisation project: Design and implementation of a timely tracking system for technical-economic data for each individual type of waste and automation of approval management processes

TARGETS

- Raising awareness: Promoting initiatives to raise the awareness of employees and contractors on HSE aspects and the importance of analysing and managing near-misses and unsafe conditions/acts (so-called weak signals)
- Water: water recovery through treatment in GTP plants and their reuse in production cycles or by re-injection into the groundwater, to reduce the use of water from nature
- Waste: Participation in the RENTRI trial; continue with the implementation of the project for the digitisation of environmental logistics



↗ To find out more: enirewind.com

Key initiatives to strengthen the environmental culture in 2020

Due to the nature of its mission, Eni Rewind is committed to promoting and strengthening an environmental awareness among all its people and in the companies with which it works, organising training opportunities and the exchange of experiences. Several initiatives were carried out on a remote basis in 2020 involving Eni Rewind colleagues.

Relay project

The Relay Project continues, which was introduced as an in-depth assessment on waste and storage management, focusing on the related environmental and safety aspects, and also included some training for a group of junior colleagues, who, with the support of more experienced colleagues in the sector, move from site to site (also on a remote basis) to pass on the baton of knowledge.

In 2019, the environmental relay was launched at the Gela site, moving from one site to another (Brindisi, Porto Torres, Assemini and Ferrara). In 2020, due to the health emergency, the baton was past virtually, at other Eni Rewind sites such as Mantua, Porto Marghera, Ravenna, Priolo, Manfredonia, Crotone, Cirò Marina, Avenza, Gavorrano, Pieve Vergonte and Cengio.

Environmental training events

The environmental training programme aims to increase and strengthen Eni Rewind's specialist skills in waste management, the remediation of contaminated sites, regulatory updates (e.g. discharges and emissions).

In 2020, in addition to the training programmes involving every employee within the scope of the courses provided by Eni Corporate University, specialised courses were provided on the following topics:

- waste management, a course on the basic elements, construction and management of waste deposits, document obligations, regulatory updates (Italian Legislative Decree no. 121/2020 "Landfills" and Legislative Decree no. 161/2020 "Waste") and the workshop on "Cross Contamination";
- · remediation, with the basic course on the remediation of contaminated sites;
- Other environmental aspects, such as the basic course on the aspects relating to the main regulatory aspects on discharges and emissions.

Environmental awareness campaign

To promote environmental awareness among all Eni Rewind employees, a specific campaign was developed that included the distribution of leaflets with environmental messages. Furthermore, training "pills" were also created on the main regulatory aspects and concerning different environmental issues (water supply, water discharges, atmospheric emissions, etc.).

Team up for HSE

Eni's environmental company took part in the "Team up for HSE – Bring Your Inspiration" event, which brings together Eni's HSE managers to share ideas and specific work experiences, strengthening the environmental culture. In particular, Eni Rewind participated with a dedicated contribution illustrating its commitment to the regeneration of water resources, also through new technologies and efficiency solutions, and talking about the best practices developed at operational sites.

60 © Supplier and business partner management

Eni Rewind has a HSEQ risk control system for all its services and processes in place to ensure that the activities are carried out in full safety, respecting the environment and human rights and in compliance with the Eni Code of Ethics. This control system is based on the regular monitoring of some indicators, operational field checks and audits scheduled throughout the value chain, in order to ensure the correct application of the integrated HSEQ management system.

In 2020, audits were carried out remotely, due to the health emergency, with the proactive collaboration of all site representatives. Eni Rewind conducted sampling at operational unit sites:

- Internal HSEQ system audits, including: technical audit to ascertain the adoption and correct application of the HSEQ SGI (TA); verification of compliance with current HSE (VDC) regulations; quality audit (Q);
- HSEQ field checks, including: operational field checks (VO) → about 8 sites; operational site checks (VC) → about 2000 field inspections

Assemini salt pans

Eni Rewind pursues the objective of conserving the natural environment and biodiversity in order to protect ecosystems, by promoting good management practices. A virtuous example is represented by the Conti Vecchi salt pans (run by the Eni Rewind subsidiary Ing. Luigi Conti Vecchi SpA, in which Eni Rewind holds the entire shareholding), a unique and special place where the work of man and nature has blended harmoniously since 1931.

Situated in one of the most important wetlands in Europe, on the south-western coast of Sardinia, the Conti Vecchi salt pans play a significant role in stabilising greenhouse gas emissions and mitigating the impacts of climate change. Under the protection of the Ramsar Convention since 1977, which includes some 2,200 wetlands of strategic international importance for maintaining global biodiversity, these are the second largest functioning salt pans, extending over 2,700 hectares in the Macchiareddu-Assemini area, on the outskirts of Cagliari. In the natural oasis, the industry is present alongside several protected species of Mediterranean birds, 35,000 specimens of waterbirds belonging to fifty different breeds, including the pink flamingo, heron, hawk, duck and water hen. Here the flamingos have found the ideal habitat, and the colony numbers more than ten thousand specimens. The lagoon is also a Site of Community Interest (SCI) and is also part of the Natura 2000 ecological network.

Enhancing the cultural and landscape heritage, Eni Rewind has signed a partnership with the FAI (Italian Environmental Fund) to recover the historical and naturalistic value of the site, where industrial archaeology coexists with current production activities in full respect of the ecosystem. Opened to the public in 2017, the salt pans have been visited by about 50,000 people to date, and have a production capacity of about 400,000 tons of salt, intended for industrial and food use and de-icing.



Interview with Marco Magnifico

It has been 4 years since the opening of the Conti Vecchi salt pans to the public, with over 50,000 visitors. The partnership between FAI and Eni Rewind / Ing. Luigi Conti Vecchi has been renewed for another 3 years to enhance the asset. What are your current considerations and expectations? How are the salt pans positioned compared to other FAI sites?

The restoration and enhancement experience at the salt pans still represents a unique asset of the Foundation today: it is in fact the first example of management, narration and promotion of an entrepreneurial, historic and innovative project, in an extraction location that is still producing and immersed in a specific natural context. A new type of Asset, with characteristics and potential that have anticipated development in cultural-tourist terms that differs from that of the North-East coast of the island, and allowed us to reach a broader and more varied audience focusing particularly on younger people, children and families. One of the most significant aspects of the project is certainly represented by Eni's intention to open up its history and contemporaneity to the community, with an approach of mutual trust and sharing that has been highly appreciated by the public, as shown by the entrance numbers, one of the highest percentages of FAI subscribers in Italy, and one of the first places to be visited by foreign visitors on one of the most important tourist hospitality platforms.

Over a year marked by the COVID emergency that has seen museums suffering greatly. In what way has the utilisation of the Asset changed and how do you envisage the post-COVID restart?

It was a difficult year, but it offered us an opportunity to rethink the basics regarding visits to our assets, offering a warm welcome and many new ideas and activities for our visitors. The result of this challenge has certainly been positive: we have rediscovered the value of an even more intimate visiting experience that has allowed us to establish an even stronger relationship of trust with our visitors. For the museum section, the salt pans have been equipped with all the security devices required by national legislation, we have analysed the maximum possible capacity in each environment and the entry flows to the Property have been restricted; we have designed an offering of daily visits that provided for multiple guided tours at the same time, thus being able to manage groups with very limited numbers, while at the same time being able to accommodate as many people as possible. Capacity on the train that tours the industrial and natural areas has been reduced by 50% so that you can enjoy a slow and immersive experience on the industrial site, while maintaining safety distances on the train.

Who are the FAI visitors, in terms of age group, gender and region of origin? Are there any differences between "natural" and "artistic" sites? Has the lower mobility rate due to COVID, increased visits within the region?

Our public is diverse and seasonal, with 70% of visitors comprising locals from Southern Sardinia; of this percentage, about 25% was represented by schools, from all over the region, of every type and grade. We have a dedicated educational offering in their regard managed by specialised museum operators. The remaining 30% is represented mostly by Italian tourists (from Lombardy, Piedmont, Veneto and Lazio), that visit us mainly in the summer. The lower mobility rate has certainly increased the influx of locals. In 2020, thanks to a much broader offering of visits, we managed to reach our targets. Our visitors comprised naturalists (we provided discussions for them on the flora and fauna, in cooperation with expert ornithologists and botanists), families (here we organised educational workshops and recreational activities such as the rediscovery of traditional games), fans of history, the identity-linked value of the place and industrial archaeology (with discussions, insights and comparisons offered on the history of the salt pans provided by former salt miners, inhabitants of the Macchiareddu village and representatives of the salt community in discussion with the salt miners and protagonists of today's salt works). Finally, we opened up the museum in the evening to younger audiences, offering them the opportunity to enjoy theatre readings in the evocative setting of the former mechanical workshop, observing the starry sky with professional astronomers and photography workshops that are highly appreciated for the breathtaking views characterising the salt pans at sunset.



Marco Magnifico FAI Executive Vice President

Human Rights



Why is it important to Eni Rewind?

Respect for human rights is an integral part of Eni's culture and is based on the dignity of every human being and the responsibility of businesses to contribute to the well-being of individuals and local communities.

In accordance with Eni, Eni Rewind considers respect for human rights to be an integral part of its internal regulatory system. A prerequisite for the fair energy transition, this approach is rooted in Eni Rewind's business model and steered by Top Management, which incorporates it in the company's culture. Commitment starts with relationships with employees and extends to local communities, governments, suppliers and business partners, as well as security activities and workers' rights. This commitment is also confirmed by our adherence to the 10 principles of the Global Compact and in the fact that Eni is recognised among the Lead companies of the initiative.

POLICIES AND OTHER REGULATORY INSTRUMENTS

"Sustainability"; "Our People", Our Partners of the Value Chain"; "Integrity in our Operations", "Global Compliance" policies, Code of Ethics, 231 Model

Human Rights Governance

Eni's approach to human rights is integrated into its Mission and is explained in detail in the Eni Declaration on the respect of human rights, approved by the Board of Directors in December 2018. This highlights the priority commitment areas and in which regard Eni exercises full due diligence, following an approach developed in line with the United Nations Guiding Principles on Business and Human Rights (UNGPs). This commitment is reiterated in the Code of Ethics, updated in 2020, and supported by the commitments required from suppliers regarding respect for human rights within the Supplier Code of Conduct, also adopted in 2020. A detailed description of Eni's commitment and performance regarding respect for human rights can be found in **7** "Eni for Human Rights".

The new "Together" industrial relations protocol signed in 2020 by Eni and Italian trade unions, in support of the energy transition process

Human rights in the workplace: industrial relations

Respecting the rights of people working at Eni is fundamental for Eni and its subsidiaries – including Eni Rewind- in order to build mutually satisfactory and lasting relationships. Eni's Industrial Relations model, which it also carries out on behalf of all its subsidiaries, is based on agreements that identify how information is shared with workers' representative organisations, defined at national and international level: these include two at European level, the European Works Council and the European Workers' Health and Safety Observatory in Eni and a global one, the Global Framework Agreement on International Industrial Relations and Corporate So-cial Responsibility (GFA), renewed in 2019. Based on this agreement, Eni and the signatory trade unions confirmed their joint commitment to promoting sustainable development and raising awareness among employees and contractors on the respect for human and labour rights. With a view to the transition to a more sustainable model from a business and people perspective, the new "Together" industrial relations protocol, signed in 2020 by Eni and Italian trade union organisations, also supports the energy transition process.

Assessment model for human rights risk at the workplace

In 2020, a pilot was carried out on the assessment model for the human rights risk at the workplace referring to certain subsidiaries, including Eni Rewind. This involves a "risk-based" model, which segments Eni companies according to specific quantitative and qualitative parameters that represent the characteristics and risks specific to the country/operating context and are linked to the human resources management process, including combating all forms of discrimination, gender equality, working conditions, freedom of association and collective bargaining. This approach identifies possible risk areas or improvements, requiring specific actions to be defined and monitored over time.

Human Rights training activities

In 2020, mandatory training continued for managers and executives (Italy and abroad) on the 4 specific modules of the human rights course (i) in the workplace; (ii) in the communities that host Eni activities; (iii) in the security services; (iv) in commercial relations (with suppliers, contractors and other business partners). There has been an excellent rate of usage over the last year in relation to registrations. In addition to the specific course on human rights, other courses on sustainability and human rights topics are accessible to all employees, such as "Sustainability in terms of stakeholders, reporting and human rights", "Sustainability and integration with business" and courses on the SDGs. Finally, a training course on the new Code of Ethics adopted in 2020 was introduced. This involves a video in which the Eni CEO and the Director of the Integrated Compliance function introduce the structure of the new Code and the main changes.

Human rights and security

Eni Rewind manages its Security operations in compliance with international principles, which are also stipulated in the Voluntary Principles on Security & Human Rights, which Eni subscribed to in 2020. In line with its commitment, Eni has designed a consistent set of rules and tools to ensure that: (i) contract terms and conditions include provisions on respect for human rights; (ii) security service providers are selected, inter alia, on the basis of human rights criteria; (iii) security operators and supervisors receive appropriate training on respecting human rights; (iv) events considered most at risk are managed in accordance with international standards.

Supplier and Business Partner management

The supply chain plays a key role in fulfilling the corporate social responsibility and human rights commitments of Eni and its subsidiaries. For this reason, Eni has adopted a model for assessing and monitoring respect for human rights, based on international standards such as the SA 8000 standard, aimed at raising awareness and involving suppliers in the process of preventing and mitigating risks throughout the procurement process. The adoption of this model also guarantees constant monitoring in the Eni Rewind Environmental Procurement function, and relations may be suspended if the established and agreed standards of acceptability are not met.



Monitoring procedures to ensure human rights are respected in the procurement process

The Model, which is the same one promoted and adopted by Eni SpA, envisages the strengthening of human rights safeguards based on:

1 Supplier Code of Conduct: published in 2020, outlines the principles contained in the Code of Ethics referring to suppliers, who are required to sign them during the self-application/qualification phase or the awarding of contracts, recognising and protecting the value of people and prohibiting any form of discrimination.

2 Introduction of Human Rights in Due Diligence: introduction of search strings for keywords, dedicated to possible human rights violations in the reputational analysis of counterparties.

3 Qualification questionnaire: verification of professionalism, technical-operational capacity, ethical, economic and financial reliability, health, safety, environmental protection, respect for human rights, when completing a specific section based on the SA8000 standard and cyber security to minimise the risks inherent to operating with third parties.

4 Definition of minimum requirements for suppliers to protect human

rights necessary for the evaluation of bids (scoring model) and consequent awarding of the tender. Highlighting the contract clauses to ensure human rights are respected, providing for the possibility of conducting specific audits on suppliers' activities.

5 Handover: transmission of all the necessary information to the contract manager, including an indication of the contract clauses included to protect human rights, in order to provide for the optimal management of the contract, also in relation to the protection of human rights.

6 Feedback: if critical issues should emerge, improvement measures need to be implemented or, if the minimum standards of acceptability are not met, limitations or prohibitions are placed on the invitation to tender. Inclusion in the system of dedicated Tags, in order to periodically detect which reports have resulted in measures regarding the supplier and in respect of which human rights violations.

Transparency and anti-corruption



Why is it important to Eni Rewind?

Improving governance and transparency of the sector in which Eni Rewind operates is essential for promoting the good use of resources and preventing corruption. The repudiation of corruption has been one of the fundamental ethical principles of Eni's Code of Ethics since 1998, and for this reason Eni Rewind has adhered to Eni's complex system of rules and controls aimed at the prevention of corruption offences (the Anti-Corruption Compliance Programme).

POLICIES AND OTHER REGULATORY INSTRUMENTS

"Anti-Corruption" Management System Guidelines; "Our Partners of the Value Chain" Policy; Eni's position on contractual transparency; Code of Ethics

MANAGEMENT AND ORGANISATION MODELS

Eni SpA's Anti-Corruption Compliance Programme, certified to the ISO 37001:2016 standard; Integrated management system; 231 Model

The Eni Anti-Corruption Compliance Programme

In line with the principle of "zero tolerance" expressed in the Code of Ethics, Eni has adopted a complex system of rules and controls aimed at the prevention of corruption offences: the Anti-Corruption Compliance Programme.



The core of this programme lies in the commitment of Eni's top management and all internal regulations, in particular the Anti-Corruption Management System Guidelines, which Eni makes available to staff to prevent and combat the risk of corruption. All subsidiaries, in Italy and abroad, adopt all the anti-corruption regulatory instruments issued by Eni SpA based on resolutions passed by their respective Board of Directors. Since 2010, the programme has been implemented by a dedicated organisational department (Anti-Corruption Unit) which is responsible for providing specialist anti-corruption assistance to Eni and its subsidiaries.

In order to prevent possible criticalities, the Compliance Programme provides for the execution of an anti-corruption due diligence on counterparties at risk, to assess the integrity, professional reliability and reputation of potential counterparties.

Training activities

Another pillar of the programme are the anti-corruption training activities:

- e-learning courses, online courses for the entire company population;
- general workshops: training sessions for resources with a medium/high risk of corruption;
- job-specific training: training sessions generally carried out together with the general workshops and aimed at professional areas with a specific risk of corruption.

To optimise the identification of recipients of training initiatives, a methodology has been defined for the systematic segmentation of employees based on their risk of corruption level according to specific risk drivers such as country, position, professional family. Information and periodic updating activities also continued based on short compliance information pills, which also included any anti-corruption issues. Due to the emergency, the 2020 training events were carried out remotely, with information and periodic updating activities on compliance and anti-corruption issues also continuing.

Reporting management

Furthermore, since 2006, Eni has adopted internal regulations aligned with national and international best practices as well as Italian legislation on the subject (Law 179/2017), which governs the process of receiving, analysing and processing reports (so-called whistleblowing) received, even in a confidential or anonymous format, from Eni and its subsidiaries, including Eni Rewind, in Italy and abroad. This regulation allows employees and third parties to report facts pertaining to the Internal Control and Risk Management System that relate to behaviour breaching the Code of Ethics, laws, regulations, provisions of authorities, internal regulations, 231 Model or compliance models for foreign subsidiaries that can cause damage or prejudice, even to Eni's reputation. In this regard, dedicated and easily accessible information channels have been established, which are available on enirewind.com **7** To find out more: enirewind.com

Corruption perception index 2020





Corruption perceived according to the 2020 Transparency International Corruption Perception Index

7 To find out more: Eni For 2020 - A just transition (pages 68-70)

Memoranda of legality

In order to counter attempts to infiltrate organised crime into the contracts and subcontracting of remediation sites, Eni Rewind and the Prefectures promote the Memoranda of Legality, subject to approval by the Ministry of the Internal Affairs. In particular, the legal instrument is applied in the more complex sites, including Pieve Vergonte, Brindisi, Crotone, Gela. All institutional stakeholders participate in the Memoranda of Legality, aiming to guarantee legality and transparency in environmental remediation activities, as well as continuous monitoring of sites by law enforcement agencies.

Among the commitments envisaged, occupational safety is of particular importance, and Eni Rewind ensures that the conditions of employment of workers, their health and the protection of the environment are effectively safeguarded.

Alliances for development

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The planet is in the midst of a profound transformation that requires a fairer and more inclusive development model. We are experiencing historic times, which after more than a year of a health emergency, require everyone's contribution towards restarting and resilient and sustainable growth. In this context, it is possible to show how much the synergy and sharing of skills is key to ensuring sustainable development for future generations. As Eni's environmental company, we have identified strategic initiatives and alliances to provide an important contribution to the decisive challenges of our time, from energy transition to environmental protection and the regeneration of the limited resources in nature. The objective is to promote longterm growth, which is sustainable for everyone, promoting constant and transparent dialogue and discussion with host territories and stakeholders.

Eni Rewind a stakeholder in local development



Why is it important to Eni Rewind?

With its "Dual Flag" approach, Eni Rewind promotes dialogue with all stakeholders, to ensure that environmental remediation is truly a driver for development and that it generates tangible opportunities with and for the territories where it operates. For this reason, it is essential to establish alliances and cooperation with the various stakeholders from public, private and civil society sectors. The combination of know-how, skills and innovation with a focus on listening and inclusion allows Eni Rewind to promote a sustainable future for everyone, contributing to the circular economy and the energy transition.

POLICIES AND OTHER REGULATORY INSTRUMENTS

"Sustainability" Policy and Eni Declaration on respect for human rights

MANAGEMENT AND ORGANISATION MODELS

Stakeholder Management System platform for the management and monitoring of relationships with stakeholders; System for the detection, mitigation and monitoring of risks related to relations with local stakeholders; Sustainability management process in the business cycle, local content, signed partnerships





Sustainability integrated into the business

At the Crotone site, Eni Rewind and Unindustria Calabria promoted a meeting to outline the progress in the works of the Operational Remediation Project (POB) Phase 1 "Eligible works at sea" to companies in the territory and share the methods for participating in the tenders for phase 2 of the reclamation project related to the areas within the industrial site and the former landfills facing the sea. For the development of the Eni Waste to Fuel project, Eni Rewind and CDP Equity signed an agreement to establish the company CircularIT. A Memorandum of Understanding was signed with A2A Ambiente aimed at initiating a collaboration for the management of special industrial waste, the optimisation of processes and the identification of innovative end-to-end plant solutions, adopting and applying best circular economy practices.

Reopening of the Conti Vecchi salt pans in Assemini (CA) to the public, providing continuity to the partnership with FAI - Fondo Ambiente Italiano. A place where the work of nature and man blend in full harmony is now accessible with the introduction of a few extra measures to ensure a safe experience in line with the anti-COVID provisions.



In Gela, Eni Rewind participated in the first stage of the Circular Tour 2020, an initiative promoted by Eni and Coldiretti, during which it presented its activities and 'circular' initiatives. Specifically, the proprietary Eni Waste to Fuel technology was illustrated.

In Porto Torres, the 31 MW photovoltaic plant developed by Eni New Energy was inaugurated, reusing the Eni Rewind areas with a view to soil regeneration and productive redevelopment of the site. The relationship with Ca' Foscari was consolidated thanks to the entry of Eni Rewind among the institutional partners of the Foundation. Testimony to the Company's commitment to the world of scientific research on the sustainability and circularity of reclamation techniques and interventions.

An environmental assessment of the soil and groundwater of the former Ilva steel plant in Taranto was carried out on behalf of ArcelorMittal Italia (now Acciaierie d 'Italia). For the Mantua site, the Ministry for the Ecological Transition confirmed Edison's takeover in the SIN decrees and environmental proceedings, previously registered to Eni companies.

In Manfredonia, the innovative groundwater circulation wells technology for the on-site reclamation of groundwater is operational. This is the first implementation at an Eni site, providing timely intervention on the source of contamination, reducing remediation times and making them more effective. In Priolo, as part of the initiatives for the territory, Eni Rewind and Versalis signed an agreement with Lipu (Italian League for the Protection of Birds) to reopen the "Riserva Nord Orientale Saline di Priolo", closed following the fire of 10 July 2019. The intervention involved the securing of the footpaths in the protected area, a naturalistic and tourist reference point. As part of the discussion process with the Entities relating to the environmental situation of the Augusta roadstead, Eni Rewind participated in the preliminary services conference convened by MITE, providing important studies and counter-deductions on the historical origin of the contamination and on the area's environmental status.

Eni research has assigned Eni Rewind the marketing license for the proprietary groundwater remediation technology, e-hyrec.

Acciaierie d 'Italia conferred a second assignment on Eni Rewind for the design of environmental interventions aimed at ensuring the operational safety of the former ILVA steel plant in Taranto. In Ravenna for the Ponticelle Project, Eni Rewind and Herambiente signed the agreement to establish a joint venture, HEA, which will create the environmental platform. Eni Rewind will manage the entire environmental supply chain for its implementation.

A year of Eni Rewind was celebrated with a live streaming event that involved all of the company's employees.

The handbook of the main remediation technologies was published on Eni Rewind's website.

In synergy with PMEC (Project Management Engineering Construction), the design of a production water and rainwater treatment plant for the Brass site in Nigeria was developed.



In synergy with EniProgetti UK and PMEC (Project Management Engineering Construction), the design and related technical specifications for a tender for the construction of a water treatment plant for the North Gas Complex project in Angola were developed.

In the Colline Metallifere area of Grosseto, for the fifth consecutive year, Eni Rewind sponsored the Maremma Trophy rally competition, a sporting initiative that is extremely popular with the local communities.

The environmental services contract for the Collina area was signed with Edison at the Mantua SIN, which provides for Eni Rewind to execute the remediation activities, maintaining the HSEQ and sustainability standards adopted in the implementation of the interventions, as non-responsible owners, until 2020. In Porto Torres, the first soil remediation module began in situ with thermal desorption technology (Canadian technology), which remediates the subsoil contaminated with chlorinated compounds without generating soil movement.

Partnerships for sustainable development

Based on the New Circular Economy Action Plan, a fundamental pillar of the European Green Deal, the evolutionary path towards a circular economy must be carried out with a view to "co-creation", with the cooperation between different parties: public institutions, economic stake-holders, citizens and civil organisations. The involvement of everyone is a key element to accelerating the transition to the new "circular" model.

In this transformation process, Eni Rewind considers it important to promote synergies, along the entire chain, through public-private partnerships, with the aim of building shared and lasting value. An example is the partnership in Energy & Strategy, a research group comprising lecturers and researchers from the Faculty of Management Engineering at the Milan Polytechnic, founded in 2007 with the aim of carrying out Research, Advisory and Training activities in the field of Energy, Sustainability and Innovation, as well as participating in observatories/tables related to the Circular Economy.

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Agreement for the development of circular economic projects in Bahrain

Thanks to its consolidated experience in remediation and waste management as the global contractor of Eni, Eni Rewind is gradually developing environmental projects and services for customers outside the Group, both in Italy and abroad, in the countries where Eni operates.

Based on a logic of knowledge sharing and collaboration, a Memorandum of Understanding was signed in January 2021, with the National Oil and Gas Authority of the Kingdom of Bahrain aimed at producing joint initiatives for the efficient recovery and valorisation of water, soil and waste in the country, in line with the goals of the 2030 Agenda approved by the United Nations. A step that testifies to the willingness to consolidate alliances for sustainable development, in order to share the challenge of the energy transition, for the protection of the environment and the regeneration of natural resources.

The signing of the agreement, which marks a step forward in the collaboration already initiated between NOGA and Eni in the energy sector, will help identify further areas of collaboration for the development of innovative circular economy solutions, in line with the three principles of reducing, reusing and recycling. Eni Rewind will contribute to the partnership, making available its environmental knowhow, the experience it has gained and the best technologies to manage and regenerate water, soil and industrial waste. The initiatives covered by the agreement, promoted by the Water Resources Management Unit of NOGA, are also part of the other project proposals for environmental sustainability and the integrated management of water resources envisaged by the Bahrain government.


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Local Content in Eni Rewind

Eni Rewind pays close attention to the involvement of businesses in the territories where it operates, with a view to the promotion and sustainable growth of the local entrepreneurial fabric and culture. For this reason, Eni Rewind implements procurement strategies that maximise the involvement of local companies, where this is possible in relation to the subject of the contract, provided they meet the necessary requirements. This approach brings many benefits, from the smaller environmental footprint determined by on-site supplies, therefore at "zero km", to the development of new market opportunities with local companies.

The attention to workers and local communities, the Memoranda of Understanding for Employment signed by Eni with the Basilicata Region (Val d'Agri Oil Centre) and for the industrial area of Gela move in this direction. These agreements are managed through constant relations with the Prefectures and the competent bodies.

Furthermore, through the territorial and sector associations, Eni promotes meetings and information sharing with local companies, aimed at "preparing" the territory in view of upcoming tenders.

During these meetings, the activities envisaged by the project and the estimated time frames are outlined with the drivers of the related procurement strategies, in addition to the minimum requirements necessary to access tenders and qualifications, and the related accreditation methods, while fully respecting free competition and the market. At the beginning of 2020, these presentations were implemented with reference to the Phase 1 and Phase 2 operational remediation projects of the Crotone site, approved by the Ministry for the Ecological Transition, in 2019 and 2020 respectively.

More recently, in 2021, meetings were held with Confindustria Verbania for the works to move the Torrente Marmazza as part of the reclamation of the Pieve Vergonte site, and Confindustria Sardinia for the subsequent activities planned as part of the important remediation interventions at the Porto Torres (Nuraghe Integrated Project) and Assemini plants.



JUST! Join Us in a Sustainable Transition - involvement of suppliers in the energy and ecological transition process

The Eni Rewind Environmental Procurement function, in addition to playing an active role in observing the market, also acts as a vehicle for best practices and driver to improve suppliers' performance on sustainability. This is the scope of the JUST initiative (Join Us in a Sustainable Transition), promoted in collaboration with Eni and aimed at involving suppliers in Eni's fair and sustainable energy transition path, enhancing the aspects of environmental protection, economic development and social growth during each phase of the procurement process. More specifically, rewarding mechanisms were adopted in the tender to promote suppliers' best practices, and workshops were organised to discuss the spaces for adopting circular economy models and/or sustainability initiatives and lay the foundations for a common sustainable development path.

The Open-es digital platform was also launched in the spirit of Community, as an open space accessible to all suppliers interested in undertaking the transition path. The platform is part of the JUST programme, with the aim of sharing and enhancing information, best practices and sustainability models along the chain. This platform is based on an ESG data model defined according to the core metrics of the WEF "Measuring Stakeholder Capitalism" initiative, with a simple, flexible approach suitable for all enterprises, from SMEs to big players.

Initiatives with and for the territory



INANC RIER

Parliamentary delegation at Porto Torres

In 2020, a Parliamentary delegation visited the Site of National Priority of Porto Torres. The visit provided an opportunity for Eni Rewind to illustrate the status of its completed and ongoing environmental activities. In Porto Torres, an industrial hub established in 1962 by the company SIR (subsequently transferred by law to Eni), particular attention was paid to the site of the Nuraghe Project, involving the application of the most innovative sustainable remediation technologies for soils and groundwater - including the Eni-patented e-hyrec device - in addition to the valorisation of the areas for subsequent productive redevelopment with the Eni New Energy photovoltaic system.

Eni Rewind supports the Maremma Trophy rally in the Colline Metallifere

For the fifth consecutive year, Eni Rewind sponsored the Maremma Trophy rally competition, a sporting initiative that is highly popular in the local communities. In 2020, the race, which includes 3 special events covering a distance of 63 km, was completely reformulated so it could be adapted to the protocol issued by the Federation in line with anti-COVID-19 measures. The rally winds its way through the Colline Metallifere in Tuscany, and also stands out for the inclusion of a special "Gavorrano" event named for Eni Rewind, with a dedicated prize. In Tuscany Eni Rewind, which holds concessions in some former mining and steel municipalities and owns the corresponding areas that were transferred by law to Eni, is engaged in soil and groundwater safety and remediation activities.

Geoarte Project

As part of the remediation activities at the Pieve Vergonte site, Eni Rewind and the Ca' Foscari University completed the activities of the Geoarte project, an initiative in support of the preservation and valorisation of the area's archaeological heritage, in conjunction with local institutions.

Salt works Reserve in Priolo managed by LIPU

Eni Rewind and Versalis have promoted an initiative supporting the nature reserve "Riserva Nord Orientale Saline di Priolo", managed by LIPU (the Italian League for the Protection of Birds), which had closed following a fire on 10 July 2019. The project involved the securing of the footpaths in the protected area, by clearing and disposing of the burned trees, in order to contribute to the reopening of the oasis to the public, which provides a natural and tourist reference point for the Priolese community.



Tools and methodologies for sustainability

On an ongoing basis, Eni Rewind makes available its environmental know-how, the experience it has gained in the field and the best technologies to manage and regenerate water, soil and industrial waste to all its stakeholders.

In this regard, the Company has created and published a Handbook on Remediation Technologies, a compendium of reclamation technologies gained from its consolidated experience in multiple and complex remediation projects and enriched, over twenty years, thanks to the ongoing interaction with stakeholders.

With the Remediation Technologies Handbook, which can be downloaded from the website www.enirewind.com, the Company intends disseminating and making available its skills, providing a multidisciplinary and integrated guide, which with drawings, diagrams, infographics and photographs, illustrates the complex world of environmental remediation.

Vademecum Tecnologie di Bonifica

Eni Rewind also contributes to the dissemination of environmental know-how by participating in the main events and trade fairs referring to the field of remediation, technological and industrial innovation applied to the circular economy and the energy transition.

Similarly to previous years, in 2020, Eni Rewind took part in Ecomondo and RemTech, participating in online conferences with presentations on topics such as the recovery and reuse of water and waste, sustainable remediation and the redevelopment of industrial sites. Furthermore, it organised workshops and webinars on the most innovative and environmentally friendly remediation techniques, with solutions that in many cases, had been tested using proprietary research.

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Impact assessment tools and methodologies

Eni Rewind strongly believes in the application of the sustainability principles as an effective tool for approaching remediation. For this reason, it has confirmed its collaboration with the Ca' Foscari University in Venice to develop the topics referring to Ecological Risk Assessment, based on an organic and scientific approach, with the following objectives:

- Application of the ERA guidelines developed in the 2018 Convention in the case studies relating to Rada di Augusta and Vallivo di Mantova.
- Practical implementation of the ERA indicators in the sustainability index measurement tool integrated with the LCA assessment.
- Adaptation of the ERA guidelines to assess activities on the aquifer for the impact of the Gela GTP discharge at sea.

The Sustainability and Life Cycle Analysis (LCA) Research Line also falls within the scope of the Convention, and includes the following activities:

- STAR-LCA (Simplified Tool to Assess the Remediation by LCA) prototype applied to 2 case studies
 - Case study #1: Groundwater circulation wells vs Hydraulic barrier Ferrandina (MT) site
 - Case study #2: Colloidal Coal Injection vs Pump and Stock (fuel service stations)
- · Application of the sustainability index measurement tool to 2 case studies
 - Case study #1: San Cusumano (SR) site
 - Case study #2: Crotone site
- LCA study of the various remediation technologies and preparation of an LCA impact score matrix that can rapidly assess the best "full-life" technology

These tools will provide Eni Rewind with additional objective tools for measuring the sustainability of remediation interventions. Furthermore, to demonstrate the importance of circularity in its activities, Eni Rewind has drawn up guidelines for the integration of the Principles of Circular Economy in the Remediation Process, as a tool for analysing and measuring the circularity of an operative site. These guidelines are currently being applied at some pilot sites where Eni Rewind operates.

Methodological Note

The Eni Rewind 2020 Sustainability Report is part of Eni sustainability reporting, which includes the Consolidated Non-Financial Declaration (NFD 2020) and the Eni Sustainability Report for 2020, prepared in accordance with the "Sustainability Reporting Standards" of the Global Reporting Initiative (GRI Standards). Furthermore, this reporting system is completed by the information provided on the Eni and the Eni Rewind websites, to which reference should be made for further information on the issues dealt with in this report.

The Eni Rewind Report has been prepared to provide stakeholders with clear and detailed information on sustainability issues related to the activities of Eni's environmental company, as well as to provide an overview of the investments that Eni Rewind is making. The external significance of the topics derives from the context in which Eni operates and from the direct and indirect requests received by Eni from various stakeholders in the year of reference, assessed based on frequency and relevance. The most significant issues form the basis of this document, which provides qualitative and quantitative information on Eni Rewind's sustainability performance. The internal significance of the issues to be addressed was determined in accordance with Eni's principles and values, strategies and business objectives. In particular, this document documents both Eni Rewind's successes and the areas for improvement and the relative actions taken.

The data reported were collected with the aim of representing a balanced and clear picture of the Company's actions and characteristics. The process of collecting information and quantitative data has been structured so as to ensure the comparability of data over several years, in order to allow a correct reading of the information and a complete view for all stakeholders interested in the evolution of Eni Rewind's performance. The figures in this document represent the KPIs reported at a Group level in the DNF and Eni sustainability report, subject to limited auditing by the appointed independent company.

Reporting scope

The information included in this document relate to Eni Rewind's activities. Unless otherwise stated, the data and performance indicators refer to the year ended 31 December 2020. Furthermore, some data from the previous two years are included for comparative purposes. Where relevant, the activities and projects described in the document are updated to the first half of the year of publication (2021) of the document in order to provide the reader with the most up-to-date information possible. The performance indicators, selected on the basis of the topics identified as most significant, were collected on an annual basis. The reporting is done on an annual basis.

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Glossary

BIOPILE

An ex situ treatment for the biological remediation of contaminated soil, based on the capacity of indigenous micro-organisms to aerobically biodegrade hydrocarbon compounds, using them as a source of carbon and energy. The matrix to be remediated by biopile is excavated, homogenised and stacked in piles to be decontaminated. Aerobic biological activity is stimulated by aeration of the soil and the addition of nutrients, minerals and water. Once the remediation concentrations have been reached, the soil is reused in situ to fill the excavations from which it derives.

CAPPING

Waterproof covering of landfills and/or polluted areas.

CHARACTERISATION

Detailed chemical/physical analysis of potentially polluted areas.

DECOMMISSIONING

Disposal, demolition and remediation of industrial plants.

EX SITU/ON SITE TECHNOLOGY

A method of remediation that involves the removal/extraction of the environmental component and its treatment in plants outside and/or insider the site.

GTP

Groundwater treatment plant.

HYDROPHOBIA

The physical property of chemical species to be repelled by water. The term is also used broadly to indicate the property of materials to not absorb or retain water inside or on their surface.

IN SITU TECHNOLOGY

Remediation systems consisting of on-site equipment that treats soil or water without removing them from their natural location.

INERTISATION

The objective of this process is to reduce the mobility of contaminants by preventing or minimising their transfer to the environment.

ISOTOPIC FINGERPRINTING

The technique used is the analysis of the isotopic ratio between rare and abundant stable isotopes of a specific chemical element through the GC-IRMS (Gas Chromatography Isotope Ratio Mass Spectometry) analysis tool. Stable isotopes do not decay, but their ratio is subject to change during the biodegradation process by micro-organisms. The technique therefore uses a quantitative approach to assess the pollution plume reduction processes.

LESSONS LEARNED

Lessons learned are recommendations for future behaviour based on past experience (positive and/or negative).

LNAPL

Light Non-Aqueous Phase Liquid.

MISE BARRIER

Hydraulic barrier (system of wells to supply groundwater) or physical barrier (sheet piling, waterproof septum, etc.) installed for the containment (MISE) of the site or area subject to pollution.

MISP PERMANENT CONTAINMENT

Containment works in a site carried out as a final remediation intervention.

MOLECULAR FINGERPRINTING

The technique used is qPCR, quantitative PCR or gene amplification based on quantitative Polymerase Chain Reaction. It consists of research into gene markers associated with in situ biodegradation of major contaminants. In particular, aerobic/anaerobic degradation markers are sought in bacterial DNA extracted from groundwater. The presence in groundwater samples of gene markers associated with specific bacterial biodegradation reactions is an indication of the potential applicability of bioremediation.

ORP

Operational Remediation Project.

PHOTOVOLTAIC

Plant for the production of electricity from sunlight.

PHYTOREMEDIATION

Remediation technology that uses green plants for the treatment of contaminated environments.

PIEZOMETER

An instrument that is introduced vertically into the ground to measure the water level and pressure of an underground water table.

PUMP & STOCK

Combined system of groundwater extraction and subsequent disposal thereof.

PUMP & TREAT

Combined system of groundwater extraction and subsequent treatment thereof.

PUMPING

Suction and extraction of groundwater.

RISK ANALYSIS

The health risk analysis makes it possible to quantitatively assess the risks to human health associated with the presence of pollutants in the environment and to define remediation objectives.

SIN

Site of National Priority.

SOIL WASHING

Technique for the remediation of contaminated soil by means of a washing process that extracts the contaminants adsorbed in the soil itself and recovers the precious ones. The technique can be applied both on site and off site.

THERMAL DESORPTION

Remediation technology that, through controlled heating at temperatures of about 450 °C, eliminates the contaminants present in the soil restoring the characteristics of the soil itself, allowing its recovery as a resource.



Eni Rewind SpA

Registered Office Piazza Boldrini, 1

20097 San Donato Milanese (MI) – Italy

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remediation & waste into development